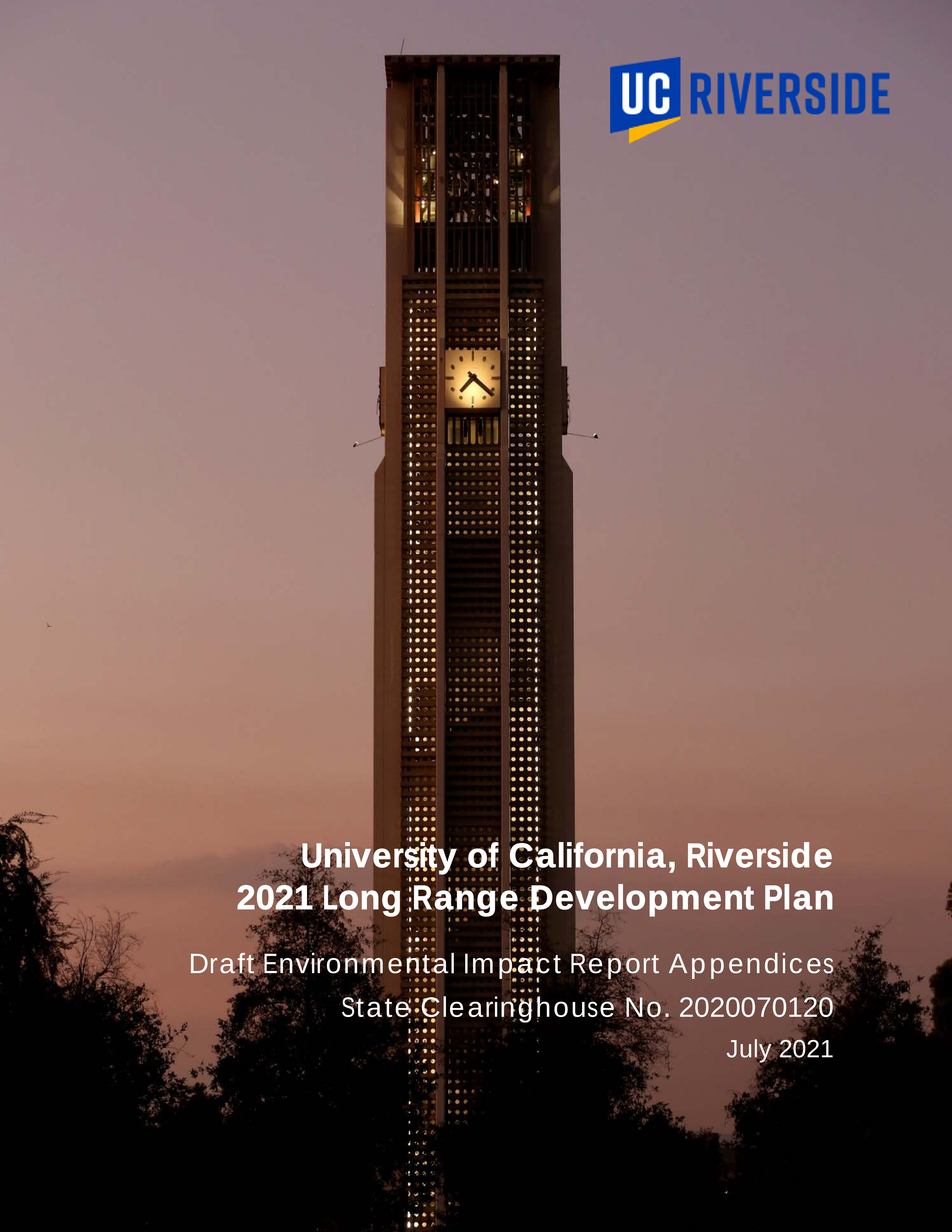

UC RIVERSIDE

University of California, Riverside
2021 Long Range Development Plan

Draft Environmental Impact Report Appendices

State Clearinghouse No. 2020070120

July 2021

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Appendix A

Notice of Preparation, Initial Study, and Scoping Comments

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Appendix A1

Notice of Preparation

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UC RIVERSIDE

Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT

Project Title: 2021 Long Range Development Plan

Lead Agency: University of California

Project Location: University of California, Riverside (UC Riverside)
900 University Avenue, Riverside, CA 92521

County: Riverside County

Contact Person: Stephanie Tang
Campus Environmental Planner
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

The proposed 2021 Long Range Development Plan (2021 LRDP) is a plan put forth by UC Riverside to guide development on the main UC Riverside campus for the next 15 years. The campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. Interstate 215/State Route 60 (I-215/SR 60) bisect the campus diagonally. The two resulting areas of campus are depicted as East Campus and West Campus on **Figure 1**.

Development under the 2021 LRDP is designed to accommodate a total enrollment of approximately 35,000 students (Fall quarter headcount) by the academic year 2035/2036. The 2021 LRDP would guide long-range land use development, open space preservation and improvements, multi-modal mobility planning, and infrastructure sustainability and resiliency efforts.

To accommodate the anticipated increase of approximately 11,078 students and 2,806 faculty and staff by academic year 2035/2036, the 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet (approximately 6 million gross square feet) of additional academic buildings, support facilities, and student housing. The 2021 LRDP would provide on-campus or campus-controlled student housing for approximately 40 percent of the student population, equal to approximately 7,489 new on-campus beds. The 2021 LRDP proposes the following land use designations: Academics & Research, Campus Support, Land-based Research, Open Space Reserve, Recreation & Athletics, Student Neighborhood, Agricultural/Campus Research, UCR Botanic Gardens, Canyon Crest Gateway, and University Avenue Gateway. **Figure 2** depicts the proposed 2021 LRDP land use designations on the campus.

The proposed 2021 LRDP is a campus wide plan to guide development, however adoption of the proposed 2021 LRDP does not constitute a commitment to any specific project. Rather, development under the 2021 LRDP would occur over time, based on campus needs and funding availability. The UC Regents and/or its delegated authorities must approve each development proposal, as appropriate. At the campus level, the review of campus development proposals is informed by a process that involves input from staff, faculty, and students (and the local community as appropriate). The proposed 2021 LRDP would require approval by the Board of Regents of the University of California.

Environmental Review and Comment

The University of California will be the Lead Agency and will prepare an Environmental Impact Report (EIR) for the 2021 LRDP, which will analyze the environmental effects of the physical development program proposed by the LRDP at a programmatic level. An Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines to identify potential environmental impacts that will be addressed in the EIR. The Initial Study also includes a description of the proposed 2021 LRDP. At this time, it is anticipated that the EIR will address environmental impacts in the following resource areas: aesthetics, agriculture resources, air quality, biological resources, cultural resources, energy, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, public services, recreation, transportation, tribal cultural resources, utilities and service systems, and wildfire. A copy of this NOP and the Initial Study supporting the scoping of the proposed 2021 LRDP EIR is available for viewing or downloading on the Planning, Design & Construction website at **https://pdc.ucr.edu/environmental-planning-ceqa.**

The University will hold a public scoping meeting on Wednesday, July 29, 2020 for the EIR. Due to public safety concerns regarding COVID-19, the meeting will be held online via Zoom from 6:00 PM to 8:00 PM. To attend this Zoom meeting:

1) Click on the following link at the time of the meeting: https://ucr.zoom.us/j/98545140324?pwd=WkJBazJFMFNkcTBOYXE5UXM4aW5sZz09; or

2) Go to www.zoom.us, Select “Join a Meeting,” and enter the following:

Meeting ID: 985 4514 0324
Password: 067203

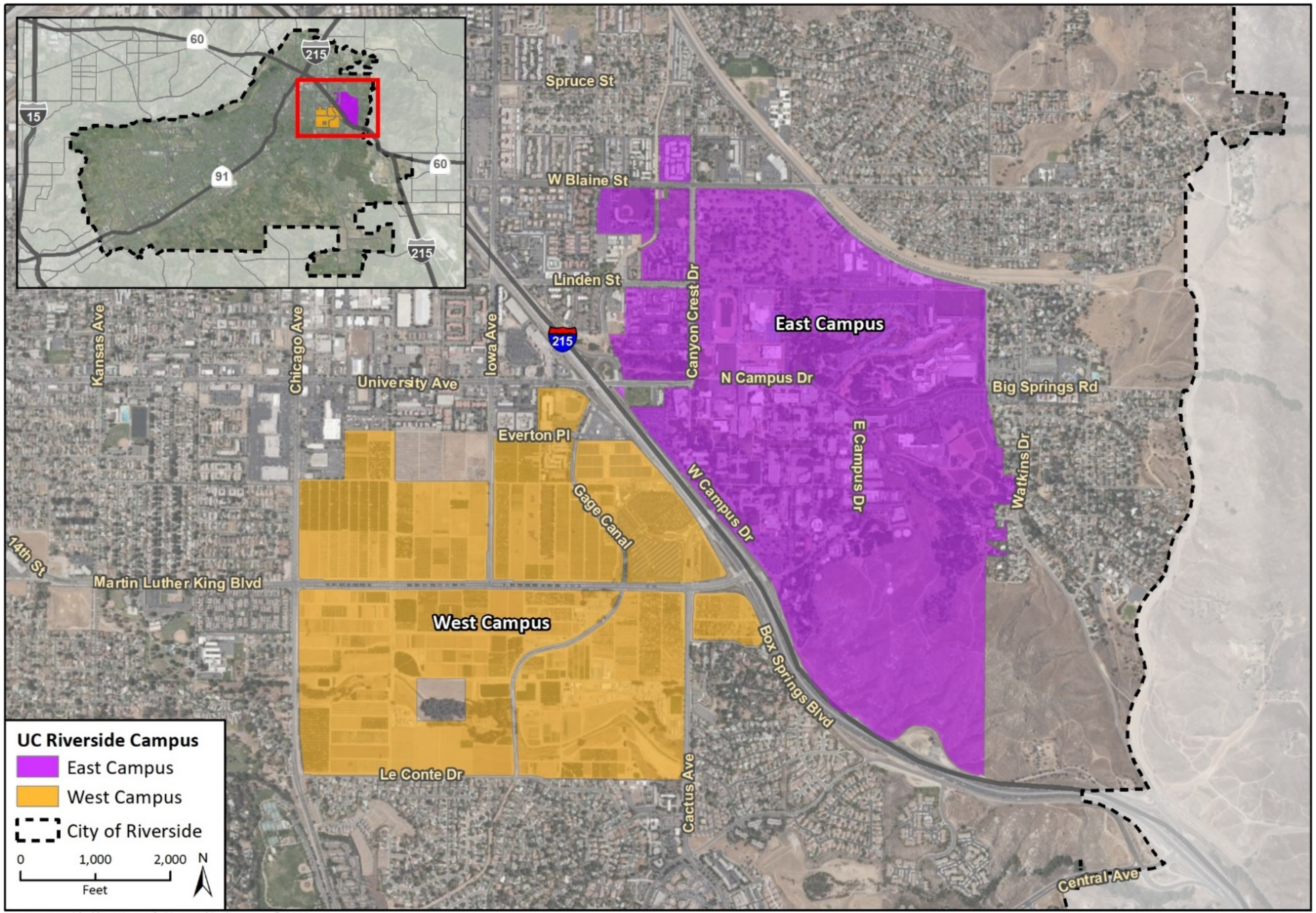
3) For those calling in, dial 16699006833, password: 98545140324#

We request your views as to the scope and contents of the EIR for the proposed project. This NOP is being circulated for 30 days, from July 7, 2020 through August 6, 2020. Your comments must be received no later than 5:00 PM on August 6, 2020. Your name, email and/or address should be included with your comments. Please send your comments to the attention of Stephanie Tang at the address noted above.

Comments can also be submitted via email to the following address: **CEQA@ucr.edu.** Email comments must also be received no later than 5:00 PM on August 6, 2020.

If you have any questions regarding this NOP, please contact Stephanie Tang at the above address or via email at **CEQA@ucr.edu**.

Figure 1 – Aerial Map



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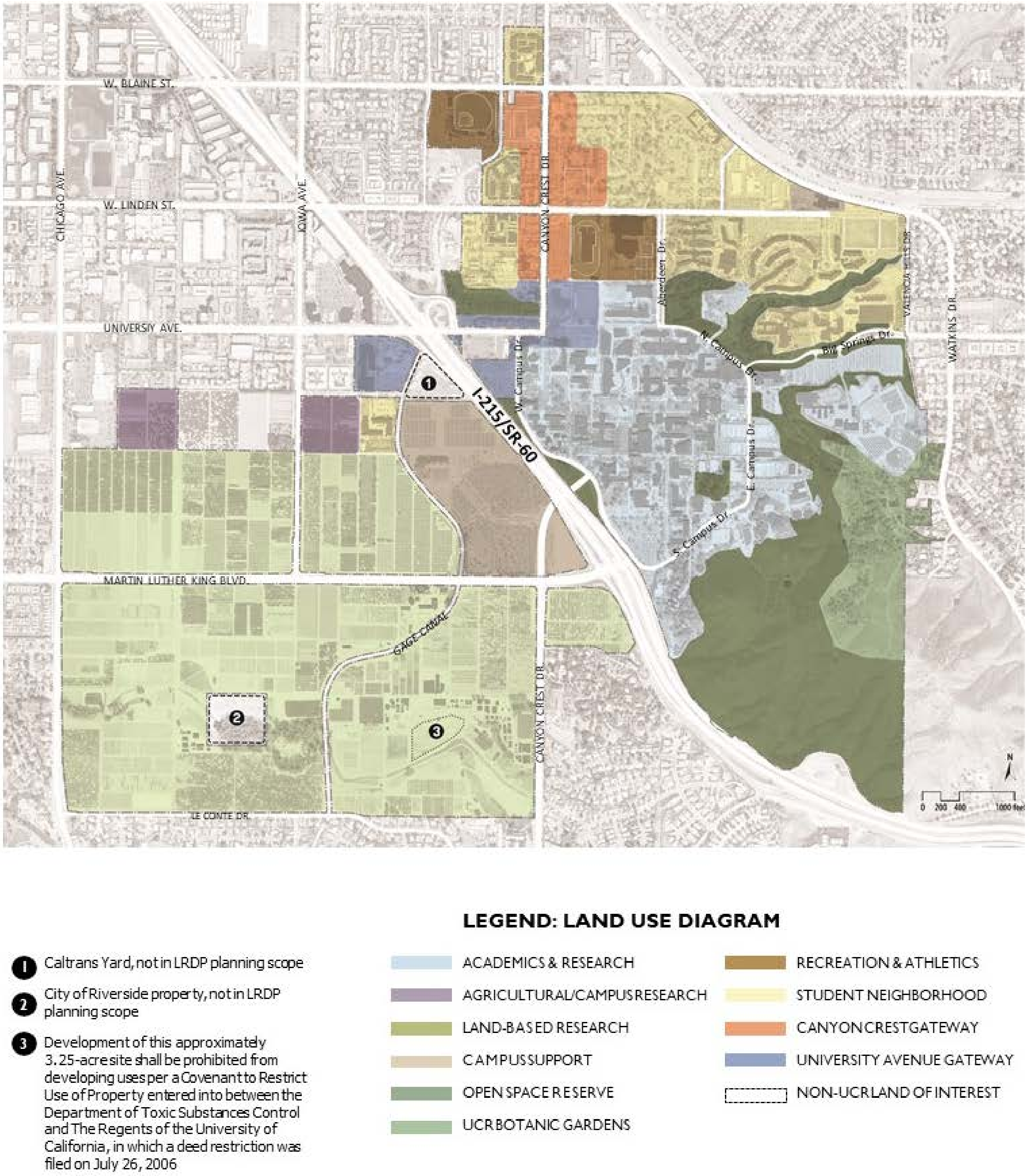
Data provided by UC Riverside and County of Riverside, 2020.

Figure 2 – Proposed 2021 LRDP Land Use Designations



Appendix A2

Initial Study for the University of California, Riverside 2021 Long Range Development Plan

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Initial Study

for the

UNIVERSITY OF CALIFORNIA, RIVERSIDE
2021 LONG RANGE DEVELOPMENT PLAN

PROJECT NO. 958098

Lead Agency

University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, California 92507
Contact: Stephanie Tang, Campus Environmental Planner

Prepared by

Rincon Consultants, Inc.
1980 Orange Tree Lane, Suite 105
Redlands, California 92374

July 2020

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TABLE OF CONTENTS

Tables

Figures

ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACM	asbestos-containing materials
asf	assignable square feet
Basin	South Coast Air Basin
BMP	best management practices
BNSF	Burlington Northern Santa Fe
CalEPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CalGreen	California Green Building Standards Code
Cal/OSHA	California Occupational Safety and Health Administration
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CRPR	California Rare Plant Ranks
CWA	Clean Water Act
DOC	(California) Department of Conservation
DOF	(California) Department of Finance
DWR	(California) Department of Water Resources
EAP	Emergency Action Plan
EH&S	Environmental Health & Safety
EIA	(United States) Energy Information Administration
EIR	Environmental Impact Report
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
GHG	greenhouse gas
GHGRS	Greenhouse Gas Reduction Strategy
GSA	Groundwater Sustainability Agency

gsf	gross square feet
GSP	Groundwater Sustainability Plan
HCP	Habitat Conservation Plan
HMBP	Hazardous Materials Business Plan
HRS	Focused Historic Resources Survey
I-215	Interstate 215
In/sec	inches per second
LBP	lead-based paint
LEED	Leadership in Energy and Environmental Design
LRDP	Long Range Development Plan
MMthm	million therms
Mgd	million gallons per day
MRZ	Mineral Resource Zone
MS4	Municipal Separate Storm Sewer System Permits
MSHCP	Multiple Species Habitat Conservation Plan
NPDES	National Pollutant Discharge Elimination System
PCB	Polychlorinated biphenyls
PEIR	Program Environmental Impact Report
$PM_{2.5}$	particulate matter less than 2.5 micrometers in diameter
PM_{10}	particulate matter less than 10 micrometers in diameter
PPV	peak partible velocity
RCDWR	Riverside County Department of Waste Resources
RCHCA	Riverside County Habitat Conservation Agency
RFD	(City of) Riverside Fire Department
RPD	(City of) Riverside Police Department
RPL	(City of) Riverside Public Library
RPU	Riverside Public Utilities
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
RUSD	Riverside Unified School District
RWQCB	Regional Water Quality Control Board
RWQCP	Riverside Water Quality Control Plant
SARWQCB	Santa Ana Regional Water Quality Control Board
SCAG	Southern California Association of Governments

SCAQMD	South Coast Air Quality Management District
SoCal Gas	Southern California Gas Company
SR 60	State Route 60
SRC	Student Recreation Center
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
the Regents	University of California Board of Regents
TIA	Transportation Impact Analysis
TPD	tons per day
UC	University of California
UCPD	UC Police Department
UCR	University of California, Riverside
U.S.	United States
USEPA	U.S. Environmental Protection Agency
UWMP	Urban Water Management Plan
VHFHSZ	Very High Fire Hazard Severity Zone
WMWD	Western Municipal Water District

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Initial Study and Environmental Checklist Form

for the

UNIVERSITY OF CALIFORNIA, RIVERSIDE
2021 LONG RANGE DEVELOPMENT PLAN

Project No. 958098

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I. PROJECT INFORMATION

1. Project Title

2021 Long Range Development Plan

2. Lead Agency and Project Sponsor Name and Address

The Regents of the University of California
1111 Franklin Street, 12th Floor
Oakland, California 94607

3. Contact Person and Phone Number

Stephanie Tang, Campus Environmental Planner
University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, California 92507
stephanie.tang@ucr.edu
(951) 827-1484

4. Project Location

University of California, Riverside
Riverside, California 92521
(Refer to **Figure 1 – Regional Map, Figure 2 – Local Setting,** and **Figure 3 – Aerial Map**)

II. PROJECT DESCRIPTION

1. Project Location and Environmental Setting

The approximately 1,108-acre University of California, Riverside (UCR) main campus is in Riverside, approximately 3 miles east of downtown and just west of the Box Springs Mountains. The city of Riverside is in Riverside County, within a larger geographic area known as Inland Southern California, which includes western Riverside, southwestern San Bernardino counties and portions of the Pomona Valley in easternmost Los Angeles County. **Figure 1** shows the location of the campus in a regional context. The campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. Interstate 215/State Route 60 (I-215/SR 60) bisect the campus diagonally. The two resulting areas of campus are described below (see **Figure 2** and **Figure 3**).

East Campus

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are in the Academic Center circumscribed by Campus Drive, including most of the original buildings. The northern half of East Campus is devoted to student housing and recreation. The bell tower marks the heart of the campus, at the center of the Carillon Mall. The terrain steepens to the south and east of East Campus and as a result, these areas are largely unbuilt.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations unit of College of Natural and Agricultural Sciences. Several facilities are also on West Campus: Parking Lot 30; University Extension; and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR, is at the northern edge of Parking Lot 30. A California Department of Transportation (Caltrans) service yard is situated on an approximately 4.4-acre triangular parcel directly west of the I-215/SR 60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses the area north to south.

Surrounding Land Uses

Land uses surrounding the campus are primarily residential, with some commercial uses along the arterial streets. Residential uses, commercial uses, and the I-215/SR 60 freeway are located north of the campus. Residential uses, open space, and the I-215/SR 60 freeway are located south of the campus. Residential uses and open space, including the Box Springs Mountain Reserve, are located east of the campus. Residential uses and commercial uses are located west of the campus. The California Air Resources Board (CARB) Southern California headquarters facility (under construction as of early 2020) is located adjacent to the West Campus, between Chicago Avenue, Iowa Avenue, University Avenue and Martin Luther King Boulevard.

Figure 1 – Regional Map

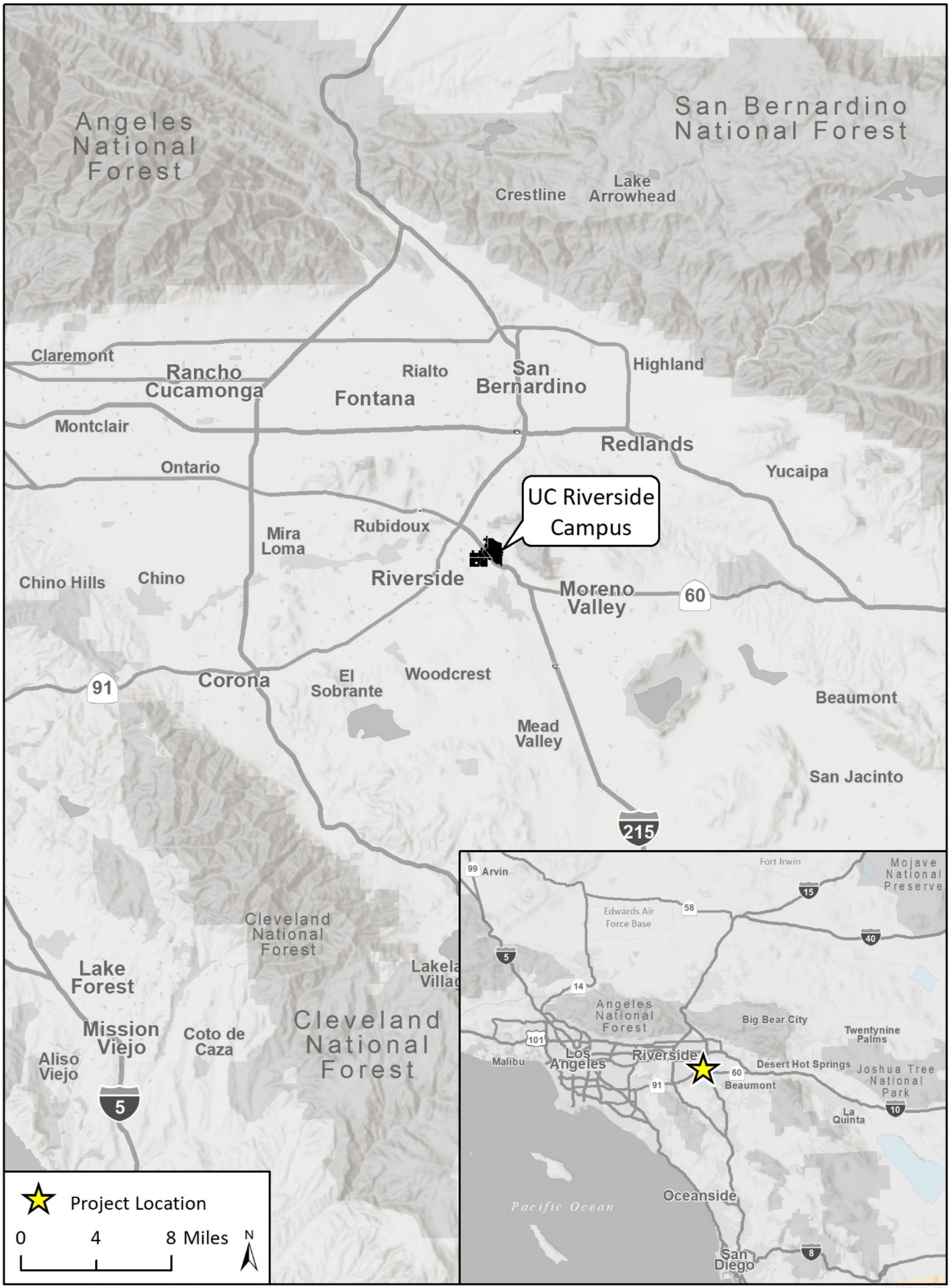

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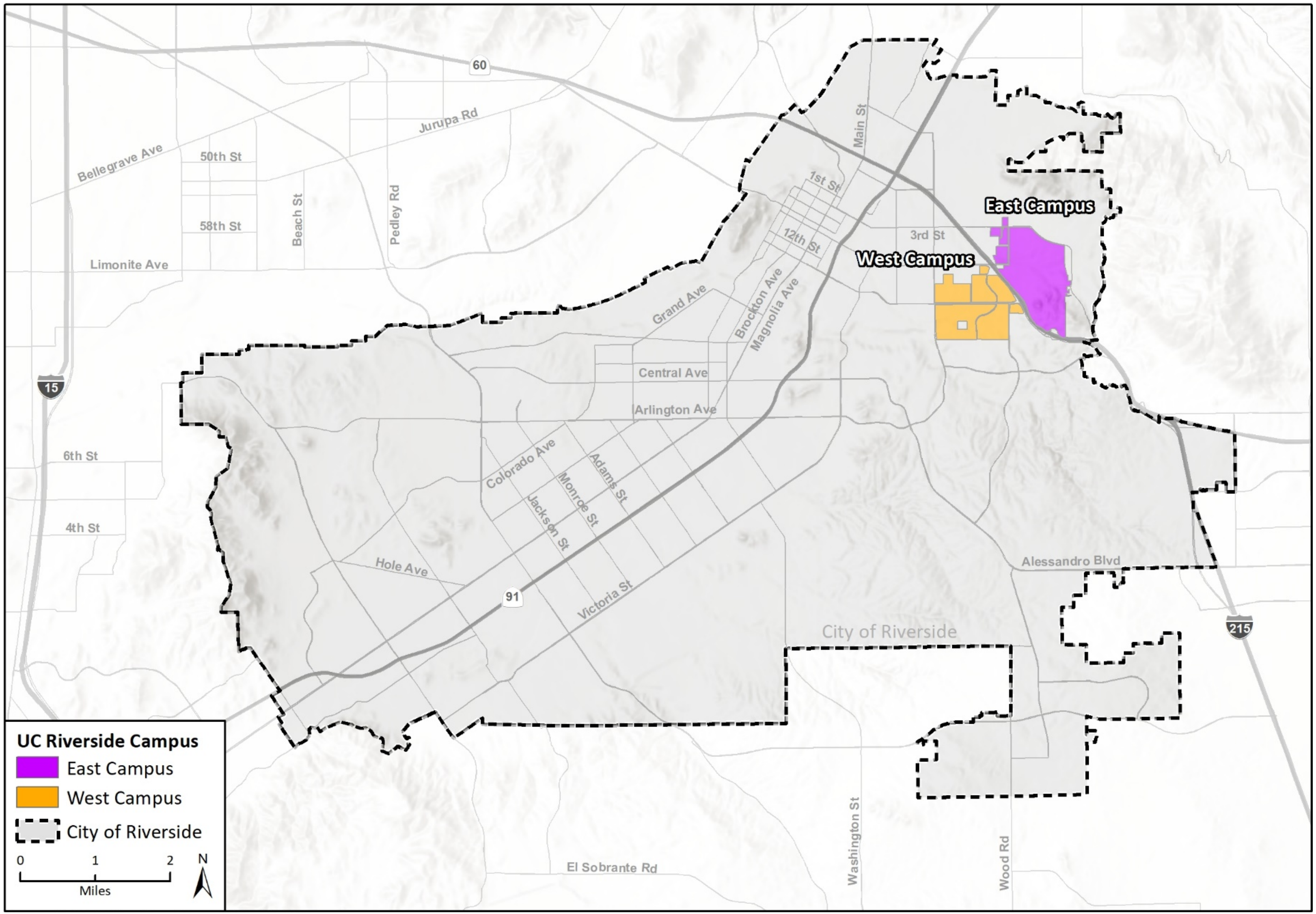
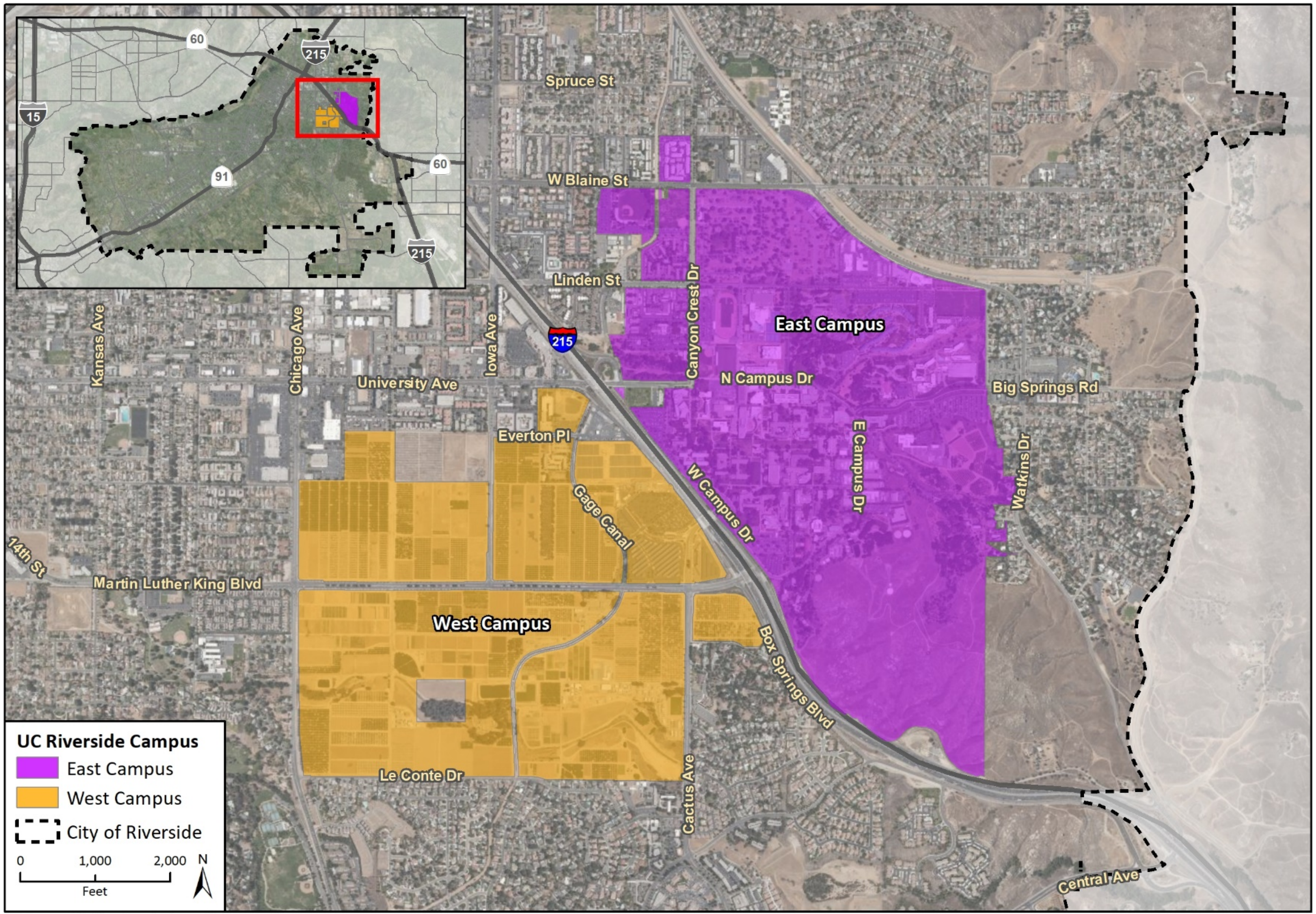
Figure 2 – Local Setting



Data provided by UC Riverside and County of Riverside, 2020.

Fig 2 Local Setting-VTA-AFS01

Figure 3 – Aerial Map



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Data provided by UC Riverside and County of Riverside, 2020.

Fig 3 Aerial Map

2. Introduction and Background

A long-range development plan (LRDP) is defined by statute (Public Resources Code [PRC] Section 21080.09) as a "physical development and land use plan to meet the academic and institutional objectives for a particular campus or medical center of public higher education." UCR last approved an LRDP in 2005 and has adopted amendments since then. The 2005 LRDP planned for a student enrollment of 25,000, which it is now close to achieving.

The number of students applying to UCR generally increased between 2010 and 2019. Freshman applications increased by approximately 87 percent (from 26,480 students to 49,516 students) and transfer student applications increased by approximately 97 percent (from 6,372 students to 12,543 students) (University of California [UC] 2019a). UCR identified an enrollment-planning target of approximately 35,000 students (Fall quarter headcount)[1] by the academic year 2035/2036.

Baseline

As of the 2018/2019 academic year, the UCR campus had approximately 4.8 million assignable square feet (asf)[2] (approximately 7 million gross square feet [gsf])[3] of academic buildings and support facilities. This included approximately 1.2 million asf of academic and research space, 1.5 million asf of administrative and support space, 1.9 million asf of student life space (not including outdoor recreation), and 0.2 million asf of corporation yard space. Additionally, in 2018/2019 the campus served approximately 23,922 total students (Fall quarter headcount), including 20,581 undergraduate students and 3,341 graduate students (UCR 2019a). Campus staff included approximately 1,702 academic faculty and staff and 3,037 non-academic staff. In addition, the campus employed approximately 3,996 student workers.

3. 2021 LRDP Overview

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf)[4] of additional academic buildings and support facilities, including student housing. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf)[5] of total academic, research, and support space development by the year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for approximately 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (Fall quarter headcount) by the academic year 2035/2036. It is anticipated that approximately 7,600 faculty and staff would be needed to support academic year 2035/2036 student enrollment. **Table 1** provides a comparison of the projected population and campus development between the 2018/2019 academic year and 2021 LRDP projections (2035/2036).

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[1] Fall quarter headcount is the third week headcount for the academic Fall quarter.

[2] Asf refers to the sum of all areas on all floors of a building assigned to or available for assignment to an occupant or specific use (e.g., classrooms, labs, offices, study facilities) used to accomplish the institution's mission.

[3] Gsf refers to the sum of all areas on all floors of a building included in the outside faces of its exterior walls, including all vertical penetration areas, for circulation and shaft areas that connect one floor to another.

[4] Rounded to the nearest million

[5] Rounded to the nearest million

Table 1 – Baseline and 2021 LRDP (2035/2036) Project Population and Physical Development

Category	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Campus Population			
Undergraduate Student Population (Fall quarter headcount)	20,581	28,000	7,419
Graduate Student Population (Fall quarter headcount)	3,341	7,000	3,659
Total Student Population (Fall quarter headcount)	23,922	35,000	11,078
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	4,739	7,545	2,806
Campus Development (asf/gsf)			
Academics and Research	1,220,283 / 1,830,425	1,700,852 / 2,551,278	480,569 / 720,854
Academic Support	1,458,975 / 2,188,463	2,355,204 / 3,532,806	896,229 / 1,344,344
Student Life (including residential, residential dining, student health, student union, indoor recreation, and athletics)	1,875,963 / 2,813,945	4,198,504 / 6,297,756	2,322,541 / 3,483,812
Corporation Yard	248,279 / 372,419	248,279 / 372,419	0 / 0
Total Campus Development (asf/gsf)	4,803,500 / 7,205,250	8,502,839 / 12,754,259	3,699,339 / 5,549,009
On-Campus Housing Beds			
Residential (beds) (includes Freshman, Triples, Upperclass, and Family housing)	6,511	14,000	7,489

Source: UCR 2021 LRDP Draft Program Model

Notes:

LRDP = Long Range Development Plan

asf = assignable square feet

gsf = gross square feet

2021 LRDP Elements

There are no requirements for the content, organization, or longevity of an LRDP. The UC facilities and planning policy guidelines[6] recommend that LRDPs address four primary elements. Among other topics, these elements are described in more detail below and addressed throughout the proposed 2021 LRDP:

- **Land Use:** Identifies the location of proposed functional land use categories and provides general guidance for locating future structures and uses while maintaining adequate flexibility for future decision making.

---

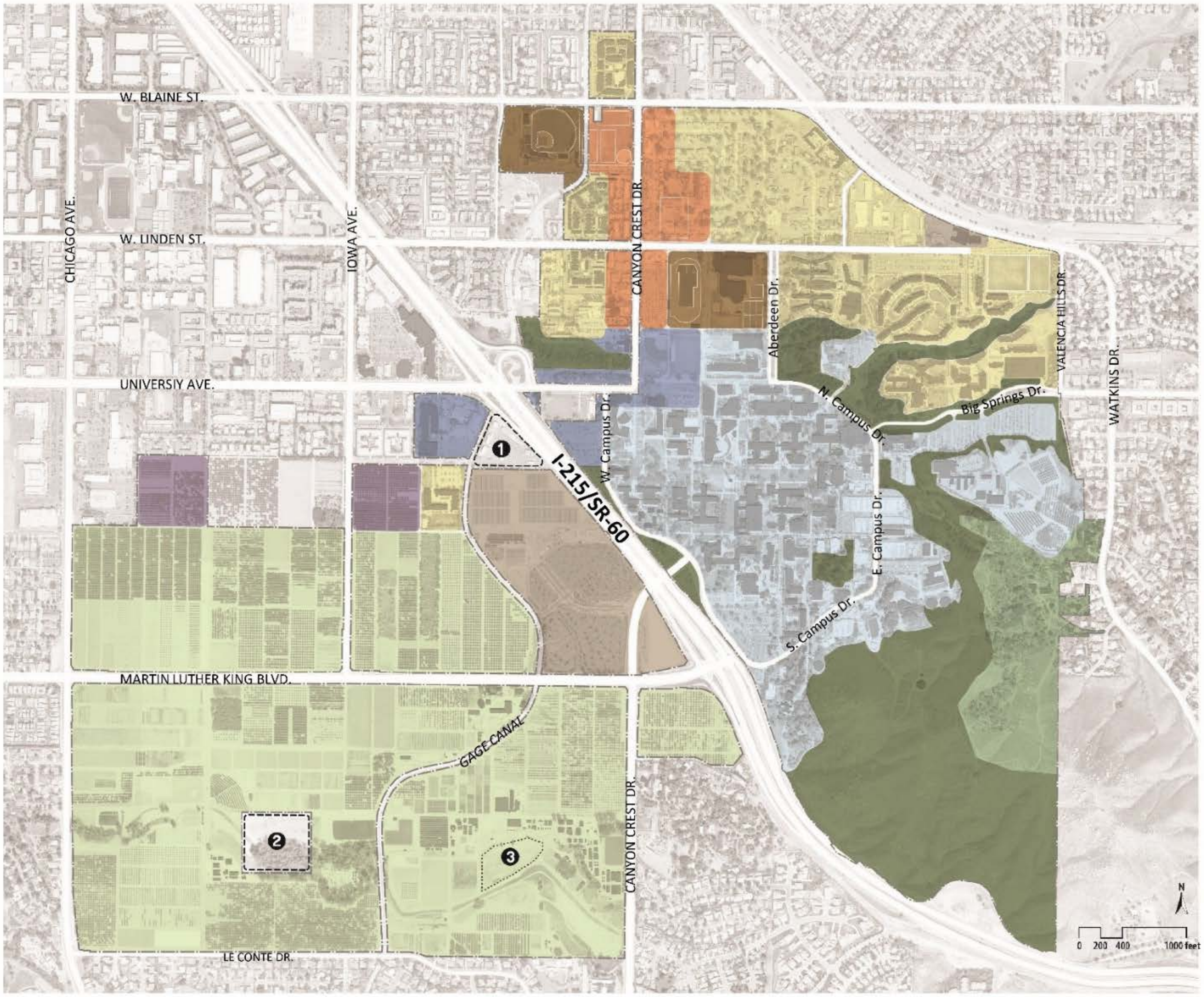
[6] https://www.ucop.edu/construction-services/facilities-manual/volume-2/vol-2-chapter-3.html#3-1

- **Open Space:** Identifies the type and character of campus open spaces, including plazas and courtyards, less formal landscaped areas, and undeveloped natural areas and restoration lands.
- **Mobility:** Shows how people are anticipated to move to and through the campus in the future. All modes of travel are considered.
- **Infrastructure and Sustainability:** Focuses on the campus systems for water, wastewater treatment, storm drainage, sewers, chilled water and steam, electrical distribution, and communications to support sustainable campus growth and resiliency. The capacity of each utility system to accommodate the growing campus population and development needs are broadly identified.

Land Use Descriptions

The proposed 2021 LRDP provides long-term planning for the land uses, activities, and facilities on the main UCR campus. The following land use descriptions outline the general allowable uses within each land use category. Predominant uses can be described by the primary facilities, programs, and/or activities in a geographic area on campus to achieve specific planning objectives. This is not intended to be an exclusive list of uses, and in many instances, additional associated or compatible uses are also allowed within the land use categories. The proposed 2021 LRDP land uses are described below and shown on **Figure 4 – 2021 LRDP Land Use Map**. **Table 2** presents a comparison between land uses in the 2005 LRDP and those proposed in the 2021 LRDP.

Figure 4 – 2021 LRDP Land Use Map



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

🟦 ACADEMICS & RESEARCH
🟪 AGRICULTURAL/CAMPUS RESEARCH
🟩 LAND-BASED RESEARCH
🟫 CAMPUS SUPPORT
🟩 OPEN SPACE RESERVE
🟩 UCR BOTANIC GARDENS
🟫 RECREATION & ATHLETICS
🟨 STUDENT NEIGHBORHOOD
🟧 CANYON CREST GATEWAY
🟦 UNIVERSITY AVENUE GATEWAY
⬚ NON-UCR LAND OF INTEREST

Table 2 – 2005 LRDP versus 2021 LRDP Land Uses

Land Use Designations	2005 LRDP (Acres)		2021 LRDP (Acres)	
	West Campus	East Campus	West Campus	East Campus
Academics & Research	54.3	132.2	0.0	184.3
Campus Support	9.1	11.0	51.0	3.0
Land-based Research	294.9	0.0	419.3	0.0
Open Space Reserve	0.0	130.5	0.0	154.8
Recreation & Athletics	14.1	53.4	0.0	28.7
Student Neighborhood	68.5	100.1	5.4	136.4
2021 LRDP-Specific Land Use Designations[1]				
Agricultural/Campus Research	Not Applicable	Not Applicable	19.4	0.0
UCR Botanic Gardens	Not Applicable	Not Applicable	0.0	43.7
Canyon Crest Gateway	Not Applicable	Not Applicable	0.0	31.9
University Avenue Gateway	Not Applicable	Not Applicable	8.3	21.3
Non-UCR Land of Interest	Not Applicable	Not Applicable	12.8[3]	0.0
2005 LRDP-Specific Land Use Designations[2]				
Open Space	25.2	144.2	Not Applicable	Not Applicable
Campus Reserve	37.3	0.0	Not Applicable	Not Applicable
Non-Institutional Agencies	0.0	12.3	Not Applicable	Not Applicable
Parking	7.9	17.1	Not Applicable	Not Applicable
Totals				
Total Acres by Campus	511.3	600.8	503.4	604.1
Total Acres (Rounded)[4]	1,112		1,108	

Source: UCR GIS database

Notes:

[1] These land use designations are new to the 2021 LRDP and were not used as land use categories under the 2005 LRDP.

[2] The acreage from 2005 LRDP Land Use Designations no longer in use have been incorporated into the proposed 2021 LRDP Land Use Designations as appropriate, e.g. 25 acres of parking lots has been allocated among the new land use areas throughout campus based on location.

[3] Non-UCR Land of Interest is not included in the total acreage under the 2021 LRDP.

[4] The difference in the acreage between the 2005 LRDP and 2021 LRDP is related to more precise GIS mapping, the acquisition of Oban and Falkirk Apartments, and the acquisition of several properties in Frost Court and one on Watkins Avenue next to the Chancellor's residence. Approximately 18 acres of land on the West Campus was also sold to CARB.

Academics & Research (~184.3 acres)

The Academics & Research land use areas are in or adjacent to the core of East Campus, primarily bounded by the campus loop road. This land use designation consists of facilities dedicated to undergraduate and graduate learning and research environments, and daytime student life activities, such as the student union and food services.

The predominant Academics & Research uses may include classrooms; instructional and research laboratories and greenhouses; undergraduate, graduate, and professional schools and associated programs; libraries; advanced scientific research facilities; federal research partnerships; performance and cultural facilities; clinical facilities; and ancillary support facilities, such as general administrative offices, conference rooms, and meeting spaces. Additional uses are those supporting core campus student life activities and food services, such as the Highlander Union Building and The Barn. Secondary permissible uses may include parking, utility infrastructure, and other campus support services.

Campus Support (~54.0 acres)

The Campus Support land use areas would be primarily located on the eastern portion of West Campus, with a small land use area located in the northeast portion of East Campus. Uses may include general campus support services, such as administrative and institutional support functions, including facilities services, public safety, parking and transportation, service yards, maintenance facilities, trade shops, materials handling and storage, inclusive of hazardous materials, shipping and receiving, utility plants and systems, fleet storage, parking, and other support functions.

Land-based Research (~419.3 acres)

The Land-based Research land use areas are located on West Campus and retain the existing agricultural land-based teaching and research fields.

The predominant Land-based Research uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses may include parking, storage, utility infrastructure, and related support services/facilities.

Open Space Reserve (~154.8 acres)

The Open Space Reserve land use designation would recognize, protect, and enhance areas that have ecological or aesthetic value to campus, including those subject to special development constraints due to native or endangered species habitats, steep or unique terrain such as arroyos, and riparian corridors or other natural and sensitive features. This land use designation is intended to recognize that these areas are major contributors to UCR’s character and ecology.

The predominant Open Space Reserve uses may include designated hillsides, storm water management infrastructure, habitat restoration and management activities, trails, and minor amenities such as seating and viewing areas, and other features compatible with natural open spaces. Secondary permissible uses may include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities.

Recreation & Athletics (~28.7 acres)

The Recreation & Athletics land uses are concentrated in two areas in the northern portion of East Campus and include the Student Recreation Center (SRC), the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood-scale facilities would be interspersed within student neighborhoods, as indicated in the Student Neighborhood land use, to improve student access, and create a more dynamic student experience into the evenings and on weekends.

The predominant Recreation & Athletics uses may include facilities to accommodate intercollegiate athletics and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses may include parking, food service, administrative areas, office and meeting space, and other supporting uses.

Student Neighborhood (~141.8 acres)

The Student Neighborhood land use areas are predominantly located within the northern portions of East Campus and encompass primarily non-academic uses that facilitate vibrant undergraduate and graduate student learning experiences outside of the classroom environment.

Student Neighborhood land uses are meant to accommodate a diverse array of uses to ensure that student needs are met within an interactive, mixed-use environment. Predominant uses may include student residences for undergraduate and graduate students, and students with families; student services, meeting, and instructional space; food service and retail; and appropriately scaled recreation and athletic facilities. Secondary permissible uses may include childcare and pre-schools proximate to family housing; parking primarily for students; and other residential support services, such as facilities services and public safety.

Agricultural/Campus Research (~19.4 acres)

The Agricultural/Campus Research land use is established to enhance and expand external engagement of UCR’s research, education, and public service mission by providing a principal place for facilities and activities that support the University and the City of Riverside’s aspirations to make and showcase UCR as a recognized center for innovation in agricultural sciences and technology.

The predominant Agricultural/Campus Research uses may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses may include parking, open space, utility infrastructure, and other support uses.

UCR Botanic Gardens (~43.7 acres)

The UCR Botanic Gardens is in the easternmost portion of East Campus, at the foothills of the Box Springs Mountains, and serves a unique role as a venue for a wide array of teaching, research, and demonstration activities. Approximately one-third of the UCR Botanic Gardens land remains natural, featuring the native habitat of the region.

The predominant UCR Botanic Gardens uses may include demonstration gardens, habitat restoration and management, and incidental facilities such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses may include support facilities for the UCR Botanic Gardens and parking.

Canyon Crest Gateway (~31.9 acres)

The Canyon Crest Gateway land use designation is in the northern portion of East Campus, generally bordering Canyon Crest Drive, between Blaine Street to the north and half a block south of Linden Street. The Canyon Crest Gateway is envisioned as a high-density, horizontal and vertical mixed-use gateway environment that will serve as a campus “Main Street” for the campus population to experience on a regular basis. It would accommodate a variety of student housing needs above an array of student and commercial services that would meet the needs of the campus and the local community. This corridor will continue to serve as a multi-modal arterial, but with increased focus on pedestrian-oriented uses at the lower levels of mid-rise structures. Parking would be carefully integrated into this area to allow for safe and convenient access from adjacent side streets that supports the desired pedestrian experience along the main street.

The predominant Canyon Crest Gateway uses may include student housing, recreation and athletics facilities, university-oriented services, administrative and support service offices, neighborhood-serving commercial and retail spaces such as banks, pharmacies, grocery outlets, etc., and restaurants; it would also feature professional services space such as outpatient medical facilities, hotel/conference center(s), alumni center, public safety, and other complementary uses, including affiliated and non-affiliated educational facilities. Secondary permissible uses may include parking, academic uses, open space, and other support uses, as well as multi-modal transportation support facilities.

University Avenue Gateway (~21.3 acres)

The University Avenue Gateway land use designation begins on the northern portion of West Campus and continues east under I-215 along University Avenue into the core of East Campus. The University Avenue Gateway is envisioned as the campus' primary entryway, connecting campus to Downtown Riverside and the broader Riverside community. The area is intended to encourage activities that express a welcoming and identifiable approach to campus, create identity, and that are active during the day, evening, and weekends, with an emphasis on street-oriented interaction and engagement. The University Avenue Gateway is envisioned to include a dense and diverse mix of uses that provide opportunities for greater campus-community interaction, and that collectively reinforce the importance of the area as the terminus of the University Avenue corridor, which connects campus with Downtown Riverside, approximately 3 miles to the west.

The predominant University Avenue Gateway uses may include academic instruction and research facilities above, or in conjunction with, large lecture halls or assembly and exhibition spaces, a visitor's center, food services and cafes, student services, multi-modal transportation support facilities, and other compatible non-UCR uses. Secondary permissible uses may include parking, open space, and other support uses.

Non-UCR Land of Interest (~12.8 acres)

The 2021 LRDP identifies two properties as potential opportunity areas for University-related uses that are not designated land uses and are not currently owned by UCR, should they become available for University use in the future. These are the existing Caltrans Yard at the east end of Everton Place and a City of Riverside-owned, approximately 8.4-acre parcel of land that is landlocked within West Campus. However, at this time there are no specific proposals for this property.

4. Sustainable Development

The UC system first issued its Sustainable Practices Policy in 2004, with the most recent update completed in 2019 (UC 2019b). The UC Sustainable Practices Policy establishes goals in nine areas of sustainable practices: green building design, clean energy, transportation, climate protection, sustainable building operations, waste reduction and recycling, environmentally preferable purchasing, sustainable food service and sustainable water systems. The policies are directed at individual projects and facilities operations throughout the UC system.

As part of UCR's commitment to responsible stewardship of its physical resources, campus development proposals under the proposed 2021 LRDP would continue to be evaluated for their environmental sustainability in accordance with the UC Sustainable Practices Policy, as well as any future programs that are developed by the UC, or UCR specifically, during the planning period for the proposed 2021 LRDP. Several strategies would focus on achieving the goal of reducing UCR's greenhouse gas (GHG) emissions over the planning period of the 2021 LRDP, with an emphasis on sustainable growth and operations.

Greenhouse Gas Emissions Reduction Strategy

UCR is preparing a GHG Reduction Strategy (GHGRS) in conjunction with the 2021 LRDP which would include measures to help reduce GHG emissions levels. The GHGRS is a policy-level document intended to ensure that the 2021 LRDP is compliant with applicable State regulations related to GHG emissions. The GHGRS will establish a baseline inventory of GHG emissions for UCR's main campus for the 2018/2019 Baseline academic year and forecast the emissions resulting from the 2021 LRDP growth by 2035/2036. The forecast will model the maximum planned build out for the land use designations on East and West Campus as defined by the 2021 LRDP, while also accounting for planned GHG reductions from State-level policies and UC sustainability policies.[7]

5. 2021 LRDP Implementation

The proposed 2021 LRDP is a plan to guide development, but it is not an implementation plan. Adoption of the proposed 2021 LRDP does not constitute a commitment to any specific project. Rather, development under the LRDP would occur over time, based on campus needs and funding availability. The UC Regents and/or its delegated authorities must approve each development proposal, as appropriate. At the campus level, the review of campus development proposals is informed by a process that involves input from staff, faculty, and students (and the local community as appropriate). The following provides a brief description of the general process for implementing projects proposed in accordance with the campus LRDP.

Campus Development Review

The design and construction of future projects at UCR would be subject to the campus development review process. In addition to compliance with the California Environmental Quality Act (CEQA), the development review process requires review by campus committees and administrative staff, evaluation of the proposed design and construction documents, and construction inspection and site monitoring during construction. Committees and administrative offices involved in project implementation may include project sponsors, Office of the Vice Chancellor for Planning & Budget, and campus stakeholders, among others.

Although the LRDP is the primary governing planning document for the campus, several other supplemental guidance documents are in place to inform development at UCR (e.g., Physical Design Framework, Campus Design Guidelines). In general, facilities on the UCR campus comply with the design guidelines set forth in these documents. The UCR physical planning process, campus planning documents, and Design Guidelines are presented in greater detail on the UCR website at https://cpp.ucr.edu/physical-planning.

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[7] The GHGRS will be prepared in line with the UC Carbon Neutrality Initiative that commits the UC system to achieving climate neutrality from Scope 1 and Scope 2 emissions sources by 2025 and climate neutrality from specific Scope 3 emission sources by 2050 or sooner (UC 2015).

Tiering Under CEQA

One purpose of the 2021 LRDP is to streamline the environmental review process for future development projects. The 2021 LRDP Environmental Impact Report (EIR) will analyze the environmental effects of the physical development program proposed by the LRDP at a programmatic level, and will provide a basis for “tiering” subsequent environmental documents that address ensuing activities in the program, pursuant to CEQA Guidelines Section 15168(c). CEQA Guidelines Section 15168(c)(5) states, “A Program EIR (PEIR) would be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good, detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the PEIR, and no further environmental documents would be required.” Similarly, if it is determined that a project would not result in new or more severe previously identified significant environmental effects pursuant to PRC Section 21166 and CEQA Guidelines sections 15162 and 15163, subsequent or supplemental review may not be required.

University of California Autonomy and Policies

UCR is a part of the UC, a constitutionally created unit of the State of California. As a State entity, UCR is not subject to municipal plans, policies, or regulations such as county and city general plans or local ordinances. Although there is no formal mechanism for joint planning or coordination, because UCR values its relationship with the local communities, in some cases UCR may consider aspects of local land use plans, policies, and regulations.

The UC is governed by the UC Regents, which under Article IX, Section 9 of the California Constitution have “full powers of organization and governance” subject only to very specific areas of legislative control. The Regents promulgate policy for the UC overall, but certain policymaking, administrative, and operational duties are conferred on the UC President pursuant to the bylaws and various policies adopted by the Regents. New Presidential policy may result from the Regents’ action, changes in law, or new administrative issues within the UC itself. Presidential policies are revised or rescinded based on changes to the Regents’ policy, legal, or societal changes, or administrative changes. For the most part, UC policies that apply to future developments at the UCR campus are in the UC Facilities Manual.[8] Although numerous policies therein apply to campus development, relevant UCR policies will be identified and discussed in the appropriate resource sections in the forthcoming EIR.

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[8] https://www.ucop.edu/construction-services/facilities-manual/index.html

III. ANTICIPATED PUBLIC APPROVALS

The Board of the Regents of the UC must act in a public meeting on the following Regents Items when considering the 2021 LRDP:

- Certify the 2021 LRDP EIR
- Adopt the Mitigation Monitoring and Reporting Program identified in the 2021 LRDP EIR
- Adopt the CEQA Findings and any Statement of Overriding Considerations if necessary
- Approve the proposed 2021 LRDP including the GHGRS, an alternative, or a variation of these plans

As individual projects are proposed, site- and condition-specific permits and/or approvals may be needed depending on the circumstances. The following public agencies may be required to issue permits or approve certain aspects of an individual project:

- Division of the State Architect – review plans in compliance with accessibility compliance
- State of California Fire Marshal – review plans in compliance with fire/life safety
- United States (U.S.) Army Corps of Engineers – permit related to discharge of fill material to waters of the U.S. (as needed)
- U.S. Fish and Wildlife Service – compliance with the federal Endangered Species Act for potential take of listed species (as needed)
- California Department of Fish and Wildlife (CDFW) – compliance with the California Endangered Species Act for potential take of state-listed species (as needed); permit for any work in a river, stream, or lake or its tributaries (as needed)
- Caltrans – permit to provide temporary access for construction within Caltrans rights-of-way
- Santa Ana Regional Water Quality Board (SARWQCB) – Coverage under general construction and industrial storm water permits; Waste Discharge Requirements for discharges to waters of the State (as needed)
- South Coast Air Quality Management District (SCAQMD) – authority to construct and permit to operate for any stationary sources (e.g., generators and fume hoods) of air contaminants emissions
- City of Riverside – potential review and approval of off-site access, roadway, bicycle paths, sidewalk improvements, utility improvements, and any encroachment permits

IV. HAVE CALIFORNIA NATIVE AMERICAN TRIBES TRADITIONALLY AND CULTURALLY AFFILIATED WITH THE PROJECT AREA REQUESTED CONSULTATION PURSUANT TO PUBLIC RESOURCES CODE SECTION 21080.3.1?

To date, UCR has received six requests for project notification pursuant to Assembly Bill (AB) 52 (from the Agua Caliente Band of Cahuilla Indians, Torres-Martinez Desert Cahuilla Indians, Cahuilla Band of Indians, Pechanga Band of Luiseño Indians, San Manuel Band of Mission Indians, and Rincon Band of Luiseño Indians). On May 2020, UCR provided these tribes with notification of the proposed 2021 LRDP. As of the date of this Initial Study, three requests for consultation pursuant to AB 52 for the proposed 2021 LRDP have been received. Consultation will be ongoing. See Section VII.18, Tribal Cultural Resources, of this Initial Study for additional discussion.

V. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

☐ Aesthetics
■ Agriculture and Forestry Resources
■ Air Quality
■ Biological Resources
■ Cultural Resources
■ Energy
■ Geology and Soils
■ Greenhouse Gas Emissions
■ Hazards and Hazardous Materials
■ Hydrology and Water Quality
☐ Land Use and Planning
☐ Mineral Resources
■ Noise
☐ Population and Housing
■ Public Services
■ Recreation
■ Transportation
■ Tribal Cultural Resources
■ Utilities and Service Systems
■ Wildfire
■ Mandatory Findings of Significance

VI. DETERMINATION

Based on this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, the project impacts were adequately addressed in an earlier document or there will not be a significant effect in this case because revisions to the project have been made or project-specific mitigation measures have been proposed that will avoid or reduce any potential significant effects to a less than significant level and recommend that a MITIGATED NEGATIVE DECLARATION be prepared.

■ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

	July 7, 2020
Signature	Date
Stephanie Tang	Campus Environmental Planner
Printed Name	Title

VII. EVALUATION OF ENVIRONMENTAL IMPACTS

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed 2021 LRDP. This 2021 LRDP Environmental Checklist utilizes the following terms to describe the level of significance of impacts identified in the environmental analysis:

1. A “No Impact” conclusion means that the impact does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone).

2. A “Less Than Significant Impact” refers to impacts resulting from implementation of the proposed 2021 LRDP that would not exceed the defined standards of significance.

3. A “Potentially Significant Impact” means that further evaluation and relevant technical analyses are required to determine the significance conclusion for that particular threshold topic in the forthcoming Program EIR.

ENVIRONMENTAL CHECKLIST

1. Aesthetics

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐

Less Than Significant Impact. Scenic vistas for the campus include views of the Box Springs Mountains approximately 1 mile to the north, northeast, east, and southeast of campus; Mt. Rubidoux approximately 3 miles to the west; the San Bernardino Mountains approximately 15 miles to the northeast; and the San Gabriel Mountains approximately 20 miles to the northwest. These scenic vista areas can be seen, in general, from existing and proposed Open Space Reserve land use areas and would not be directly impacted by campus development. In other areas of the East Campus and West Campus, the existing views of the distant mountains are intermittent and substantially obstructed by campus structures under existing conditions. The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities, including student housing. Development of new facilities in the Student Neighborhood, Academics & Research, University Avenue Gateway, and Canyon Crest Gateway areas may diminish views of the distant Box Springs Mountains from public vantage points, though not substantially. While impacts to scenic vistas are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

No Impact. The UCR main campus is bisected by the I-215/SR 60 freeway and is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west, none of which are officially designated or identified as eligible for designation as a State scenic highway (Caltrans 2019).

The proposed 2021 LRDP is not in nor visible from any State scenic highway; therefore, implementation of the proposed 2021 LRDP would not impact scenic resources within a State scenic highway. **No impacts** are anticipated, and no mitigation is required. This issue will not be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable regulations governing scenic quality?	☐	☐	☒	☐

Less Than Significant Impact. The campus is divided into two main areas: West Campus and East Campus. Most of the approximately 504-acre West Campus land area is used currently for agricultural teaching and research fields of citrus groves, and encompasses Parking Lot 30; a multi-story building in an urban area north of the agricultural fields (University Extension); and International Village, a two-story housing complex surrounded by agricultural fields to the west and south.

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are located within the Academic Center outlined by Campus Drive, including most of the campus' original buildings. The northern half of East Campus is devoted to student housing and recreation. Except for areas designated as Open Space or Recreation & Athletics, the existing aesthetic form of the East Campus is urban, surrounded by vehicular roadways and interspersed with multi-use pathways, courtyards, and landscaping. Most parking areas are paved surface lots on the edges of East Campus or near housing facilities. On-campus housing ranges from single-story duplexes in a suburban-style setting to mid-rise apartment/dorm complexes with pedestrian-oriented courtyards (three to five stories). Midcentury buildings in the Academic Center tend to employ brick and concrete materials, Brutalist style architecture, and a mixture of low-, mid-, and high-rise buildings. This area also contains the Carillon Mall and the bell tower. Buildings constructed in the modern era employ similar brick and concrete facades.

The 2021 LRDP proposes a net increase in campus development of approximately 3.7 million asf (approximately 6 million gsf). Most of the facilities developed under the proposed 2021 LRDP, including academic and research facilities, administration and support, and student life and housing, would be in the East Campus or in areas of the West Campus that contain an existing built environment. Development under the proposed 2021 LRDP would include physical changes to the LRDP area that would alter its visual character and quality and increase overall massing and density within the UCR main campus. New and redeveloped facilities constructed under the framework of the proposed 2021 LRDP would be subject to the design guidelines set forth in documents such as the Physical Design Framework and Campus Design Guidelines. However, new development under the proposed 2021 LRDP has the potential to alter the existing visual quality and character of the existing campus. While these changes are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Less Than Significant Impact. Current sources of daytime glare on the UCR main campus area include glare-inducing materials such as glass and non-painted metal. Current sources of nighttime light and glare include roadway streetlights; headlights and taillights from vehicles traveling on roadways in or near campus or entering or exiting parking lots or parking garages; security lighting in parking areas, outside buildings, and pathways; and lighting associated with the outdoor athletic and recreation facilities and playfields. Implementation of the proposed 2021 LRDP would result in a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities, including student housing and thus would generate light and glare from building materials, security lighting, and vehicle traffic generated by students, faculty, staff, and visitors.

Facilities developed under the proposed 2021 LRDP would be subject to the Campus Design Guidelines and the Campus Landscape Master Plan; they would include features to reduce light and glare effects, whenever feasible. However, impacts may occur based on location and density of light sources or use of building materials, lighting from outdoor athletic and recreation facilities, parking areas, and from increased vehicular traffic at night. While impacts from new lights and glare are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

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2. Agriculture and Forestry Resources

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☒	☐	☐	☐

Potentially Significant Impact. The UCR main campus contains land categorized as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. Most of the categorized Farmland is in West Campus, though a small area is in East Campus near the USDA Salinity Laboratory north of the Botanic Gardens (California Department of Conservation [DOC] 2016). The remaining acreage is considered Urban and Built-Up Land or Other Land (in East Campus). The broad definitions of these categories from the Farmland Mapping and Monitoring Program are provided below:

> "Prime Farmland" is irrigated land with the best combination of physical and chemical features able to sustain long term production of agricultural crops. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
>
> "Farmland of Statewide Importance" is irrigated land similar to Prime Farmland that has a good combination of physical and chemical characteristics for the production of agricultural crops. This land has minor shortcomings, such as greater slopes or less ability to store soil moisture than Prime Farmland. Land must have been used for production of irrigated crops at some time during the four years prior to the mapping date.
>
> "Unique Farmland" is land of lesser quality soils that is usually irrigated but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.
>
> "Urban and Built-Up Land" is occupied by structure with a building density of at least one unit for every 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.
>
> "Other Land" is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded by urban development and greater than 40 acres is mapped as other land (DOC 2016).

Most farmland that fall under these categories would be located on areas categorized as Agricultural/Campus Research or Land-Based Research under direction of the 2021 LRDP. Agricultural/Campus Research would comprise approximately 19.4 acres of campus land and Land-Based Research would comprise approximately 419.3 acres of campus land. The Agricultural/Campus Research land use area would provide space to enhance and expand external engagement of UCR's research, education, and public service mission. Agricultural/Campus Research land uses would support the shared UCR and City of Riverside aspirations to build and show case Riverside as a center for innovation in agricultural sciences and technology.

Agricultural/Campus Research facilities may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses include parking, open space, utility infrastructure, and other support uses. Land-based Research land uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses also include parking, storage, utility infrastructure, and related support services/facilities. Where these potential uses may be developed is unknown at this time. Therefore, the proposed 2021 LRDP may convert land designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland from farmland use to non-farmland uses. The proposed 2021 LRDP may have a **potentially significant impact** on Farmland, and this topic will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒

No Impact. Implementation of the proposed 2021 LRDP would result in the potential conversion of existing agricultural teaching and research fields in the Land-based Research and Agricultural/Campus Research on the West Campus to non-agricultural uses. UCR, a public university, is zoned for public facilities as depicted in the City of Riverside's Zoning Map (City of Riverside 2007a), which is intended for office and public uses of property and related activities, including civic center, public schools, public buildings, parks and recreation facilities, and waterworks and drainage facilities (City of Riverside 2019a). UCR is designated public facilities/institutional on the City of Riverside's Land Use Policy Map in its 2025 General Plan (City of Riverside 2019a). Although agricultural uses and related activities are permitted in the City of Riverside's public facilities zoning designation of the UCR main campus, no portion of the UCR main campus is specifically zoned for agricultural use in the City of Riverside's Zoning Map. Furthermore, UCR is part of the UC, a constitutionally created entity of the State of California. As a constitutional entity, the UC is not subject to municipal regulations, such as Riverside County and City of Riverside general plans. Williamson Act contracts are formed between a county or city and a landowner for the purpose of restricting specific parcels of land to agricultural or related open space use. Private land within locally designated agricultural preserve areas is eligible for enrollment under a contract (DOC 2020a). There are no UCR lands designated under a Williamson Act contract on campus. Therefore, the proposed 2021 LRDP would have **no impact**, and further analysis of these issues in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

No Impact. The UCR main campus is not zoned as forest land or timberland and does not meet the definition of forest land or timberland under PRC Section 12220(g) or 4526, or Government Code Section 51104(g). No forest land would be converted or lost with the implementation of the proposed 2021 LRDP. Therefore, the proposed 2021 LRDP would have **no impact**, and further analysis of these issues in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

No Impact. The UCR main campus is not zoned as forest land and does not meet the definition of forest land under PRC Section 12220(g). No forest land would be converted or lost with the implementation of the proposed 2021 LRDP. Therefore, the proposed 2021 LRDP would have **no impact**, and further analysis of these issues in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☒	☐	☐	☐

Potentially Significant Impact. Conversion of Farmland is addressed in criterion 2(a). The proposed 2021 LRDP may have a **potentially significant impact** on Farmland, and this topic will be analyzed further in the forthcoming EIR.

The proposed 2021 LRDP would have **no impact** on forest land, and further analysis of the conversion of forest land to non-forest use in the forthcoming EIR is not warranted.

3. Air Quality

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project conflict with or obstruct implementation of the applicable air quality plan?	☒	☐	☐	☐

Potentially Significant Impact. UCR is in the South Coast Air Basin (Basin), which is under the jurisdiction of SCAQMD. The local air quality management agency is required to monitor air pollutant levels to ensure that applicable air quality standards are met, and, if they are not met, to develop strategies to meet the standards. The Basin is designated a non-attainment area for the federal standards for ozone and particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$) and the State standards for ozone, particulate matter less than 10 micrometers in diameter (PM_{10}), and $PM_{2.5}$. The Basin is designated unclassifiable or in attainment for all other federal and State standards.

SCAQMD has adopted an Air Quality Management Plan that provides a strategy for the attainment of State and federal air quality standards (SCAQMD 2017). The proposed 2021 LRDP would incrementally accommodate approximately 7,419 undergraduate students, 3,659 graduate students, 843 academic faculty and staff, and 1,963 non-academic staff, resulting in a net increase to the campus population of approximately 13,884 people by the 2035 horizon year.

In its 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), the Southern California Association of Governments (SCAG) forecasts that the City of Riverside's population will increase to 386,600 by 2040 — an increase of 58,499 persons relative to the 2019 population (SCAG 2015) of 328,101. A conservative approach assumes that all new students, faculty, and staff would be new residents that would move into the area from outside of the region. An increase of approximately 13,884 residents would contribute approximately 24 percent to the City of Riverside's projected population growth (13,884 UCR-affiliated population/58,499 project city population growth). It is likely that a portion of the additional students and staff would commute to campus from neighboring cities or would already live within the City of Riverside, resulting in less direct population growth.

Rincon will utilize the California Emissions Estimator Model version 2016.3.2 to assess potential air quality impacts of the proposed 2021 LRDP. The analysis, conclusions, and any mitigation requirements will be incorporated into the forthcoming EIR. Therefore, implementation of the proposed 2021 LRDP may conflict with or obstruct implementation of the applicable air quality plan. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	☒	☐	☐	☐

Potentially Significant Impact. UCR is in the Basin, under the jurisdiction of the SCAQMD. The local air quality management agency is required to monitor air pollutant levels to ensure that applicable air quality standards are met, and, if they are not met, to develop strategies to meet the standards. The Basin is designated a non-attainment area for the federal standards for ozone and $PM_{2.5}$ and the State standards for ozone, PM_{10}, and $PM_{2.5}$. The Basin is designated unclassifiable or in attainment for all other federal and State standards.

The 2021 LRDP proposes an increase in the number of students, faculty, and staff by academic year 2035/2036 and the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR campus. Construction of the proposed new buildings would result in short-term air pollution emissions associated with activities such as equipment use, construction worker trips, and delivery and hauling of construction supplies and debris (SCAQMD 2005). Operation of the UCR main campus under the proposed 2021 LRDP would result in long-term increases in air pollutants due to increased vehicle trips associated with the proposed campus population growth and emissions from energy consumption and area sources, such as landscaping equipment, in the expanded campus facilities.

Overall, the proposed 2021 LRDP would generate both short-term construction emissions and long-term operational emissions, which could result in significant impacts. Emissions have the potential to contribute to an existing air quality violation or cumulatively considerable net increases of criteria pollutants for which that region is in non-attainment. An air quality analysis will be prepared for the proposed 2021 LRDP to assess potential air quality impacts. The analysis, conclusions, and any mitigation requirements will be incorporated into the forthcoming EIR. Therefore, implementation of the proposed 2021 LRDP may result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project expose sensitive receptors to substantial pollutant concentrations?	☒	☐	☐	☐

Potentially Significant Impact. The 2021 LRDP proposes an increase in the number of students, faculty, and staff by academic year 2035/2036 and the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR main campus, including new housing for students. Construction of the proposed new buildings would result in short-term air pollution emissions, primarily diesel emissions, associated with activities such as equipment use, construction worker trips, and delivery and hauling of construction supplies and debris. These emissions could potentially impact existing sensitive receptors on the campus.

An air quality analysis will be prepared for the proposed 2021 LRDP to assess potential air quality impacts to sensitive receptors. A Health Risk Assessment will also be prepared in the forthcoming EIR. The analysis, conclusions, and any mitigation requirements will be incorporated into the forthcoming EIR. Therefore, implementation of the proposed 2021 LRDP may result in exposure of sensitive receptors to substantial pollutant concentrations. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Less Than Significant Impact. The California Environmental Protection Agency (CalEPA) and CARB *Air Quality and Land Use Handbook: A Community Health Perspective* identifies land uses associated with odor complaints to be sewage treatment plants, waste transfer stations, recycling facilities, petroleum refineries, biomass operations, coating operations, autobody shops, landfills, livestock operations, foundries, fiberglass manufacturing, rendering plants (CalEPA and CARB 2005). The proposed 2021 LRDP contains similar uses to the existing campus operations such as academic facilities, agricultural research, residence halls, recreation, parking, and other ancillary uses. Agricultural uses on West Campus include agricultural field research, instructional and research laboratories, greenhouses, and services supporting agricultural research. These agricultural uses do not include livestock that typically generate odors (e.g., manure).

Demolition and construction activities associated with the proposed 2021 LRDP may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the proposed project's (long-term operational) uses. However, these are not identified as uses typically associated with significant odor emission impacts. Furthermore, the construction odor emissions would be temporary, short-term, and intermittent in nature, would cease upon completion of the respective phases of future construction activities, and generally confined to the immediate area of construction activities. Consequently, construction related impacts are considered **less than significant**, and no mitigation is required. Future proposed projects would have to comply with SCAQMD Rule 402, which prohibits the discharge of air contaminants that would cause injury, detriment, nuisance, or annoyance to the public. This issue will not be discussed further in the forthcoming EIR.

4. Biological Resources

Rincon Consultants, Inc. completed the following assessment to evaluate existing site conditions and determine potential impacts to sensitive biological resources that may result from implementation of the proposed 2021 LRDP. The proposed 2021 LRDP covers the approximately 1,108-acre UCR main campus, herein referred to as the study area. The analyses provided below are based on the Biological Resource Constraints report prepared by Psomas in March 2019.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☒	☐	☐	☐

Potentially Significant Impact. Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the United States Fish and Wildlife Service under the federal Endangered Species Act; those considered Species of Concern by the U.S. Fish and Wildlife Service; those listed or candidates for listing as Rare, Threatened, or Endangered by the CDFW under the California Endangered Species Act and Native Plant Protection Act; animals designated as Fully Protected by the California Fish and Game Code; animals listed as Species of Special Concern by the CDFW; CDFW Special Plants, specifically those with California Rare Plant Ranks (CRPR) of 1B, 2, 3, and 4 in the California Native Plant Society Inventory of Rare and Endangered Vascular Plants of California; and species identified as sensitive by the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP, County of Riverside 2003).

Forty-one special status plant species have been reported within five miles of the study area. Of these, marginally suitable habitat for four federal and/or State-listed endangered or threatened species occurs within the naturally vegetated areas present in the study area. Munz’s onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), Nevin’s barberry (*Berberis nevinii*), and slenderhorned spineflower (*Dodecahema leptoceras*) all have low potential to occur (Psomas 2019a).

Additionally, 14 species with a CRPR ranking of 1A, 1B, or 2B also have low potential to occur in the study area. These 14 species are chaparral sand-verbena (*Abronia villosa* var. *aurita*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), Parry’s spineflower (*Chorizanthe parryi* var. *parryi*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), snake cholla (*Cylindropuntia californica* var. *californica*), many-stemmed dudleya (*Dudleya multicaulis*), mesa horkelia (*Horkelia cuneata* var. *puberula*), California satintail (*Imperata brevifolia*), Parish’s desert-thorn (*Lycium parishii*), Brand’s star phacelia (*Phacelia stellaris*), chaparral ragwort (*Senecio aphanactis*), salt spring checkerbloom (*Sidalcea neomexicana*), prairie wedge grass (*Sphenopholis obtusata*), and San Bernardino aster (*Symphyotrichum* *defoliatum*). One CRPR 4.3 species, Robinson's peppergrass (*Lepidium virginicum* ssp. *robinsonii*), has been observed within the southeastern portion of the study area, but plant species with a CRPR of 3 or 4 are not typically considered constraints on development. All the above-mentioned species are only expected to occur within the naturally vegetated areas present in the study area (Psomas 2019a).

Fifty-six special-status wildlife species occurrences were tracked within 5 miles of the study area. Five species are federally and/or State-listed endangered or threatened are candidates for listing have moderate potential to occur, including: Riverside fairy shrimp (*Streptocephalus woottoni*), Swainson's hawk (*Buteo swainsoni*), coastal California gnatcatcher (*Polioptila californica californica*), least Bell's vireo (*Vireo bellii pusillus*), and Stephens' kangaroo rat (*Dipodomys stephensi*). Four basins, which are mapped as freshwater ponds, are in the western portion of campus and contained surface water for extended periods of time (Psomas 2019a). The unlined basins provide marginally suitable habitat for Riverside fairy shrimp. Least Bell's vireo could occur within the mixed riparian vegetation and the mulefat thicket, and the coastal California gnatcatcher could occur in the brittle bush scrub, rock outcrops, sage scrub restoration, mixed scrub, and prickly pear scrub in the naturally vegetated areas on campus. Additionally, marginally suitable habitat for Stephens' kangaroo rat occurs in the annual grassland areas and Swainson's hawk may forage in the larger campus open space areas, but do not typically nest in the project region.

Three species which are considered California Species of Special Concern, Watch List, and Fully Protected may also occur in the study area. Western spadefoot (*Spea hammondii*), burrowing owl (*Athene cunicularia*), and the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) all have potential to occur (Psomas 2019a).

In addition, the following special status species have potential or limited potential to occur due to the presence of suitable or marginally suitable habitat: San Diego banded gecko (*Coleonyx variegatus abbottii*), coast horned lizard (*Phrynosoma blainvillii*), orange-throated whiptail, coastal whiptail (*Aspidoscelis tigris stejnegeri*), southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), two striped garter snake (*Thamnophis hammondii*), red-diamond rattlesnake (*Crotalus ruber*), white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*), southern California rufouscrowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Artemisiospiza belli belli*), yellow-breasted chat (*Icteria virens*), yellow warbler (*Setophaga petechia*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), southern grasshopper mouse (*Onychomys torridus ramona*), San Diego black tailed jackrabbit (*Lepus californicus bennettii*), western yellow bat (*Lasiurus xanthinus*), pallid bat (*Antrozous pallidus*), and American badger (*Taxidea taxus*) (Psomas 2019a).

Due to the potential for sensitive plant and wildlife species to occur in the study area, future development within the study area could result in habitat removal/damage or by direct and/or indirect impacts during construction. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☒	☐	☐	☐

Potentially Significant Impact. The CDFW *California Sensitive Natural Communities* list identifies sensitive natural communities throughout California, based in part on global and State rarity ranks. Natural communities having a rank of 1 to 3 are generally considered sensitive, though some communities with other ranks may also be considered sensitive. Twenty-three vegetation communities were identified in the study area (Psomas 2019a). Of these, one is considered sensitive by the CDFW: prickly pear scrub. Prickly pear scrub occurs naturally on the slopes along the UCR Botanical Gardens Road and in a small patch in the western portion of the study area. Vasey's prickly-pear (*Opuntia vaseyi*) dominates, interspersed with cholla (*Cylindropuntia* sp.) and brittle bush (Psomas 2019a). Approximately 8 acres of mixed riparian habitat is also present in the study area. CDFW does not consider this habitat a sensitive natural community but impacts to this community may be considered significant due to the potential for sensitive wildlife species to occur.

Future development in the study area could impact prickly pear scrub and/or mixed riparian vegetation through habitat removal/damage or by direct and/or indirect impacts during construction. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☒	☐	☐	☐

Potentially Significant Impact. Section 404 of the federal Clean Water Act (CWA) regulates activities affecting water resources under the jurisdiction of the U.S. Army Corps of Engineers. Waters of the U.S. under the jurisdiction of the U.S. Army Corps of Engineers include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce.

Additionally, Section 401 of the CWA provides the Regional Water Quality Control Board (RWQCB) with the authority to regulate any proposed federally permitted activity that may affect water quality. The RWQCB also has jurisdiction over isolated wetlands and waters under the Porter-Cologne Water Quality Control Act. Waterways are also regulated through Section 1602 of the California Fish and Game Code, which deals with activities affecting water resources under the jurisdiction of the CDFW. The CDFW has jurisdictional authority over resources associated with rivers, streams, and lakes. Impacts to any jurisdictional waterways described above typically require permits from the listed agencies including a Section 404 permit and a Lake or Streambed Alteration Agreement. Section 6.1.2 of the MSHCP describes the process to protect species associated with riparian/riverine areas and vernal pools. As defined in the MSHCP, riparian/riverine areas are lands which contain habitat dominated by trees, shrubs, persistent emergent, or emergent mosses and lichens, which occur close to or depend on a nearby freshwater source or areas that contain a freshwater flow during all or a portion of the year.

Potential jurisdictional features were identified during the desktop review and initial survey completed by Psomas in December 2018, but a formal jurisdictional delineation was not completed. These features include the University Arroyo, including its tributaries, six basins, and the storm drain system. The University Arroyo runs along Big Springs Road, North Campus Drive, and University Avenue which enters the Gage Basin (western end of the arroyo) and then the City of Riverside storm drain system, which ultimately connects to the Santa Ana River and then to the Pacific Ocean. Portions of this drainage have been channelized and are diverted underground via culverts. Additionally, a tributary of the arroyo extends from the hills south of the UCR main campus and other small drainage features are in the hills in the southeastern corner of the campus. Culverts are located at the downstream ends of these features at I-215. There is also a tributary between Glen Mor, Pentland Hills, and Lothian residence halls which is surrounded by riparian and sage scrub habitat that has been planted as part of a restoration effort. An arroyo also runs through the northern edge of the UCR Botanic Gardens, along the road leading to the garden, and into the unlined UCR Botanic Gardens basin. Four more basins are mapped as freshwater ponds in the western portion of campus and contained surface water at the time of the 2018 survey (Psomas 2019a). Some basins are concrete-lined and others are soft-bottomed. A lined, artificial basin adjacent to undeveloped open space in the southeastern portion of the study area contained surface water at the time of the 2018 survey. These features are considered potentially jurisdictional and many of them may be considered riparian/riverine resources regulated under the MSHCP (Psomas 2019a). Additionally, drainage features present in the hills in the southeastern corner of the study area flow underground at the I-215. If these features connect to the City of Riverside storm drain system and ultimately the Santa Ana River, they may also be considered waters of the U.S. (Psomas 2019a).

Drainages in the study area contain a bed and bank where water flows during the year and/or have riparian vegetation, and therefore are likely subject to the jurisdiction of the CDFW and considered waters of the State under the jurisdiction of the SARWQCB.

Due to the presence of jurisdictional waters, future development in the study area could result in direct and/or indirect impacts during construction. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☒	☐	☐	☐

Potentially Significant Impact. UCR is located at the edge of urban development in the eastern portion of the city of Riverside and is isolated from natural areas to the north, west, and south. The southeast corner of the study area includes undeveloped open space areas linking the Box Springs Mountains to the northeast with Sycamore Canyon Wilderness Park to the southwest. The Western Riverside MSHCP identifies the southeast portion of the study area an MSHCP Criteria Area (Criteria Cell 634). Conservation in this cell will contribute to assembly of the MSHCP Proposed Constrained Linkage 7, which is the only connection between existing core habitat in Sycamore Canyon Wilderness Park to the southwest and existing noncontiguous habitat block A in the Box Springs Mountains to the northeast. Although UCR is not a signatory of the MSHCP, any future development in this southeastern portion should minimize effects on the wildlife movement corridor identified by the MSHCP. Furthermore, even though the main study area is developed, the University Arroyo, Gage Canal, and the drainage south of Martin Luther King Boulevard may provide opportunities for local wildlife movement. Wildlife may also travel through the agricultural portions of West Campus (County of Riverside 2003).

Implementation of the proposed 2021 LRDP could impact wildlife movement if future development would inhibit or restrict wildlife in these areas. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐

Less Than Significant Impact. UCR is a part of the UC, a constitutionally created unit of the State of California. As a State entity, UCR is not subject to municipal plans, policies, or regulations such as county and city general plans or local ordinances. Nonetheless, UCR values biological resources such as mature trees and native habitat. Currently, no tree preservation policy or ordinance is in place for campus projects. A Tree Replacement Guidelines document is being prepared for campus projects and it includes applicable tree replacement for the removal of specified trees. The native habitat areas are primarily within the proposed 2021 LRDP Open Space Reserve designation where land forms and uses include hillsides; storm water management infrastructure; habitat restoration and management activities; trails, and small facilities such as seating and viewing areas and other amenities compatible with natural open spaces. Secondary permissible uses include facilities that support campus open space resources, such as maintenance roads, storage structures, and incidental field research facilities.

The Riverside County Habitat Conservation Agency (RCHCA) acquires and manages habitat for the Stephens' kangaroo rat and other associated special status species[9]. The RCHCA Stephens' Kangaroo Rat Habitat Conservation Plan (HCP) was developed to meet the requirements of the program's federal Endangered Species Act Section 10(a) permit and is managed by the RCHCA. The HCP establishes a reserve system where activities in the core reserve areas are limited and/or restricted. UCR does not fall within one of the designated RCHCA reserve areas (RCHCA 2018). Potential impacts are less than significant through the implementation of the RCHCA. Impacts to trees on campus shall comply with the Tree Replacement Guidelines once this document is published. Impacts to local policies or ordinances protecting biological resources would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

Less Than Significant Impact. The Western Riverside MSHCP was approved and adopted by Riverside County in 2003 as a comprehensive, multi-jurisdictional HCP focusing on conservation of both species and associated habitats to address biological and ecological diversity conservation needs in Western Riverside County. In addition to constituting an HCP pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act of 1973, the MSHCP also serves as a Natural Communities Conservation Plan under the Natural Communities Conservation Planning Act of 1991. The plan provides a coordinated reserve system and implementation program that facilitates the preservation of biological diversity and maintenance of the region's quality of life. The Western Riverside County MSHCP boundaries encompass approximately 1.26 million acres. UCR is not a permittee to the Western Riverside MSHCP and therefore is not subject to the conservation efforts established in the plan. However, UCR is subject to compliance with certain sections of the MSHCP as described below, and the following analysis discusses how the proposed 2021 LRDP complies with the MSHCP.

The UCR main campus is located within the Western Riverside County MSHCP boundaries and is adjacent to conservation target areas including the Box Springs Mountains and Sycamore Canyon Park. Additionally, the southeast portion of the campus is part of the Area Plan Subunit 2: Sycamore Canyon – West and is considered an MSHCP Criterion Area (Criteria Cell 634). Conservation in Criteria Cell 634

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[9] https://rchca.us/31/About-RCHCA

contributes to assembly of Proposed Constrained Linkage 7 and focuses on upland scrub habitat. Areas conserved within Criteria Cell 634 connects to upland scrub habitat proposed for conservation in Criteria Cell 635 in the Highgrove Area Plan to the east and in Criteria Cell 719 to the south. Conservation within Criteria Cell 634 will be approximately five percent of the Cell focusing in the eastern portion of the Cell. The southern portion of East Campus is within the western portion Criteria Cell 634, not the eastern portion of the Cell called out for conservation (eastern portion of Criteria Cell 634 is outside of the campus boundary and under the City of Riverside's jurisdiction). Additionally, the proposed 2021 LRDP land use in the western portion of Criteria Cell 634 is Open Space Reserve, where land forms and uses primarily include hillsides; storm water management infrastructure; habitat restoration and management activities; trails, and small facilities such as seating and viewing areas and other amenities compatible with natural open spaces. Secondary permissible uses may include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities. Since most of the southeast hills would remain undisturbed with no major facilities allowed within the Open Space Reserve, wildlife movement within and across the southeast hills would be largely unaffected by implementation of the proposed 2021 LRDP (County of Riverside 2003).

At this time, no specific campus projects are proposed, and future specific campus projects would be subject to compliance with Sections 6.1.2 (Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools), 6.1.3 (Protection of Narrow Endemic Plant Species), 6.3.2 (Additional Survey Needs and Procedures), and 6.1.4 (Guidelines Pertaining to the Urban/Wildlands Interface) of the MSHCP. Based on the above discussion, the proposed 2021 LRDP would not conflict with the provisions of an adopted HCP, Natural Community Conservation Plan, or other approved local, regional, or State HCP.

Although not a signatory of the MSHCP, UCR is given the option to use the MSHCP as a Participating Special Entity. If processing a project under the MSHCP, UCR would need to follow all aspects of the MSHCP for that project. However, if UCR chooses not to process a project under the MSHCP, the project would have to be processed under traditional consultation/permitting mechanisms. Regardless, any campus project in the plan area should ensure that it does not conflict with the provisions of the plan. Given the above discussion, impacts are considered to be **less than significant** and further discussion in the forthcoming EIR is not warranted.

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5. Cultural Resources

Rincon Consultants completed the following assessment to evaluate existing site conditions and determine potential impacts to cultural resources that may result from implementation of the proposed 2021 LRDP. The LRDP covers the approximately 1,108-acre UCR main campus, herein referred to as study area. The analyses provided below are based on the Cultural Resources Constraints Study prepared by Psomas in March 2019 (Psomas 2019b).

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP would result in a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities, including student housing development. UCR is currently undertaking a focused historic resources survey (HRS) report to provide important baseline information on existing conditions and the historic resource status of affected buildings under the 2021 LRDP that will guide and inform future planning of campus projects. The HRS will identify any potential historical resources on campus. The HRS will discuss whether any of the buildings on campus are eligible or potentially eligible for listing on the National Register of Historic Places and/or California Register of Historical Resources and therefore meet the definition of historical resources under Section 15064.5(a) of the CEQA Guidelines. Future development near these resources or others identified in the HRS report may cause a significant impact. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☒	☐	☐	☐

Potentially Significant Impact. According to the records search performed as part of the Cultural Resources Constraints Study, three known archaeological resources are present on the UCR campus. During the pedestrian survey, these resources could not be located (Psomas 2019b). However, physical indicators of human occupation could be disguised by the natural weathering of the granitic outcrops.

The eastern side of the planning area, particularly the southeastern area near the Botanic Gardens and Open Space Reserve, is considered highly sensitive for the presence of archaeological resources. It is possible that additional subsurface deposits are present and could be encountered and damaged during project-related ground-disturbing activities. This would be a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐

Less Than Significant Impact. According to the Cultural Resources Constraints Study, there are no known cemeteries on the UCR main campus (Psomas 2019b). In the unlikely event that human remains are unearthed during excavation and grading activities, applicable regulatory requirements pertaining to the handling and treatment of such resources would be followed. If human remains are unearthed, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur, and the Riverside County Coroner must be notified immediately to determine the origin and disposition pursuant to PRC Section 5097.98. If the human remains are determined to be prehistoric, the coroner is required to notify the Native American Heritage Commission, which would determine and notify a most likely descendant, who must complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Native American human remains would be reburied on-site or on an acceptable alternative site, along with any artifacts found with the burial. Given the required compliance with California Health & Safety Code section 7050.5 and California PRC Section 5097.98, impacts to human remains would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

6. Energy

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☒	☐	☐	☐

Electricity and Natural Gas

In 2018, California used 285,488 gigawatt-hours of electricity, of which 31 percent were from renewable resources (California Energy Commission [CEC] 2019). California also consumed approximately 22,223.8 million U.S. therms (MMthm) of natural gas in 2018 (U.S. Energy Information Administration [EIA] 2020a). In 2018, Riverside Public Utilities (RPU) provided approximately 0.77 percent (2,186 gigawatt-hours/285,488 gigawatt-hours) of the total electricity used in California; Southern California Gas Company (SoCal Gas) provided approximately 23.2 percent (5,156.08 MMThm/22,223.08 MMThm) of the total natural gas consumed in California (RPU 2019, California Gas and Electric Utilities 2019, SoCalGas 2020b).

RPU is the primary provider of electricity for the campus and SoCal Gas provides natural gas. UCR installed more than 9,600 solar panels (4.3 megawatts) in two campus parking lots in 2017; these generate approximately 7.6 million kilowatt hours per year (Martinez 2017). Renewable energy sources produced approximately 34 percent of RPU's power in 2018 (RPU 2019). **Table 3** and **Table 4** show the electricity and natural gas consumption by sector and total for RPU and SoCal Gas.

Table 3 – Electricity Consumption in the RPU Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
30.19	1,080.73	45.00	276.770	13.32	719.44	20.55	2,186.00

Source: CEC 2020a
Notes: All usage expressed in gigawatt-hours

Table 4 – Natural Gas Consumption in SoCal Gas Service Area in 2018

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
77.61	912.98	74.52	1,714.36	229.22	2,147.39	5,156.08

Source: CEC 2020b
Notes: All usage expressed in MMThm

Petroleum

In 2018, approximately 40 percent of the State's energy consumption was used for transportation activities (EIA 2020b). Californians presently consume over 19 billion gallons of motor vehicle fuels per year (CEC 2018a). Though California's population and economy are expected to grow, gasoline demand is projected to decline from roughly 15.8 billion gallons in 2017 to between 12.3 and 12.7 billion gallons in 2030, a 20 to 22 percent reduction. This decline comes in response to both increasing vehicle electrification and higher fuel economy for new gasoline vehicles.

Construction Energy Demand

The 2021 LRDP proposed the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR main campus. During future campus project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The campus project would require site preparation and grading, including hauling material off-site; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping.

Project-related construction energy demand would be confined to the construction period, which would be relatively short in relation to the overall life of the proposed project. Construction equipment would be maintained to applicable standards, and construction activity and associated fuel consumption and energy use would be temporary and typical of similar-sized construction projects in the region. Furthermore, in the interest of cost efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. However, further analysis is required to quantify energy use related to construction.

Operational Energy Demand

Operation of the UCR main campus under the proposed 2021 LRDP would increase energy demand for electricity and gasoline due to greater consumption relating to the expansion of campus buildings and increased student enrollment and campus employees. Natural gas and electricity would be used for heating and cooling systems, lighting, appliances, water, and the overall operation of the campus facilities. Gasoline consumption would be attributed to the trips generated by people employed by UCR, students commuting to campus, and visitors to the campus. As of June 2019, no new UC buildings or buildings that undergo major renovations will use on-site fossil fuel combustion, such as natural gas, for space and water heating, except in special circumstances (UC 2019b).

UCR is committed to meeting UC system-wide goals of achieving Leadership in Energy and Environmental Design (LEED) Silver Certification or better for all new buildings and LEED Certification for all major renovations. All new buildings or major renovation projects are required to comply with the UC Sustainable Practices Policy (UC 2019b). The California Green Building Standards Code (CALGreen) (California Code of Regulations [CCR], Title 24, Part 11) requires implementation of energy efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (California Building Code [CBC] Title 24, Part 6) require newly constructed buildings to meet energy performance standards set by the Energy Commission. As the name implies, these standards are specifically crafted for new buildings to result in energy efficient performance so that the buildings do not result in wasteful, inefficient, or unnecessary consumption of energy. The standards are updated every three years and each iteration is more energy efficient than the previous standards. For example, according to the CEC, upon implementation of the 2019 Building

Energy Efficiency Standards, nonresidential buildings will use about 30 percent less energy than 2016 Title 24 requirements due mainly to lighting upgrades (CEC 2018b). The proposed 2021 LRDP would further reduce its use of nonrenewable energy resources, as the electricity generated by renewable resources provided by the UCR campus and by RPU facilities continues to increase to comply with State requirements through Senate Bill 100.

Despite the energy efficiency measures described above, the changes proposed in the 2021 LRDP have the potential to significantly increase energy and petroleum demand and consumption due to the requirements of proposed new buildings and additional students, faculty, and staff on campus by academic year 2035/2036. Therefore, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☒	☐

Less Than Significant Impact. The proposed increase in enrollment, employees, and development under the 2021 LRDP would result in increased energy consumption through electricity to power facilities and petroleum use through motor vehicles on the campus. As discussed in criterion 6(a), new development proposed under the 2021 LRDP would comply with the UC Sustainable Practices Policy. In addition, UCR is preparing a GHGRS as part of the 2021 LRDP that would incorporate reduction measures to help reduce GHG emissions levels, including energy efficiency measures. The GHGRS is a policy-level document intended to ensure that the 2021 LRDP is compliant with applicable State regulations related to GHG emissions and energy use. The GHGRS will support the proposed 2021 LRDP.

Senate Bill 100 mandates 100 percent clean electricity for California by 2045. Because the proposed 2021 LRDP would be powered by the existing electricity grid and on-site solar generation, potential projects under the proposed 2021 LRDP would eventually be powered by renewable energy as mandated by Senate Bill 100 and would not conflict with this statewide plan. Therefore, no conflict with an applicable plan, policy or regulation adopted for the purpose of energy efficiency is anticipated, and impacts are considered **less than significant**. However, as this topic is still under investigation, further analysis in the forthcoming EIR is warranted.

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7. Geology and Soils

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐

Less Than Significant Impact. According to the DOC's Earthquake Zones of Required Investigation map, the UCR campus is not located in an Alquist-Priolo Earthquake Fault Zone (DOC 2020b). According to the California Earthquake Hazards Zone Map, the UCR main campus is approximately 6 miles southwest of the San Jacinto Fault Zone and 18 miles northeast of the Elsinore Fault Zone. Because ground rupture occurrences are generally limited to the location of faults, development of future campus projects would not be subject to a substantial risk of fault (ground surface) ruptures.

Although the UCR main campus is not located within an active fault, the campus is in a seismically active area, as is the majority of southern California and thus is subject to seismic ground shaking. UCR completed a systemwide seismic program study in which structural engineers evaluated existing campus buildings and assigned ratings that represent the ability of each structure to address seismic hazards (UCR 2019a). While these impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

The 2021 LRDP proposes the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR main campus. Renovations of existing campus buildings may also occur during implementation of the proposed 2021 LRDP. Development of new campus building projects would be required to conduct a site-specific geotechnical study and comply with all the provided engineering design recommendations. Additionally, future campus projects would be required to comply with the State of California Title 24, California Building Code (CBC), the systemwide seismic program study recommendations, and the UC Seismic Safety Policy. The UC Seismic Safety Policy establishes that University policy is "to the extent feasible by present earthquake engineering practice, to provide an acceptable level of earthquake safety for students, employees, and the public who occupy University Facilities and Leased Facilities" (UC 2017). Therefore, implementation of the proposed 2021 LRDP would not expose people and/or structures to potentially substantial adverse effects resulting from strong seismic ground shaking. However, while these impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

According to Figure PS-2 of the City of Riverside General Plan Public Safety Element, the UCR main campus is characterized primarily by low potential for liquefaction, with a narrow area considered at moderate risk for liquefaction adjacent to SR 60 between Third Street and University Avenue and from University Avenue east to the Box Springs Mountains (City of Riverside 2018e). Elevations on campus range from 1,000 feet to 1,400 feet above sea level. The older alluvium and bedrock that underlies large portions of the campus are non-liquefiable regardless of groundwater depth (UCR 2005). West Campus and most of East Campus are relatively flat and not subject to landslides. The proposed 2021 LRDP would potentially develop the southeastern area of East Campus adjacent to natural hillsides, but the geologic materials on the campus render the risk for deep-seated landslides to be very low, even on natural slopes. This is due to the sturdy nature of the alluvial materials and bedrock underlying most of the campus, as these have no weak planar structures developed that could trigger a large, deep-seated landslide.

New development proposed under the 2021 LRDP would require campus building permits that undergo review and approval by UCR's Building and Safety Division and other UCR departments and staff. All campus project construction activities would be compliant with the UCR Plan Review and Building Permit Program, which specifies requirements for new construction on campus, as well as the California Building Code, and inspection protocols for existing buildings (UCR 2018). All new campus facilities built as part of the proposed 2021 LRDP would be required to conduct a project-specific geotechnical study prior to construction to assess potential for displacement expansive and compressible soils or other earth movements or soil constraints. Future development would also be subject to the design and construction requirements of the CBC. While impacts from liquefaction and landslides are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Less Than Significant Impact. Soil erosion is the process by which soil particles are removed from a land surface by wind, water, or gravity. Most natural erosion occurs at slow rates; however, the rate of erosion increases when land is cleared or altered and left in a disturbed condition. The 2021 LRDP proposes a net increase in campus development of approximately 3.7 million asf (approximately 6 million gsf). Construction activities would result in site clearance, grading, and other earthmoving activities. Any campus projects would be required to comply with SCAQMD Rule 403 – Fugitive Dust during construction, which would stabilize soils and prevent erosion through the reduction of dust generation. Additionally, future campus projects would be required to comply with the provisions of the Statewide General Construction Activity Stormwater Permit that specifies the implementation of best management practices (BMP) (e.g., watering exposed soils; covering stockpiles of soils; installing sandbags to minimize off-site runoff; creating temporary desilting basins; construction vehicle maintenance in staging areas to avoid leaks or spills of fuels, motor oil, coolant, and other hazardous materials; installation of silt fences and erosion control blankets; timing grading to avoid the rainy season [November through April]) during project construction. Furthermore, the University has been and will continue to implement the National Pollutant Discharge Elimination System (NPDES) Phase II requirements through the implementation of Stormwater Management Program that includes construction site stormwater runoff control for sites greater than one acre and post-construction stormwater management in new development and redevelopment.[10]

Upon project completion, the site would not contain any loose or exposed topsoil, and conditions that would cause long-term erosion would not be present. New development on campus would be required to prepare a site-specific geotechnical study and be required to implement the geotechnical recommendations into the project design. New development proposed under the 2021 LRDP would require campus building permits, which require review and approval by UCR's Building and Safety Division, Fire Prevention, Facilities Services, and other UCR departments and staff. All campus project construction activities would be compliant with the UCR Plan Review and Building Permit Program, which specifies requirements for new construction on campus, as well as inspections protocol for existing buildings (UCR 2018).

Adherence to applicable rules under the UCR Plan Review and Building Permit Program would be necessary to reduce and/or prevent erosion during construction activities. Impacts to soil erosion or loss of topsoil would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

Less Than Significant Impact. As described above in criterion 7(a), the campus is underlain by soils with low potential for liquefaction and all new campus facilities built as part of the proposed 2021 LRDP would be required to conduct a project-specific geotechnical study prior to construction to assess potential for displacement caused by seismically induced shaking, fault/ground surface rupture, liquefaction, differential soil settlement, expansive and compressible soils, landsliding, lateral spreading and subsidence, or other earth movements or soil constraints. Future development would also be subject to the design and construction requirements of the CBC.

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[10] https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html

As discussed in criterion 7(a), the older alluvium and bedrock that underlies large portions of the campus are non-liquefiable regardless of groundwater depth (UCR 2005). The geologic materials located on the campus render the risk for deep-seated landslides to be very low, even on natural slopes. This is due to the sturdy nature of the alluvial materials and bedrock underlying most of the campus, which have no weak planar structures developed that could trigger a large deep-seated landslide. The hillsides are designated as Open Space Reserve and no major development is planned in the area. While these hazards are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

Less Than Significant Impact. The Arlington and Hanford soils make up most of the relatively flat-sloped West Campus, and Soil series that comprise the East Campus include the Arlington, Hanford, Buren, and Monserate series (UCR 2005). The Arlington and Hanford soils are primarily found on the relatively flat-sloped western portion of the campus and have a low shrink-swell characteristic. The Buren series has a moderate to low shrink-swell potential. The Monserate soils are found on most of the northeastern part of the campus and shrink-swell potential is from low to moderate. Soils found at the southeastern portion of the campus, which have relatively steeper slopes than other parts of the campus, are predominately of the Cieneba and Vista series and have low shrink-swell characteristics. As most of the soils on the campus have low to moderate shrink-swell characteristics, the potential for water uptake after rainfall to cause soils to expand and damage building foundations is considered low. All new campus facilities built as part of the proposed 2021 LRDP would be required to conduct a project-specific geotechnical study prior to construction to assess potential for displacement expansive and compressible soils or other earth movements or soil constraints. Future development would also be subject to the design and construction requirements of the CBC. Therefore, implementation of the proposed 2021 LRDP would not be located on expansive soil and there would be **less than significant impacts,** and further analysis of this issue in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

No Impact. The proposed 2021 LRDP would be served by the municipal sewer system and would not entail the construction or use of septic tanks or alternative wastewater disposal systems. Therefore, implementation of the proposed 2021 LRDP would have **no impact** related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP would result in the development of new academic buildings and support facilities. Ground disturbing activities, such as grading or excavation, could affect previously unknown paleontological resources. Rocks and sediment underlying the campus are considered unlikely to be fossil-bearing (UCR 2005). However, ground disturbing activities in previously undisturbed portions of the main campus could potentially result in significant impacts to paleontological resources. Impacts would be significant if construction activities result in a potential for destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. Therefore, the proposed 2021 LRDP would have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

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8. Greenhouse Gas Emissions

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐

Potentially Significant Impact. The 2021 LRDP proposes the addition of approximately 3.7 million asf (approximately 6 million gsf) of academic buildings and support facilities on the UCR campus, including student housing. Construction of the proposed new buildings would result in short-term GHG emissions associated with activities, such as equipment use, construction worker trips, and delivery and hauling of construction supplies and debris. Operation of the UCR campus under the proposed 2021 LRDP would result in long-term increases in GHG emissions on the UCR Campus due to increased localized vehicle trips associated with the proposed campus population growth and emissions from energy consumption associated with the expanded facilities.

Overall, the proposed 2021 LRDP would generate both short-term, construction-related GHG emissions and long-term operational emissions, which could result in potentially significant impacts. UCR is preparing a GHGRS as part of the proposed 2021 LRDP that would include reduction measures to help reduce GHG emissions levels. The proposed 2021 LRDP may have **potentially significant impacts** related to GHG emissions and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Less Than Significant Impact. The proposed increase in student enrollment, faculty, and staff, and development under the 2021 LRDP would result in increased GHG emissions. UCR is preparing a GHGRS as part of the proposed 2021 LRDP which would include reduction measures to help reduce GHG emissions levels. The GHGRS is a policy-level document intended to ensure that the 2021 LRDP is compliant with applicable State regulations related to GHG emissions. The GHGRS will establish a baseline inventory of GHG emissions for UCR's main campus for the 2018/2019 Baseline academic year and forecast the emissions resulting from the proposed 2021 LRDP growth by 2035. The forecast will model the maximum planned build out for the land use designations on East Campus and West Campus as defined by the 2021 LRDP, while also accounting for planned GHG reductions from State-level policies and UC sustainability policies.[11] Therefore, no conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG is anticipated, and impacts are considered **less than significant**. However, as this topic is still under investigation at this time, implementation of the proposed 2021 LRDP and further analysis in the forthcoming EIR is warranted.

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[11] The GHGRS will also be prepared in line with the UC Carbon Neutrality Initiative, which commits the UC system to achieving climate neutrality from Scope 1 and Scope 2 emissions sources by 2025 and climate neutrality from specific Scope 3 emission sources by 2050 or sooner (UC 2015).

9. Hazards and Hazardous Materials

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Less Than Significant Impact. The State of California defines hazardous materials as “any material that, because of its quantity, concentration, or chemical characteristics, poses a significant present or potential hazard to human health and the environment if released into the workplace or the environment” (California Health and Safety Code Division 20, Chapter 6.95, Section 25501) Services 2014). These include hazardous substances and wastes, along with any material that might reasonably be considered injurious to the health and safety of individuals or the environment if released. Effective January 1, 2012, AB 2286 requires all facilities with regulated hazardous materials to file required Unified Program information in an online, statewide information management system. UCR is a certified generator and handler of hazardous materials and as such is required to prepare a Hazardous Materials Business Plan (HMBP) that provides information that will help minimize the effects and extent of a release of hazardous material. The UCR HMBP is accompanied by training materials that educate those who work with or might be exposed to hazardous materials on campus, and emergency responders, including contact information, site security, and other facilities information and procedures (UCR 2016a).

Construction Transport, Use, Disposal

Potential hazardous materials, such as fuel, paint products, lubricants, solvents, and cleaning products, may be used and/or stored on site during the construction of future campus projects. The quantities would be limited, and they are not considered hazardous to the public at large. Furthermore, the transport, use, and storage of hazardous materials during project construction would be conducted pursuant to all applicable federal, State, and local regulations, including but not limited to Title 49 of the Code of Federal Regulations implemented by Title 13 of the CCR, which describes strict regulations for the safe use and transport of hazardous materials, and by the provisions discussed in detail in the UCR HMBP.

The UCR campus is a non-traditional permittee under the Phase II municipal separate storm sewer systems (MS4) Small statewide general storm water permit, which requires UCR to prevent construction site discharges of pollutants through the installation, implementation, and maintenance of BMPs and ensure compliance with Construction General Permit (State Water Resources Control Board Order 2009-0009-DWQ, as amended). As part of the compliance with the Construction General Permit, a Stormwater Pollution Prevention Plan (SWPPP) would be prepared for specific construction projects. Among other things, the SWPPP requires that hazardous materials be properly stored, contained, and disposed of to prevent polluted stormwater discharged from the site. As a result, proper use and disposal of these materials would not pose a significant risk to the public and the environment.

Some existing buildings may contain hazardous substances such as lead-based paint (LBP), asbestos-containing materials (ACM), or Polychlorinated biphenyls (PCB). Prior to the U.S. Environmental Protection Agency (USEPA) ban in 1978, LBP was commonly used on interior and exterior surfaces of buildings. When LBP remains contained, it presents no significant health risk, however, though such disturbances as sanding and scraping activities, renovation work, gradual wear and tear, old peeling paint, and paint dust particulates, lead may contaminate surface soils or migrate and affect indoor air quality. Exposure to residual lead can cause severe adverse health effects, especially in children.

Asbestos is a naturally occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the USEPA in the 1970s. ACMs were commonly used for insulation of heating ducts and in the manufacture of ceiling and floor tiles. ACMs contained in building materials present no significant health risk because there is no exposure pathway. However, once these tiny fibers are disturbed, they can become airborne and pose a respiratory hazard. The fibers are very small and cannot be seen with the naked eye. Once they are inhaled, they can become lodged into the lungs and may cause cancer, lung disease, or other pulmonary complications.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment, including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the USEPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs, and are required to have a label clearly stating that PCBs are not present in the unit. Chronic (long-term) exposure to some PCB formulations by inhalation in humans results in respiratory tract symptoms, gastrointestinal effects, mild liver effects, and effects on the skin and eyes such as chloracne, skin rashes, and eye irritation. Epidemiological studies indicate an association between dietary PCB exposures and developmental effects. Human studies provide inconclusive, yet suggestive, evidence of an association between PCBs exposure and cancer. Animal studies have reported an increase in liver tumors in rats and mice exposed orally to all tested PCB formulations. CalEPA has classified PCBs as a Group B2, probable human carcinogen.

The campus Environmental Health and Safety (EH&S) department oversees proper transportation and disposal of waste materials on campus and manages environmental and safety compliance for all campus projects through a Hazardous Materials Building Survey Request and Abatement Project Notification system accessible by construction project managers on the EH&S department's website.[12] Through this site, project managers are able to submit requests for surveys of Hazardous Building Materials and work with EH&S to determine the extent of, and mitigation required, for any hazardous materials that may be encountered. Disturbance, stabilization, and removal of ACM, LBP, PCBs, and any other hazardous materials would be performed in compliance with current applicable regulations.

Asbestos is regulated as a hazardous air pollutant under the Clean Air Act at the Asbestos National Emission Standards for Hazardous Air Pollutants (Title 40 of the Code of Federal Regulations, Part 61, Subpart M). This air toxics regulation for asbestos is intended to minimize the release of asbestos fibers during demolition and renovation activities involving the handling of asbestos. Requirements of the federal Asbestos National Emission Standards for Hazardous Air Pollutants, the Cal/OSHA Asbestos in Construction standard at 8 CCR 1529, and several other occupational asbestos standards and hazardous waste management regulations are incorporated into SCAQMD Rule 1403 Asbestos Emissions from Demolition/Renovation Activities. In structures slated for demolition or renovation, any ACM would be removed in accordance with all requirements set forth in SCAQMD Rule 1403 prior to the start of

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[12] https://ehs.ucr.edu/safety

demolition or renovation activities and thereby in compliance with all existing applicable federal and State regulations and standards. SCAQMD Rule 1403 requirements for virtually any facility being demolished or renovated includes surveys for the presence of all friable and Class I and II non-friable ACM, sampling and test methods, notifications, removal procedures, warning labels, signs and markings, training, supervision, and specific requirements for handling, transportation and disposal of asbestos-containing waste material.

LBP and other lead-containing materials associated with all campus projects are handled in compliance with standards set and enforced by the State of California Department of Industrial Relations Division of Occupational Safety and Health, better known as Cal/OSHA. The Lead in Construction standard at Title 8 of the California Code of Regulations, Section 1532.1 (8 CCR 1532.1) includes exposure assessment, respiratory protection, protective work clothing and equipment, medical monitoring, engineering and work practice controls and other requirements to reduce the hazard from lead in construction. The evaluation and control of lead-based paint hazards will be conducted in accordance with the guidelines set forth in Title 24 of the Code of Federal Regulations, Section 1012-1013 (Title X Housing and Urban Development). Disposal of lead-containing waste materials is managed in compliance with California Title 22, Division 4.5 Environmental Health Standards for the Management of Hazardous Waste.

During demolition and renovation activities PCB-containing materials may be found in fluorescent lighting ballasts manufactured before 1978, electrical transformers, capacitors, and other electrical equipment manufactured before 1979, and in building materials in buildings constructed or renovated between about 1950 and 1979. The Toxic Substances Control Act at Title 40 of the Code of Federal Regulations, Section 761 requires proper handling and disposal of any PCB-containing materials removed during renovations and repairs. All PCB-containing materials are managed according to these federal regulatory requirements.

With continued implementation of EH&S and the regulations described above, impacts during construction of 2021 LRDP projects would be **less than significant** under this threshold and construction impacts would not be discussed further in the forthcoming EIR.

Operational Transport, Use, Disposal

UCR is a licensed generator of hazardous waste, which includes chemical, radioactive, and biohazardous (infectious) waste (UCR 2005). As such, it is required to evaluate developments where activities include the handling of hazardous materials and to disseminate general information about the handling, storing, and disposing of hazardous materials. This includes training all individuals who may handle hazardous materials through the circulation of various safety guidance documents and other publications. Hazardous materials are managed throughout campus ranging from the art department to the biomedical sciences department and can include flammable, corrosive, and reactive materials used in a variety of ways. The 2005 LRDP Draft EIR detailed the types of hazardous materials, their use throughout the campus, and the plan for managing their transport, use, and accidental release in such a way that the impact were determined to be less than significant under that evaluation (UCR 2011). Since the 2005 EIR, the UCR HMBP is updated yearly and continues to be in line with current regulatory requirements.

Transportation of hazardous materials and wastes along any city or State roadway or rail lines in or near the campus is subject to all relevant Caltrans, California Highway Patrol, and California Department of Health Services hazardous materials and wastes transportation regulations, as applicable. Regular inspections are conducted of licensed waste transporters by agencies to ensure compliance with requirements that range from the design of vehicles used to transport wastes to the procedures to be followed in case of spills or leaks during transit.

Implementation of the proposed 2021 LRDP creates the potential of hazardous materials to increase, because the new medical school and the expanded student health center, along with other facilities could increase the risk for accidental release. However, with continued adherence to federal, State, and the UCR HMBP, the 2021 LRDP is not anticipated to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. While impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

Less Than Significant Impact. Implementation of the proposed 2021 LDRP will expand square footage and student population nearly double its current amounts. This increases the potential for upset and accident conditions to arise that involve the potential release of hazardous materials into the environment. As discussed above in criterion 9(a), the UCR HMBP will continue to serve as the guiding document for prevention of such incidents. While impacts would be **less than significant**, further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of a school?	☐	☐	☒	☐

Less Than Significant Impact. As indicated in **Table 5**, multiple schools and one child development center are located within 0.25 mile of the boundaries of the UCR campus.

Table 5 – Distance to Schools from Campus Boundary

School	Approximate Distance in Miles to UCR LRDP Boundary	School Address	Nearest Proposed LRDP Land Use/UCR facilities
UCR Child Development Center	On Campus	3333 W. Blaine Street Riverside, California 92503	Student Neighborhood, Facilities Services
Islamic Academy of Riverside	0.06	1038 W. Linden Street Riverside, California 92507	Student Neighborhood
REACH Leadership STEAM Academy	0.08	3422 Rustin Avenue Riverside, California 92507	Recreation & Athletics/UCR Baseball Complex
Highland Elementary School	0.14	700 Highlander Drive Riverside, California 92507	Student Neighborhood, UCR Child Development Center
Emerson Elementary School	0.20	4660 Ottawa Avenue Riverside, California 92507	West Campus land-based research area
Riverside STEM Academy	0.25	4466 Mt. Vernon Avenue Riverside, California 92507	UCR Botanic Gardens
University Heights Middle School	0.25	1155 Massachusetts Avenue Riverside, California 92507	Student Neighborhood

Notes: UCR = University of California, LRDP = Long Range Development Plan

The UCR Child Development Center comprises two adjacent facilities on the northeastern corner of East Campus. It is surrounded by a surface parking lot, West Blaine Street and Watkins Drive to the east, facilities services to the southeast, and the future North District student neighborhood (currently under construction) to the southwest. Highland Elementary School is northeast of the northern campus boundary across Watkins Drive and the Burlington Northern Santa Fe (BNSF) Railway right-of-way. It is surrounded by Highland Park to the north, residential neighborhoods to the east, and the BNSF Railway to the west and south. Emerson Elementary is west of the West Campus boundary, surrounded by residential neighborhoods to the north, east, and south, and Bordwell Park to the west. Since the schools and UCR Child Development Center are not adjacent to areas of substantial development proposed under the 2021 LRDP, it is unlikely there would be substantial impacts to these locations associated with the emission of hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste related to the proposed 2021 LRDP.

As discussed in criterion 9(a), construction, redevelopment, and operation of facilities associated with implementation of the 2021 LRDP would comply with existing federal, State, and university requirements for the transport, use, or disposal of hazardous materials. Removal of LBP, ACM, PCB, and hazardous materials would be performed in compliance with existing regulations. LBP and other lead-containing materials associated with proposed projects would be handled in compliance Cal/OSHA regulations regarding LBPs and lead-containing materials. CCR Title 8, Section 1532.1, requires testing, monitoring, containment, and disposal of LBPs and lead-containing materials in a manner that exposure levels do not exceed Cal/OSHA standards.

With continued adherence to the UCR HMBP, the proposed 2021 LRDP is not anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of a school. While impacts are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐

Less Than Significant Impact. A review of the Cortese List database did not show the UCR main campus as a hazardous materials site. Neither are there any hazardous materials sites listed within a 1,000-foot radius of the UCR main campus (California Department of Toxic Substances Control 2020). The nearest hazardous site is located at 2755 West Main Street, approximately 2.7 miles northwest of campus. The site is listed as an active federal “superfund” site. Other sites are over 5 miles from the UCR main campus, and even with the campus expansion by the proposed 2021 LRDP, these would not create a hazard to the public during project construction or operation.

While not on the Cortese List, there is a former agricultural operations pesticide disposal site at 1060 Martin Luther King Boulevard in West Campus that was monitored by the Department of Toxic Substances Control until 2011. The constituents of concern in soil included pesticides, herbicides, and volatile organic compounds. A review of the results from 16 years of groundwater monitoring indicated no chemical was detected at concentrations greater than its maximum contaminant level. A Covenant to Restrict Use of Property was recorded on May 12, 2006 for soil within 10 feet of the ground surface at the site based on the presence of certain chemicals. The site is prohibited from use as a residence, childcare center, classroom for persons under the age of 18, or hospital, and may not be used for agriculture, drilling, or groundwater extraction (Haley & Aldrich 2017). This site is not proposed for development under the proposed 2021 LRDP.

Less than significant impacts are anticipated, and no mitigation is required. This issue will not be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

No Impact. Flabob Airport is approximately 4.7 miles west of the UCR main campus, and March Air Reserve Base is approximately 6 miles southeast of the UCR main campus. The proposed 2021 LRDP project sites would not be situated within 2 miles of a public airport, public use airport, or an airport land use plan area. Therefore, the proposed 2021 LRDP would not result in any impacts from safety hazards associated with airports or airport land use plans. **No impacts** are anticipated, and no mitigation is required. This issue will not be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐

Potentially Significant Impact. UCR operates under the auspices of the UCR Emergency Action Plan (EAP), revised February 9, 2016. The plan establishes operational procedures needed for campus personnel to respond to, and recover from, a significant emergency event, in a timely and organized manner (UCR 2016b). The Emergency Action Plan also serves as the foundation for local plans developed and executed by sub-units within the purview of the campus. The UCR EAP follows federal and State requirements and fits into statewide and national emergency operations in the event of a disaster declaration by either of those authorities. The plan outlines basic information about evacuation procedures and routes and includes a map to emergency assembly areas throughout the campus. Finally, it offers descriptions of staff responsibilities at a basic level and outlines emergency notification procedures. It focuses on the facilities on the campus alone and does not discuss exiting into the surrounding community.

Roadways within the university are not designated evacuation routes for the City. Furthermore, the ramp for I-215 is accessible directly from the east/west campus exit on University Avenue and west campus exit on Martin Luther King Boulevard, which also serve as evacuation routes for the campus (City of Riverside 2018).

The construction and operation of projects associated with the proposed 2021 LRDP would not substantially alter or otherwise interfere with public rights-of-way and would provide adequate internal ingress and egress for necessary emergency response vehicles. Implementation of the proposed 2021 LRDP would not interfere with traffic circulation on designated disaster routes during construction or operation. Future campus projects would be required to comply with all applicable California Fire Code (Title 24, CCR, Section 9) requirements.

Construction of facilities associated with the implementation of the proposed 2021 LRDP could result in lane or roadway closures on the edges of campus and within the campus circulation system. Future development could affect areas identified as emergency assembly areas. Implementation of future development under the proposed 2021 LRDP would be guided by existing and future LRDP planning strategies, including those concerning transportation where circulation and traffic management would be discussed. Future development on the UCR main campus would require the implementation of measures that require construction staging area be situated in such a way that they avoid designated evacuation zones, as in the current LRDP. Furthermore, new development would require EH&S to update the Campus Emergency Operations Plan to account for the new development and increased student/faculty/staff population. These revisions would include changes to the campus evacuation zones, emergency assembly areas, staff responsibilities, and general procedures.

Policies proposed under the 2021 LRDP will be reviewed in the forthcoming EIR to ensure that future campus projects comply with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. As such, impacts are considered **potentially significant** and will be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☒	☐

Less Than Significant Impact. Section 20, Wildfire, presents a detailed discussion of wildfire risk in and around UCR. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by California Department of Forestry and Fire Protection (CAL FIRE)* map for the City of Riverside, portions of the southeastern area of campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a Very High Fire Hazard Severity Zone (VHFHSZ) that includes the Box Springs Mountain Reserve (CAL FIRE 2007). The main campus is situated in an area that is largely developed with urban and commercial land uses, but the campus contains open space areas to the east that are sparsely vegetated grasslands with intermittent, non-native trees in areas of lower elevation. Most of the development under the proposed 2021 LRDP would occur in the northern and central areas of East Campus; however, the proposed LRDP may allow for development of new facilities in or adjacent to the VHFHSZ in the southeastern area of East Campus adjacent to the natural hillsides.

The UCR Fire Prevention and Life Safety Policy requires that all construction, alterations, renovations, and interior space dividers are subject to fire code review and inspection by EH&S, Campus Building Official, and Campus Fire Marshal. This includes approval of plans and specifications to verify compliance with applicable codes, including the following:

- Title 24, CCR, Building Regulations
- Uniform Fire Code
- National Fire Codes of the National Fire Protection Association
- Title 19, CCR, Public Safety
- Title 8, CCR, Occupational Safety
- California Health and Safety Code

During plan check review, the Campus Building Official and Campus Fire Marshal would review specific project plans to ensure that the design of the building complies with all the required codes noted above. Project structures would be required to comply with the California Fire Code regarding emergency/fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible.

Section 20, Wildfire, further discusses the exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. Future development on the campus would require the implementation of measures that require construction staging area be situated in such a way that they avoid designated evacuation zones; therefore, the proposed 2021 LRDP may result in potentially significant impacts related to impairment of an adopted emergency response plan or emergency evacuation plan. It is anticipated that the proposed 2021 LRDP would not result in significant impacts related to exposing people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, exacerbating fire risk due to the installation or maintenance of associated infrastructure, or exposing people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. However, as wildfire is an issue of concern to the community, these potential impacts will be analyzed under the wildfire thresholds in Section 20 of this Initial Study in the forthcoming EIR.

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10. Hydrology and Water Quality

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐

Less Than Significant Impact. Development under the LRDP would result in temporary construction-related activities such as the movement of earth. The UCR campus is in the Upper Santa Ana River Watershed, within two sub-watersheds that are generally divided by the I-215/SR 60 freeway (San Bernardino Valley Water Conservation District 2015). Most of East Campus drains to the University Arroyo Watershed, while portions of the West Campus drain to the Box Springs Arroyo Watershed. The proposed 2021 LRDP is also subject to the 2016 Water Quality Control Plan for the SARWQCB and will be analyzed for consistency with this plan in the EIR.

As discussed in criterion 9(a), the UCR campus is a non-traditional permittee under the Phase II MS4 Small statewide general storm water permit, which requires UCR to prevent construction site discharges of pollutants through the installation, implementation, and maintenance of BMPs and ensure compliance with Construction General Permit (State Water Resources Control Board Order 2009-0009-DWQ, as amended). Phase I of the NPDES Program requires NPDES permits for storm water discharge from priority sources, including MS4s serving populations of over 100,000; several categories of industrial activity; and construction activity that disturbs one acre or more. Phase II of the NPDES Program regulates storm water discharges from Small MS4s (such as schools and universities). As part of Phase II of the NPDES program, the State Water Resources Control Board (SWRCB) adopted a General Permit for the Discharge of Storm Water from Small MS4s (WQ Order No. 2003-0005-DWQ) to provide permit coverage for smaller municipalities, including non-traditional Small MS4s, which include public campuses. The Phase II Small MS4 General Permit covers Phase II Permittees statewide.

As a Phase II permittee, UCR must comply with the MS4 permit requirements including:

1. Education and outreach program
2. Public involvement and participation program
3. Illicit discharge detection and elimination
4. Construction site storm water runoff control program
5. Pollution prevention/good housekeeping for facilities
6. Post-construction stormwater management program
7. Program effectiveness assessment and improvement

All UCR facility design and construction projects must comply with applicable State building code requirements, as well as State and federal agency regulations. All campus projects would be required to comply with the provisions of the Statewide General Construction Activity Stormwater Permit that specifies the implementation of BMPs (e.g., watering exposed soils; covering stockpiles of soils; installing sandbags to minimize off-site runoff; creating temporary desilting basins; construction vehicle maintenance in staging areas to avoid leaks or spills of fuels, motor oil, coolant, and other hazardous materials; installation of silt fences and erosion control blankets; timing grading to avoid the rainy season [November through April]) during project construction. Furthermore, the University has been and will continue to implement the NPDES Phase II requirements through the implementation of Stormwater Management Program that includes construction site stormwater runoff control for sites greater than one acre and post-construction stormwater management in new development and redevelopment.[13]

Storm drain infrastructure for the campus projects would include area drains, roof drain connections, and piped conveyance of stormwater to the water quality treatment basins/devices and connections to the existing storm drain system. Stormwater would be treated by a coalescing silt/sand oil/water separator (clarifier). Water quality treatment would consist of biofiltration basins, proprietary treatment devices, and/or underground storage vaults. These BMPs would slow the velocity of water and allow sediment and debris to settle out of the water column, thereby minimizing the potential for downstream flooding, erosion/siltation, or exceedances of stormwater drainage system capacity. Operation and maintenance of the proposed 2021 LRDP would not violate water quality standards or otherwise substantially degrade water quality.

As described above, construction and operation of the proposed 2021 LRDP is expected to occur in compliance with applicable water quality standards and waste discharge requirements. Although impacts to surface and groundwater quality are anticipated to be **less than significant**, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☒	☐	☐	☐

Potentially Significant Impact. The Riverside area is located within the Upper Santa Ana Valley Groundwater Basin, and the UCR main campus is located near the southeastern edge of the Riverside-Arlington Subbasin. Groundwater in this subbasin is replenished by multiple sources including infiltration from Santa Ana River flow, underflow past the Rialto-Colton Fault, intermittent underflow from the Chino Groundwater Subbasin, return irrigation flow, and deep percolation of precipitation (California Department of Water Resources [DWR] 2004). The Riverside-Arlington Subbasin is approximately 65 percent adjudicated, with the Adjudication Judgment administered by Western Municipal Water District (WMWD). The portion of the Riverside-Arlington Subbasin that is not adjudicated is identified by the DWR as a low-priority groundwater basin, meaning that it is not subject to management direction of the

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[13] https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html

Sustainable Groundwater Management Act of 2014. Basins that are designated as High Priority are subject to the Sustainable Groundwater Management Act and a Groundwater Sustainability Plan (GSP) administered by a Groundwater Sustainability Agency (GSA) is required.

DWR's prioritization of the Riverside-Arlington Subbasin has changed over recent years, as described below (Groundwater Exchange 2018):

- 2014: Basin prioritization – High. Water quality degradation issues known in several public supply wells.
- 2016: Riverside-Arlington Subbasin boundaries modified along with the boundaries of Yucaipa Subbasin 8-002.07, Bunker Hill Subbasin 8-002.06, and Rialto-Colton Subbasin 8-002.04 to align with adjudicated areas.
- 2018: Draft Basin Prioritization – High. Hydrographs generally show increasing water levels starting around 1960 and stabilizing or declining somewhat after the 1980s.
- 2018: Final Basin Prioritization – Very Low.
- 2019: DWR released the *Sustainable Groundwater Management Act 2018 Basin Prioritization* report, which outlined the process involved with reassessing the priority of the groundwater basins in California following the 2016 basin boundary modifications; through this process, the Riverside-Arlington Basin was designated as very low-priority, and therefore not requiring a GSP (WMWD 2020).

Although the Riverside-Arlington Subbasin is currently identified as Very Low Priority, WMWD applied to DWR and was approved as the GSA for the Riverside-Arlington Subbasin; as such, WMWD is proceeding with the process of meeting with stakeholders and creating a GSP for the subbasin, with the support of Proposition 1 grant funding awarded to WMWD by the DWR. At the time of drafting this Initial Study for the proposed 2021 LRDP, a GSP for the Riverside-Arlington Subbasin is not in place and the proposed 2021 LRDP would therefore not interfere with the implementation of a GSP.

Under this significance criterion, adverse impacts to groundwater supply could occur indirectly, by disrupting recharge rates or patterns to the underlying groundwater basin, or directly, by increasing use of local groundwater supply. The UCR main campus is presently developed and characterized by large areas of impervious surfaces, such as paving for streets and buildings. Infiltration and percolation of precipitation occurs in permeable areas such as open space areas in East Campus and, research fields located in West Campus. The proposed 2021 LRDP would introduce additional impervious areas through development of new buildings. As such, development of the proposed 2021 LRDP could interfere with groundwater recharge due to increased impervious surfaces.

Implementation of the proposed 2021 LRDP would increase water demands on the campus project sites due to the introduction of up to approximately 11,000 new students and 2,800 new faculty and staff, some of whom would reside in on-campus housing. Water service to the UCR main campus is provided by the City of Riverside Public Utility Department. Water delivered by the City of Riverside is sourced from local groundwater resources. Therefore, implementation of the proposed 2021 LRDP may result in a decrease of groundwater supplies and would have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial erosion or siltation on- or off-site;	☒	☐	☐	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or	☒	☐	☐	☐
iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP would not alter the course of a stream or river. However, full build-out of the proposed 2021 LRDP would result in site-specific alterations to the local drainage patterns. Planning and design of the proposed 2021 LRDP would include stormwater drainage features to accommodate runoff associated with new project features. Additional sources of pollution are addressed under significance criterion 10(a) above, for potential impacts associated with water quality and waste discharge requirements; no additional impacts associated with polluted runoff have been identified.

The proposed 2021 LRDP would increase the area of impervious surfaces on the campus area and would implement post-construction stormwater management control measures on-site through infiltration, evapotranspiration, storm water runoff harvest and use, or a combination of the three. In addition, as described above for significance criterion 10(a), project-specific SWPPPs would be developed and implemented to minimize or avoid potential water quality impacts during construction and operation of individual campus projects. Also as described above, construction and operation of the proposed 2021 LRDP is expected to occur in compliance with applicable water quality standards and waste discharge requirements, based upon project-specific design features and BMPs. Without BMPs, this would be a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project, in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☒	☐

Less Than Significant Impact. The UCR main campus is not located in a tsunami hazard area and is therefore not subject to inundation by tsunami. The UCR main campus is also not located in proximity to a standing body of water that could experience a seiche, or large wave activity associated with a seismic event, and therefore is not subject to inundation by seiche. Implementation of the proposed 2021 LRDP would not increase or otherwise alter the area's potential to be inundated by tsunami or seiche. Therefore, this impact analysis is focused on the potential for flooding from storm events to result in water quality impacts.

The Federal Emergency Management Agency (FEMA) identifies the majority of the UCR main campus (and the City of Riverside as a whole) as Zone X, or an Area of Minimal Flood Hazard. This includes areas outside of defined Special Flood Hazard Areas, or flood hazard areas associated with the area of inundation from a storm of magnitude with the likelihood of occurring once every 100 years, or the storm with a one percent chance of occurring during any given year. There is a FEMA-designated Zone AE surrounding University Wash, which bisects the UCR campus and is shown on FEMA's Flood Insurance Rate Maps 06065C0727G and 06065C0726G, including Letter of Map Revision 10-09-0680P (FEMA 2008). The proposed 2021 LRDP would not expand or otherwise alter existing FEMA flood hazard areas.

Implementation of the proposed 2021 LRDP would not introduce projects subject to inundation by the failure of a levee or dam. The closest dam to the UCR main campus is Seven Oaks Dam, approximately 24 miles upstream of the Santa Ana River from Riverside. The Santa Ana River itself is more than 3 miles from the UCR main campus at its nearest point. Due to the distance and existing structures between the UCR campus and the Santa Ana River, the potential for release of pollutants due to a flood event from the catastrophic failure of Seven Oaks Dam is remote. Therefore, implementation of the proposed 2021 LRDP would not expose people or structures to a significant risk of release of pollutants due to inundation related to flooding from the failure of a levee or dam.

The proposed 2021 LRDP would not involve the storage or processing of pollutants such that they may be spilled or released due to inundation, should a flood hazard event occur. As discussed in criterion 10(a) and 10(c), implementation of the proposed 2021 LRDP would occur in compliance with UCR's MS4 permit and as such, the potential for campus project activities to result in pollutant release would be minimized or avoided. Potential impacts of the proposed 2021 LRDP associated with the release of pollutants due to project inundation would be **less than significant** and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP would result in increased drinking water and irrigation water demand due to the expansion of UCR facilities and increase in enrollment and employees under the proposed 2021 LRDP. As discussed in criterion 10(a), 10(b), and 10(c), increased water demand on the UCR main campus, construction activities, and expanded impervious surface on the campus could potentially impact water quality and groundwater supplies. Therefore, the proposed 2021 LRDP could potentially conflict with existing water quality control or groundwater management plans. The proposed 2021 LRDP could have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

11. Land Use and Planning

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project physically divide an established community?	☐	☐	☒	☐

Less than Significant Impact. The UCR main campus is in the southeastern portion of Riverside, bisected by the I-215/SR 60 freeway. The City of Riverside General Plan, which includes the UCR main campus, has identified UCR as a public facility/institutional land use (City of Riverside 2012). The campus is adjacent to and surrounded by single- and multi-family neighborhoods, office/commercial retail development, government facilities, and open space areas. The UCR main campus is developed with academic, research, agricultural, recreational, athletic, maintenance, housing facilities, campus support facilities, and designated open space areas.

The 2021 LRDP proposes approximately 7,489 new beds in on-campus housing, 2,322,541 asf (3,483,812 gsf) of new facility space for student life (including housing), 896,229 asf (1,344,344 gsf) of new facility space for administration and support, and 480,569 asf (720,854 gsf) of new facility space for academic and research. The proposed 2021 LRDP would direct campus growth and identify locations for future land use, including location of new facilities, new and redeveloped open space and recreation areas, transportation options and needs, infrastructure capacity and management, and sustainability. Utility infrastructure improvements would be temporary and would not physically divide existing neighborhoods or the surrounding community.

The on-campus community consists of students (undergraduate and graduate), faculty, and staff. The implementation of the proposed 2021 LRDP would develop buildings and facilities on the existing main campus. Development under the proposed 2021 LRDP would occur in phases over the planning period as more housing and facilities are needed and to maintain all campus functions by developing areas of campus at appropriate and strategic times. Overall, the proposed 2021 LRDP would build upon the existing campus framework and development to accommodate increases in enrollment, would improve on-campus amenities, and would not divide the on-campus or surrounding community. The proposed 2021 LRDP currently includes the following draft objectives and policies to increase connections to surrounding communities and improve multi-modal access within and adjacent to the campus:

- Objective LU1.1: Serve as good stewards of limited campus lands and natural resources as UCR continues to grow and develop toward its enrollment goals.
    - Policy: Promote increased densities on East Campus through increased site coverage and heights of future projects flanking northern and western gateways and campus loop road.
- Objective LU1.2: Retain existing land-based research operations on West campus, while balancing the need for innovative partnerships and initiatives.
    - Policy: Require increased development density on East Campus to fully accommodate proposed new space per the 2021 LRDP.

- Objective LU1.3: Maintain the height and character of the Mid-Century Core to preserve its unique design legacy in the mid-century core.
    - Policy: Plan and design future buildings consistent with the existing established heights, building setbacks, and character of the Academic Center.
- Objective LU1.4: Generally locate higher density future growth adjacent to and outside of the campus loop road.
    - Policy: Allow increased heights and increased density on underutilized lands such as surface parking lots and in infill areas to meet future needs.
- Objective LU1.5: Continue to grow on-campus student housing to 40% and increase student life activities.
    - Policy: Provide increased housing capacity and student life facilities in existing student neighborhoods in the northern portions of East Campus.
- Objective LU1.6: Enhance Canyon Crest Drive as a new campus “Main Street” and northern gateway.
    - Policy: Ensure that all proposed buildings include a mix of active uses that have a street interface.
- Objective LU1.7: Celebrate the University Avenue corridor as the primary gateway into campus.
    - Policy: Promote new facilities in this area which serve a broad swath of the campus population, engage the community, and support multi-modal access.
- Objective LU1.8: Enhance campus edges to promote a welcoming impression to visitors and visually communicate the transition to campus-owned land areas.
    - Policy: Locate key campus community-related facilities to engage campus edges and enhanced landscape strategies.

The proposed 2021 LRDP would not physically divide the established community around UCR or the on-campus community, and there would be **less than significant impact**. No further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

For an impact to be considered potentially significant, any inconsistency would also have to result in a significant adverse change in the environment not already addressed in the other resource chapters of this Initial Study.

Less Than Significant Impact. UCR is part of the UC, a constitutionally created entity of the State of California. As a constitutional entity, the UC is not subject to municipal regulations, such as Riverside

County and City of Riverside general plans. Implementation of the proposed 2021 LRDP would primarily affect existing campus facilities within the UCR main campus area. Increases in building development, student housing, parking activity, and associated student activity would occur throughout the UCR main campus, but primarily in East Campus. Development under the proposed 2021 LRDP would complement and build upon changes that have been made under the 2005 LRDP. This development would continue the activation, use, and improvement of the campus' facilities and open spaces.

The intensity of use and development on the UCR main campus would increase incrementally throughout the next 15 years. Proposed land use changes and increased intensity would be consistent with the overarching land use development goals and vision for the UCR main campus. UCR and the City of Riverside will consult with one another during the proposed 2021 LRDP and the City of Riverside's General Plan Update processes. The proposed 2021 LRDP would direct campus growth and identify locations for future land use, including location of new facilities, new and redeveloped open space and recreation areas, transportation options and needs, infrastructure capacity and management, and sustainability. Development under the proposed 2021 LRDP would include physical changes to the main campus area that are being analyzed in the individual resource chapters in this Initial Study. Future development carried out would be controlled by the proposed 2021 LRDP, which is the comprehensive plan to guide future physical development of the campus.

Most of the proposed development and changes would be concentrated in the Academics & Research, Canyon Crest Gateway, University Avenue Gateway, and Student Neighborhood areas of the East Campus area that are not directly adjacent to the off-campus community. While policies from the neighboring jurisdictions are not applicable to UCR, development under the proposed 2021 LRDP would consider existing and planned uses in the surrounding community, particularly in the northern areas of East Campus near Blaine Street and West Linden Street, the northeastern areas of East Campus near Watkins Drive, and the northern areas of West Campus near University Avenue and Iowa Avenue, indicated by the following proposed 2021 LRDP draft objectives and policies:

- Objective LU1.6: Enhance Canyon Crest Drive as a new campus "Main Street" and northern gateway.
    - Policy: Ensure that all proposed buildings include a mix of active uses that have a street interface.
- Objective LU1.7: Celebrate the University Avenue corridor as the primary gateway into campus.
    - Policy: Promote new facilities in this area which serve a broad swath of the campus population, engage the community, and support multi-modal access.
- Objective LU1.8: Enhance campus edges to promote a welcoming impression to visitors and visually communicate the transition to campus-owned land areas.
    - Policy: Locate key campus community-related facilities to engage campus edges and enhanced landscape strategies.
- Objective M1.1: Reduce future traffic, parking demand, and GHG Emissions, by increasing student housing on campus up to 40% of the projected enrollment in 2035.
    - Policy: Develop the University Avenue and Canyon Crest Drive Gateway streetscapes to support increased use and functional efficiency of the RTA system, improved clarity of drop-off and pick-up locations for ride-sharing services, reduced conflict, and improved safety for cyclists, pedestrians, and emerging micro-mobility solutions in these increasingly busy mixed-mode circulation areas.

As required by Section 15125(d) of the CEQA Guidelines, this section discusses any inconsistencies between the proposed 2021 LRDP and applicable regional plans. The regional plans relevant to the proposed 2021 LRDP include the 2016 SCAG RTP/SCS, the 2016 Water Quality Control Plan for the SARWQCB, and the 2016 SCAQMD Air Quality Management Plan. A consistency analysis between the applicable regional plans and the 2021 LRDP would be needed to determine if the proposed 2021 LRDP would conflict with these applicable plans. Information provided in the consistency analysis would be derived from assessments conducted for traffic, air quality, and other applicable impact areas and included in the forthcoming EIR. These plans are already proposed for further evaluation in the forthcoming EIR as part of the Transportation (Section 17(a)), Air Quality (Section 3(a)), and Hydrology (Section 10(a)) analyses in the EIR. Therefore, the project would not result in additional significant adverse change in the environment not already addressed in the other resource chapters of this Initial Study. Therefore, this would be a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

12. Mineral Resources

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

No Impact. The UCR campus is located on lands classified as Mineral Resource Zone 3 (MRZ-3), which are areas of undetermined mineral resource significance (City of Riverside 2012). According to the City of Riverside General Plan 2025, the quarrying of granitic rock was once a significant industry in Riverside, but these operations have not been active for decades. There are no known mineral resources on campus; the existing LRDP and proposed 2021 LRDP does not allow for mining. Therefore, the proposed 2021 LRDP would not result in the loss of availability of valuable mineral resources. **No impact** would occur and further discussion in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

No Impact. The UCR campus is located on lands classified as MRZ-3, which are areas of undetermined mineral resource significance (City of Riverside 2007a). According to the City of Riverside General Plan 2025, granitic rock quarrying was once a significant industry in Riverside, but these operations have not been active for decades (City of Riverside 2012). There are no known mineral resources on campus; neither the existing LRDP nor the proposed 2021 LRDP allow for mining. Therefore, the proposed 2021 LRDP would not result in the loss of availability of a locally important mineral resource recovery site. **No impact** would occur and further discussion in the forthcoming EIR is not warranted.

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13. Noise

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of applicable standards?	☒	☐	☐	☐

Potentially Significant Impact. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (Caltrans 2020). Noise-sensitive land uses include those uses where noise exposure could result in health-related risks to individuals and places where quiet is an essential element of the intended purpose. Residential dwellings are of primary concern; land uses such as childcare centers, K-12 schools, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, trails, cemeteries, and playgrounds are considered sensitive to increases in noise levels. Noise-sensitive land uses closest to the campus include on-campus and off-campus residences and hotels, and on-campus uses such as classrooms, childcare centers, libraries, and the Student Health Services. Recreational uses could also be considered noise sensitive receptors.

Construction

Sources of construction noise could include heavy-equipment operation, pile drivers, and other equipment associated with grading, excavation, and building construction. Trucks, haulers, and other construction equipment traveling to and from the campus construction sites and staging areas could increase noise levels to the point of nuisance for on-campus sensitive receptors. While construction hours could be limited to certain times of day and days of the week, impacts are **potentially significant** during construction and further analysis in the forthcoming EIR is warranted.

Operation

Operational noise could be generated by increased traffic entering and exiting the campus and by the increase in student, faculty, and staff population. Operational building systems would be required to comply with State regulations, but the increase in gross square footage predicted by the proposed 2021 LRDP could result in **potentially significant** impacts for operational noise over the long-term. This impact warrants further analysis in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Generation of excessive groundborne vibration or groundborne noise levels?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP could include substantial ground-borne vibration that would affect student housing, academic facilities, laboratories, among other uses on-campus and at nearby off-campus uses (e.g., single-family and multi-family residences) as construction activities (e.g., grading, excavation, and building construction) have the greatest potential to generate ground-borne vibration affecting nearby receivers. A vibratory roller and an impact pile driver would be the greatest sources of vibration during general campus project construction activities. Construction vibration estimates are based on vibration levels Caltrans and the Federal Transit Authority (FTA) provide for these types of equipment as indicated in **Table 6** (Caltrans 2020, FTA 2018).

Table 6 – Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 feet (in/sec)
Pile driver (impact)	Upper Range: 1.518
	Typical Range: 0.644
Pile driver (sonic)	Upper Range: 0.734
	Typical Range: 0.170
Vibratory roller	0.210

Source: Caltrans 2020, FTA 2018
Notes: in/sec = inches per second, ppv = peak partible velocity

Table 7 and **Table 8** detail the limits at which human annoyance associated with vibration is usually different if it is generated by a steady state or a transient vibration source.

Table 7 – Human Response to Steady State Vibration

PPV (in/sec)	Human Response
3.6 (at 2 Hz)-0.4 (at 20 Hz)	Very disturbing
0.7 (at 2 Hz)–0.17 (at 20 Hz)	Disturbing
0.10	Strongly perceptible
0.035	Distinctly perceptible
0.012	Slightly perceptible

Source: Caltrans 2020
Notes: in/sec = inches per second, ppv = peak partible velocity

Table 8 – Human Response to Transient Vibration

PPV (in/sec)	Human Response
2.0	Severe
0.9	Strongly perceptible
0.24	Distinctly perceptible
0.035	Barely perceptible

Source: Caltrans 2020
Notes: in/sec = inches per second, ppv = peak partible velocity

Pile driving is a construction activity known to generate excessive ground-borne vibration. It is unknown at this stage of planning if pile driving would be required to drive foundation piles into the ground for any campus projects that would occur under the proposed 2021 LRDP. This analysis conservatively assumes campus project implementation would involve use of impact pile drivers for more than one location. The upper range for an impact pile driver would create approximately 1.518 inches per second (in/sec) peak particle velocity (PPV) at 25 feet (FTA 2018). If conservative estimated distances from campus project construction to existing buildings, a pile driver may be used within 50 feet of those structures. This would equal a vibration level of 0.7086 in/sec PPV at the nearest buildings, which would exceed the distinctly perceptible impact for humans of 0.24 in/sec PPV. This could cause damage to sensitive laboratory facilities and equipment and disrupt research and instruction that uses this equipment. Furthermore, sensitive collections or specimens could be damaged and older buildings could incur damage from the vibration. The distance to which an impact pile driver would exceed 0.2 in/sec PPV would be approximately 160 feet. As it is unknown if pile drivers would be needed for future campus projects at this stage of planning, conservative estimates indicate impacts could be **potentially significant** and detailed technical analysis in the forthcoming EIR is warranted.

Another potential source of substantial vibration during general campus project construction activities would come from a vibratory roller, which would be used during paving activities and may be deployed within 50 feet of the nearest buildings. A vibratory roller would create approximately 0.210 in/sec PPV at 25 feet (FTA 2018). This would equal a vibration level of 0.098 in/sec PPV at 50 feet. As it is unknown if vibratory rollers would be needed for future campus projects at this stage of planning, conservative estimates indicate impacts could be **potentially significant** and detailed technical analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

No Impact. Flabob Airport is approximately 4.7 miles west of the UCR main campus, and March Air Reserve Base is approximately 6 miles southeast of the UCR main campus. The proposed 2021 LRDP campus project sites would not be situated within two miles of a public airport, public use airport, or an airport land use plan area. Therefore, implementation of the proposed 2021 LRDP would not result in any impacts from exposure to excessive noise levels generated by airports or private airstrips. **No impacts** are anticipated and no further discussion in the forthcoming EIR is warranted.

14. Population and Housing

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would incrementally accommodate approximately 7,419 undergraduate students, 3,659 graduate students, 843 academic faculty and staff, and 1,963 non-academic staff, resulting in a net increase to the campus population of approximately 13,884 people by the 2035 horizon year. The proposed 2021 LRDP would provide on-campus or campus-controlled student housing for approximately 40 percent of the student population, equal to approximately 7,489 new on-campus beds. Therefore, approximately 6,395 new students and faculty/staff would be expected to reside in non-university housing by 2035 (13,884 net increase to the campus population – 7,489 new on-campus beds).

A conservative approach assumes that all new students, faculty, and staff would be new residents that would move into the City of Riverside and Riverside County from outside of the region. The estimated 2019 and forecasted 2035 populations for the City of Riverside and Riverside County are shown in **Table 9**.

The population growth attributed to the proposed 2021 LRDP would account for approximately 11.4 percent of the City of Riverside's forecasted growth (6,395 off-campus residents/55,999 total resident growth) and one percent of Riverside County's forecasted growth (6,395 off-campus residents/632,954 total resident growth).

Table 9 – City and County Population Growth

Jurisdiction	2019 Population	Forecasted 2035 Population	Anticipated Growth 2019-2035	Proposed 2021 LRDP Increase (Off-Campus Population)	Percent Growth Attributed to the 2021 LRDP
City of Riverside	328,101	384,100	55,999	6,395	11.4
County of Riverside	2,422,146	3,055,100	632,954	6,395	1.0

Source: City of Riverside 2018a, California Department of Finance (DOF) 2019; SCAG 2016

The contribution of new residents would be incremental; using a conservative estimate of even population growth year over year, approximately 426 new residents would be added each year over the proposed 15-year life of the 2021 LRDP. This incremental contribution to the area population growth would likely be lower than this estimate, as it can be logically assumed that some new students and faculty/staff would come from residents already living in the area prior to enrollment or employment. The City of Riverside and Riverside County could absorb the incremental population increase over the proposed 15-year life of the 2021 LRDP and would not need to construct new housing or infrastructure as a direct result of the proposed 2021 LRDP.

The proposed 2021 LRDP may induce indirect population growth due to regional commercial and business activity. This indirect population growth would be included in regional SCAG population forecasts and would not be considered unplanned. Therefore, impacts related to direct and indirect unplanned population growth would be less than significant. Furthermore, the proposed 2021 LRDP would be serviced by existing infrastructure and no new roads are proposed that would indirectly increase unplanned population growth. Therefore, the proposed 2021 LRDP would not induce substantial unplanned population growth in the City of Riverside or Riverside County. The proposed 2021 LRDP would have a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. The proposed 2021 LRDP would direct the construction of new on-campus housing. The proposed 2021 LRDP may require the renovation or demolition and replacement of existing housing, which may result in the temporary displacement of students residing on campus. Renovations would not permanently displace existing students. It is anticipated that redevelopment and/or remodeling of existing on-campus housing would occur over the summer months when student population would be reduced.

As discussed in criterion 14(a) above, approximately 6,395 students and faculty/staff would be accommodated in non-affiliated, off-campus housing units, conservatively assumed to all be either in the City of Riverside or Riverside County more broadly. In 2019, the persons per household rate for the City of Riverside was 3.28 and 3.2 for Riverside County (DOF 2019). Assuming those rates are maintained to 2035, the proposed LRDP could generate a need for approximately 1,950 housing units over the proposed 15-year life of the 2021 LRDP.

The City of Riverside's estimated 2019 housing inventory was 100,760 units, with a vacancy rate of 4.9 percent. Therefore, a total of 4,937 units are currently unoccupied. The County of Riverside's 2019 housing inventory was 847,851, with a vacancy rate of 12.8 percent. Thus, 108,525 units are currently unoccupied throughout the County (DOF 2019). Estimated 2019 and forecasted 2035 City of Riverside and Riverside County housing units are shown in **Table 10**.

The housing needs of the proposed 2021 LRDP would account for approximately 11.5 percent of the City of Riverside's forecasted housing growth (1,950 housing units/16,940 total housing units) and 1.2 percent of Riverside County's forecasted housing growth (1,950 housing units /161,149 housing units).

Table 10 – Estimated and Forecasted City and County Housing Units

Jurisdiction	2019 Housing Units	Forecasted 2035 Housing Units	Anticipated Growth 2020-2035	Proposed 2021 LRDP Need (Non-affiliated, off-campus housing)	Percent of New Housing Units that Would Accommodate the 2021 LRDP Housing Needs
City of Riverside	100,760	117,700	16,940	1,950	11.5
County of Riverside	847,851	1,009,000	161,149	1,950	1.2

Source: DOF 2019; SCAG 2016

The contribution of new residents would be incremental; using a conservative estimate of even housing unit need year over year, approximately 130 housing units would be needed each year over the proposed 15-year life of the 2021 LRDP. As discussed in criterion 14(a) above, this number would likely be far lower, as it can be logically assumed that a portion of the new students and faculty/staff would be drawn from people already residing in the area. Given the current area vacancy rates, the City of Riverside and Riverside County more generally could absorb this housing demand and new housing construction would not be required merely because of the implementation of the proposed 2021 LRDP.

Under State law, the City of Riverside and neighboring jurisdictions address planning for housing needs in the housing elements of their general plans in compliance with the SCAG Regional Housing Needs Assessment. Local policies would guide housing development to accommodate the needs of future population growth, particularly housing for low-income residents (including students), and decrease potential impacts to existing residents from housing and economic displacement.

The proposed 2021 LRDP would not displace substantial numbers of existing people or housing and would not necessitate the construction of new housing beyond what is already forecasted for the City of Riverside or Riverside County. Therefore, the proposed 2021 LRDP would have a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

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15. Public Services

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: a) Fire protection?	☒	☐	☐	☐

Potentially Significant Impact. UCR is within the service district of the Riverside Fire Department, which is responsible for fire protection, fire safety inspections, community education, and emergency preparedness planning and training for the Riverside community. In 2017, City of Riverside Fire Department (RFD) responded to 38,501 calls for service, or 0.12 calls per resident in its service population (City of Riverside 2017). During the first quarter of 2019, turnout time for all 14 RFD fire stations was 2:06 minutes, and RFD is seeking a “turnout time” to under 2:00 minutes at all fire stations (City of Riverside 2019b). The City of Riverside allocated seven percent of the City’s operating budget to RFD in Fiscal Years 2018/2019 to 2019/2020 for 248 FTE positions (City of Riverside 2020). Riverside City Fire Station 4, located at 1496 W. Linden Street, is approximately 0.6 mile northwest by local streets from UCR Extension, the nearest UCR facility. It employs one captain, one engineer, one firefighter, and one firefighter/paramedic, and has one engine and one water tender. RFD maintains mutual and/or automatic aid agreements with City of Corona Fire Department, City of Colton Fire Department, one military fire department, Riverside County Fire Department, and San Bernardino County Fire Department.

In November 2016, the RFD identified the severity of the need to replace vehicles as they had exceeded their life cycle, mileage, or hour limits, and were incurring high costs in repairs. On May 16, 2017, City Council approved a 5-year spending plan of Measure Z funding which included a one-time allocation of $14.5 million to the RFD for new apparatus and required equipment. The purchase of these units will replace most of the current front-line apparatus, while some of the aged units will become part of the reserve fleet. As a result of Measure Z funding, RFD was able to increase truck companies by 25 percent, increase personnel and paramedics, and improve response times (City of Riverside n.d.).

The UCR Fire Prevention program is intended to ensure responsible and consistent protection for persons and property in, on, and exposed to UCR administered properties in conformance with California statues, regulations, and University policy. The program addresses emergency incident response, fire, panic, explosion, and disaster preparedness. On-campus student housing facilities experienced one fire incident in 2018.

UCR's Building and Safety Division, Fire Prevention, Facilities Services, EH&S, and/or other UCR departments and staff is responsible for inspection, fire protection engineering, and fire prevention. The campus has historically maintained a Memorandum of Understanding with the State Fire Marshal to provide additional support, and the Campus Fire Marshal is a designated Deputy State Fire Marshal. Projects developed under the proposed 2021 LRDP would comply with all regulations of Sections 13000 et seq. of the California Health and Safety Code, which pertain to fire protection systems, including provision of smoke alarms, fire sprinklers, fire extinguishers, appropriate building access, and emergency response notification systems.

Buildout of the proposed 2021 LRDP may increase the need for fire protection services within the RFD service area. Implementation of the proposed 2021 LRDP would result in the expansion of existing academic programs, extra-curricular activities, and development of housing and instructional facilities, however, would not fundamentally change the nature of campus operations, and the LRDP may result in retrofitting or replacing older structures with modern structures built to more stringent fire code requirements. Therefore, implementation of the proposed 2021 LRDP is not anticipated to result in an increase in incident calls per capita. However, increased building density, size, and building heights may require additional fire equipment, such as ladders, and increased personnel to respond to fires (City of Riverside 2017).

The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year, or approximately 926 new residents annually over the proposed 15-year life of the 2021 LRDP (13,884/15 years = approximately 926 residents per year). The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. An estimated 6,395 students, faculty, and staff would be accommodated by non-affiliated, off-campus housing in the City of Riverside and surrounding region.

RFD may need to increase staff and/or facilities to adequately respond to the increase in service population, which may necessitate the construction of new facilities which could cause **potentially significant environmental impacts** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Police protection?	☐	☐	☒	☐

Less Than Significant Impact. The University of California Police Department (UCPD) is located on campus at 3500 Canyon Crest Drive Riverside, California 92507. UCPD operates 24 hours-per-day, 365 days a year. It employs police officers, security guards, and Community Service Officers to deliver public safety services on campus, and near the campus. UCPD is accredited by the California Commission on Police Officer Standards and Training and vested with the authority and responsibility to enforce all applicable local, State, and federal laws. All UCPD Officers are duly sworn peace officers with statewide authority as defined in California Penal Code Section 830.2(b), are authorized to carry firearms, and have the authority and duty to conduct criminal investigations and make arrests. At times UCPD supplements its staff with officers from other agencies who have arrest authority under mutual aid agreements. UCPD has primary jurisdiction over the UCR campus and properties owned, leased, or controlled by the University in adjacent areas. In 2018, UCPD responded to 66 criminal offenses on campus (non-residential areas and residence halls) and 10 off-campus criminal offenses (non-campus and public property). The most common criminal offenses were burglary and motor vehicle theft (UCR 2019b).

UCPD enjoys a close working relationship with the Riverside Police Department (RPD), the Riverside County Sheriff's Department as well as the local branches of the California Highway Patrol. UCPD personnel regularly meet with agents assigned to the Riverside Field Office of the Federal Bureau of Investigation to exchange information to prevent criminal activity on campus.

The need for police services on campus would increase incrementally in association with the increase in student, staff, and faculty population under the proposed 2021 LRDP. The increased population on campus would require additional routine services to provide additional patrols of the campus and maintain police presence. Additional administrative staff may be necessary to support the increases in patrol personnel. To maintain adequate levels of police protection to serve the anticipated increase in campus population, the UCPD may need to purchase additional equipment and/or hire more personnel, which may result in the need for further facility space. It is anticipated that the proposed 2021 LRDP would accommodate these facility needs as part of the proposed approximately 896,229 asf (1,344,344 gsf) of new administrative and support facility space proposed in the buildout projections for the 2021 LRDP, and there would be no additional environmental impacts beyond those already being analyzed as part of the proposed 2021 LRDP.

The RPD serves the rest of the City of Riverside, with the nearest RPD station located approximately 2.2 miles west of UCR at 4102 Orange Street Riverside, California 92501. The proposed 2021 LRDP would incrementally increase the service population of the RPD, as it would be anticipated that most new students and employees would primarily reside in the RPD service area when living off campus. The City of Riverside has allocated $126 million (13 percent) of Fiscal Year 2018/2019 – 2019/2020 operating budget to fund 557 FTE positions, 197 of which are in field operations (City of Riverside 2020). In 2018, the RPD responded to 245,000 calls for service. Measure Z funding generated more than $20 million for RPD staff, 49 vehicles, and one police aircraft (City of Riverside 2018b).

The City of Riverside plans to construct a new RPD headquarters to replace the downtown facility (4102 Orange Street), which may or may not be decommissioned. The building size, location, and completion date for the new headquarters have yet to be determined (Gonzalez 2020). Planning for new or physically altered RPD stations is based on an assessment of Riverside's need for new facilities. The incremental contribution to demand for increased RPD protection services would be offset by payment of proportionate property taxes and sales taxes to the City of Riverside by the residents. Likewise, property taxes and sales taxes from new residents in neighboring jurisdictions would support the appropriate police protection agency. An evaluation of the environmental impacts of implementation of the future headquarters is not feasible at this time, given that a location and other design details are unknown. Therefore, the proposed 2021 LRDP would have a **less than significant impact**, and further analysis in the forthcoming EIR is not warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Schools?	☐	☐	☒	☐

Less Than Significant Impact. UCR is in the service area of the Riverside Unified School District (RUSD), which serves a large portion of Riverside, as well as the nearby unincorporated areas of Highgrove and Woodcrest (City of Riverside 2007b). RUSD currently serves nearly 42,000 students in preschool through twelfth grade. Schools in the district include 29 elementary schools, seven middle schools, five comprehensive high schools, three alternative schools and a science, technology, engineering, arts, and mathematics (STEAM) specialty school. There are a variety of preschool options at different schools as well as transitional kindergarten classes at each elementary school (RUSD 2019). RUSD's median enrollment standards are 750 students per elementary school, 900 students per middle school, and 2,500 students per high school (RUSD 2016).

The proposed 2021 LRDP would result in approximately 13,884 additional area residents by the 2035 horizon year. UCR faculty, staff, and students could potentially introduce new children to the area who would attend nearby schools, which would occur incrementally over the proposed 15-year life of the 2021 LRDP.

A 2019 survey showed that 1.7 percent of undergraduate students and 14 percent of graduate students at UCR identified as a parent living with their children (UC 2019c). The proposed 2021 LRDP would accommodate an additional 7,419 undergraduate students and 3,659 graduate students by 2035. Based on the 2019 survey information, it is anticipated that the proposed 2021 LRDP would result in approximately 126 additional undergraduate students living with children at home (1.7 percent of 7,419), and 512 additional graduate students living with children at home (14 percent of 3,659), or 638 total UCR students living with children at home. The average number of children per family in California is 1.95 (US Census 2000). Using this information as a guide, an estimated 1,244 children (1.95 multiplied by 638) could reside with UCR students.

However, not all children would be school age (five years and older). According to the U.S. Census, 24 percent of the City of Riverside total population is under the age of 18 and 6.5 percent of the total population is under the age of five; therefore, 27 percent of children under 18 are assumed to be under the age of five (6.5 percent of 24 percent total population), and 73 percent would be school age (U.S. Census 2019). Using this data as a guide, approximately 908 school-age children (73 percent of 1,244) could reside with UCR undergraduate and graduate students over the proposed 15-year life of the 2021 LRDP.

The proposed 2021 LRDP also would result in approximately 2,806 additional employees (faculty and staff). A conservative approach assumes each new employee would be new to the City of Riverside and would occupy an individual housing unit. Using the RUSD student generation rate of 0.48 students per dwelling unit), this increase in faculty and staff equates to approximately 1,358 school age children (RUSD 2012).

Combined, the proposed 2021 LRDP would result in a conservative estimate of 2,266 school-age children (908 plus 1,358), or approximately 151 additional students each year, added incrementally to the RUSD student population over the 15-year life of the proposed 2021 LRDP.

Upon implementation of its Facilities Master Plan, which guides development for the next 15-20 years, RUSD will be able to accommodate approximately 45,500 students district-wide; an increase in approximately 3,500 students (RUSD 2016). The RUSD Facilities Master Plan prioritizes replacing portable facilities with permanent facilities, renovating gymnasiums, undertaking energy efficient upgrades, constructing maker labs and STEAM facilities, and constructing multi-purpose rooms to meet the needs of a growing student population. Potential environmental impacts related to the construction of new or expanded school facilities would be assessed on a project-specific level.

Students residing near UCR and attending public schools would likely attend the Riverside STEAM Academy, Highland Elementary, Longfellow Elementary, University Heights Middle School, and John W. North High School, because these are the closest RUSD public schools to the campus. **Table 11** shows the current enrollment and capacity at each school upon implementation of facility plans.

Table 11 – Public School Enrollment and Capacity

School	2018-19 Enrollment[1]	Total Capacity[2]	Remaining Capacity
Riverside STEAM Academy	636	900	264
Highland Elementary	704	850	101
Longfellow Elementary	741	750	9
University Heights Middle School	850	900	50
John W. North High School	2,228	2,500	272

Source: [1]Education Data Partnership 2020; [2]RUSD 2016

Should new housing development be constructed to accommodate the general increase in area population, which would include UCR-affiliated students, faculty, and staff, school impact fees would be paid to the local school district to address school capacity impacts. RUSD is authorized to collect a fee per square foot for new residential development pursuant to Government Code Section 65995(b)(2) for new private industrial, commercial, or residential construction that exceeds 500 square feet (RUSD 2020). UCR provides family housing options for a portion of its student population. Developer fees are not collected for on-campus housing development, as this regulation does not apply to public institutions, including UCR facilities. However, most of the school age children that would result from the proposed 2021 LRDP would live in non-university affiliated housing, which may contribute to school fees.

Although the proposed 2021 LRDP would likely have a **less than significant impact** on the need for new or physically altered school facilities, this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Parks?	☒	☐	☐	☐

Potentially Significant Impact. Parks and recreation facilities are addressed in Section 16, *Recreation*, of this Initial Study. Unlike other issue areas in Public Services, the project would have a **potentially significant impact** on recreation facilities on and around campus due to the increase in student and employee populations, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Other public facilities?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would result in approximately 13,884 additional residents (students, faculty, and staff) by the 2035 horizon year. This population increase may increase the service population of Riverside Public Library (RPL) and potentially other libraries in neighboring cities. All UCR students have access to the Tomas Rivera Library, the Orbach Science Library, and the Special Collections and University Archives, and it is anticipated that UCR students will primarily patronize the on-campus library facilities. The proposed 2021 LRDP would increase library facilities by 50 percent, including collaboration and study areas for students, the impacts of which are being analyzed as buildout under the proposed 2021 LRDP.

The City of Riverside currently provides library services from the Main Library and seven branch libraries that serve the existing city population of 328,101 residents. With a collection of approximately 425,000 books and other library materials, as well as 400 public access computers (including catalogs) and an annual circulation of 1.23 million, RPL is a major provider of information services and cultural programs in California's Inland Empire (City of Riverside 2020a). A new, 42,000-square foot Main Library in downtown Riverside is currently under construction and anticipated to open summer 2020. The City of Riverside does not have library facility per capita goal, but the City of Riverside General Plan contains the objective to “ensure that the library system remains a premier information and independent learning resource for the Riverside residents and a complement to formal education,” with a policy goal to “provide ample and convenient library facilities” (City of Riverside 2012). RPL operations is funded by the City’s General Fund, which allocated $8.6 million (approximately 1 percent) of its Fiscal Years 2018/2019 – 2019/2020 Operating Budget to library services to provide 60 FTE staff positions (City of Riverside 2020b).

The Riverside County Library System has 39 branches, the closest facilities being the Highgrove Library approximately 2.25 miles north of UCR, Woodcrest Library approximately 6.0 miles southwest of UCR, and Louis Rubidoux Library approximately 4.2 miles northwest of UCR. It also has a bookmobile service. Library facilities currently have 333,884 square feet available (County of Riverside 2015). Recently, Riverside County supervisors approved spending up to $50 million to build three new library branches to be completed by 2021, in Desert Hot Springs, Menifee, and French Valley (Press Enterprise 2019).

Planning for new or physically altered library facilities is based on an assessment of the cumulative need for new facilities. The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year, or approximately 426 new residents each year over the proposed 15-year life of the 2021 LRDP. Future residents would pay proportionate property and sales taxes to Riverside and neighboring cities, which would support investments in new or expanded library facilities and amenities. As a result, the new residents would contribute to the financing of library services. The increased population from implementation of the proposed 2021 LRDP is not anticipated to require new or altered library facilities, beyond those facilities already proposed as part of the LRDP, to meet the relatively small increase in service demand. Furthermore, potential environmental impacts related to the construction of new or expanded public facilities would be assessed on a project-specific level by the applicable lead agency. Therefore, this impact would be **less than significant**, and further analysis in the forthcoming EIR is not warranted.

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16. Recreation

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

Less Than Significant Impact. The proposed 2021 LRDP would guide the future use and development of recreation and open space areas on the UCR main campus. Buildout under the proposed 2021 LRDP includes development of new recreational facilities. Therefore, this analysis focuses upon the extent to which the proposed 2021 LRDP would impact existing non-affiliated, off-campus neighborhood and regional parks and recreational facilities.

UCR Parks and Recreation Facilities

Currently, UCR contains approximately 67.5 acres of land designated Recreation & Athletics for approximately 23,922 students. UCR's SRC is in the northern area of East Campus south of Linden Street. The SRC is divided into two sections: SRC North and SRC South. SRC North contains the 22,000-square foot SRC Arena (maximum capacity of 3,000), four Multi-Purpose Rooms, racquetball and squash courts, basketball and badminton courts, locker rooms, and Conference and Training Rooms. SRC South contains the 8,297-square foot Multi-Activity Court Gym, climbing wall, jogging track, kitchen, six tennis courts, lap pools, recreation pool, spa, pool deck, pool grass area, and sand volleyball court. Gym membership is included in student tuition (UCR 2020a).

The UCR Botanic Gardens, located on more than 40 acres on the southeastern side of the East Campus, is a living plant museum with more than 3,500 plant species and thousands of specimens from around the world. The UCR Botanic Gardens is utilized for teaching, research, and demonstration purposes, as well as for enjoyment, passive recreation, and appreciation of nature. The UCR Botanic Gardens houses several buildings on the site, including a Gatehouse with two small restrooms and a meeting room near the entrance. Located on the UCR Botanic Gardens property are a second restroom building, garage used as an office and equipment space, propagation lath house, greenhouse, and the Schneider House. The UCR Botanic Gardens hosts events for visitors year-round. There is no charge for admission to the UCR Botanic Gardens and it is open to all UCR students and the public (UCR 2020b).

The proposed 2021 LRDP would establish a UCR Botanic Gardens Land Use category, which would encompass the existing UCR Botanic Gardens. Predominant land uses would primarily include demonstration gardens; habitat restoration and management; and incidental facilities, such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses would also include support facilities for the UCR Botanic Gardens and parking.

The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year. The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. An estimated 6,395 students, faculty, and staff would be accommodated by non-affiliated, off-campus housing in Riverside or neighboring cities.

The 2005 LRDP designated 14.1 acres of the West Campus and 53.4 acres of the East Campus for Athletics & Recreation land uses. Implementation of the proposed 2021 LRDP would retain existing student recreational facilities and would provide new open space and recreation facilities to accommodate the increase in student population. Under the proposed 2021 LRDP, approximately 28.7 acres of the campus with the highest concentration of existing recreational uses would be designated Athletics & Recreation. The Recreation & Athletics land uses would be concentrated in two areas in the northern portion of East Campus and include the SRC, the track facility, tennis courts, and the baseball stadium on Blaine Street. Recreation & Athletics land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses also include parking, food service, administrative areas, office and meeting space, and other supporting uses. Additional recreational facilities would be interspersed within other land use categories (e.g., Student Neighborhood).

UCR Student Affairs manages the UCR's SRC and the recreational fields. UCR employs technicians, mechanics, and maintenance staff to repair fitness equipment, as well as heating, ventilation, and air conditioning equipment, plumbing, pools, turf, and other recreational facility components. The same level of management and maintenance of campus facilities would be provided throughout the implementation of the proposed 2021 LRDP. New recreational facilities are proposed under the proposed 2021 LRDP to accommodate the increase demand. Therefore, because new recreational facilities are proposed and maintenance of existing recreational facilities would continue to occur, substantial deterioration of on-campus recreational facilities is not anticipated.

City of Riverside Parks and Recreation Facilities

The City of Riverside's Park System includes almost 3,000 acres of park land, consisting of 58 developed, natural, or undeveloped parks.

The City of Riverside has a goal of three acres of local parks per thousand population, consisting of 0.75 acre of Community Park per thousand population and 2.25 acres of Neighborhood Park per thousand population (City of Riverside 2019b). The City currently has 202.63 acres of Neighborhood Parks and 351.48 acres of Community Parks. **Table 12** shows the current park to population ratios and future park to population ratios with implementation of the proposed 2021 LRDP.

Table 12 – Parkland to Population

Type of Park	City Park Standard	Existing Park to Population Ratio	With 2021 LRDP Park to Population Ratio
Neighborhood Park	2.25 acres/1,000 residents	0.62 acre/1,000 residents	0.59 acre/1,000 residents
Community Park	0.75 acre/1,000 residents	1.07 acres/1,000 residents	1.03 acres/1,000 residents

Source: City of Riverside 2019b; DOF 2020

As shown in **Table 12**, the City of Riverside currently does not meet its park to population standards for Neighborhood Parks or Community Parks. All UCR students would have access to on-campus recreational facilities, but they may also patronize parks and recreational facilities in the City. In addition, the projected increase in campus population associated with the proposed 2021 LRDP could result in increased use of off-campus recreational facilities. Use of off-campus public recreational facilities by UCR students, faculty, and staff could occur in two ways: 1) UCR students, faculty, and staff who live off-campus and use recreational facilities near their residences; and 2) UCR students who live on campus and use recreational facilities off-campus in the surrounding neighborhoods.

The proposed 2021 LRDP would result in approximately 13,884 additional residents by the 2035 horizon year, or approximately 926 new residents each year over the proposed 15-year life of the 2021 LRDP. Non-affiliated, off-campus residential housing developments are subject to the Quimby Act (Government Code Section 66477), which allows a city or county to require the dedication of land or impose a requirement for payment of in-lieu fees, or a combination of both, for park or recreational facilities as a condition for the approval of a tentative map or parcel map for private development projects. Thus, the necessary funding and/or land to develop recreation facilities to serve campus populations living off campus would be provided to the City of Riverside (assuming all students are living off-campus in the City of Riverside's jurisdiction) by private housing developers as part of the Quimby Act requirements during the development of new residences.

Furthermore, funding for maintenance for those facilities is provided through property assessments and taxes distributed to the City of Riverside, whose responsibility it is to provide and maintain such recreational facilities; it is anticipated that this would occur in accordance with the City of Riverside's General Plan and community plans. Additionally, the increase in UCR population growth is accounted for in SCAG's population projects for the City of Riverside's General Plan. Furthermore, with implementation of the proposed 2021 LRDP, new recreational facilities would be constructed on campus for both UCR populations and the public to use.

Use of off-campus public recreational facilities in the surrounding neighborhoods by UCR students, faculty, and staff who live on campus could also increase incrementally as a result of the implementation of the proposed 2021 LRDP. However, this outcome is expected to be limited with the recreational opportunities provided on campus. Students would continue to be able to use the on-campus recreational facilities as part of their enrollment fees, which would likely reduce the use of off-campus recreational facilities by students. Also, with implementation of the proposed 2021 LRDP, the potential for recreational opportunities would be provided on campus within the Recreation & Athletics, Student Neighborhood and Canyon Crest Gateway LRDP land use areas. It is not anticipated that implementation of the proposed 2021 LRDP would result in substantial increased usage of non-affiliated, off-campus public recreational facilities by on-campus populations that would result in the substantial physical deterioration of facilities would occur or be accelerated. Impacts are anticipated to be **less than significant**; however, this issue will be addressed in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP would include the development of land use categories for recreational spaces on campus, including approximately 28.7-acre Athletics & Recreation land use category and 43.7-acre UCR Botanic Gardens land use category. However, these proposed land use categories would encompass existing recreational facilities. The Recreation & Athletics land use category would be concentrated in two areas in the northern portion of East Campus and include the SRC, the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood scale facilities would be interspersed within student neighborhoods, as indicated above, to improve student access, and create a more dynamic student experience in the daytime, evenings, and on weekends. Recreation & Athletics predominant land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. The proposed 2021 LRDP would also designate approximately 43.7 acres for the UCR Botanic Gardens land use category, which would allow facilities that would support the UCR Botanic Gardens functions and programs for passive recreation opportunities. There would also be opportunities for active and passive recreation in other 2021 LRDP land use categories.

The development of new recreational facilities is part of the proposed 2021 LRDP and could result in adverse physical impacts on the environment during the construction and/or operation period, as these facilities would be one component of the overall LRDP program, and the physical environmental impacts of these facilities will be analyzed as part of the proposed project. Therefore, the 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

17. Transportation

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☒	☐	☐	☐

Potentially Significant Impact. Primary vehicular access to the UCR campus would continue to be provided from University Avenue, Canyon Crest Drive, West Linden Street, Watkins Drive, as well as secondarily from other local streets under the 2021 LRDP. Most development under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. The 2021 LRDP does not propose any substantive changes to the existing campus transportation network. Implementation of the propose 2021 LRDP would not disrupt service or inhibit access to existing transit services.

Implementation of specific campus projects under the proposed 2021 LRDP may result in temporary closure of on-campus traffic lanes or roadway segments in the project vicinity to permit the delivery of construction materials, to transport exported soil, or to provide adequate site access during construction of utility connections or other project-related features. Future campus projects may also include updates or minor realignments to existing on-campus circulation and bicycle and pedestrian facilities. However, activities associated with future campus projects would adhere to applicable UCR and UC system-wide policies and review procedures prior to implementation.

As part of the forthcoming 2021 LRDP EIR, a transportation impact analysis (TIA) will be prepared to assess the potential transportation impacts of the proposed 2021 LRDP, and to analyze consistency with the 2016 SCAG RTP/SCS. Policies proposed under the 2021 LRDP will be reviewed under the forthcoming EIR to ensure that future campus project complies with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☒	☐	☐	☐

Potentially Significant Impact. As part of the 2021 LRDP EIR, a TIA will be prepared to assess the consistency of the proposed 2021 LRDP with CEQA Guidelines section 15064.3, subdivision (b) and other pertinent transportation regulations. CEQA guidelines have recently been updated to change the requirements for transportation impact analysis as initiated under Senate Bill 743. The new guidelines are intended to better account for the environmental impacts of growth and development related to transportation rather than only considering congestion. The TIA will assess the impact of the proposed 2011 LRDP on vehicle miles of travel to reflect the number of vehicle-trips generated by the campus and the expected distance that drivers will travel to/from UCR for their work/school trips on a per service population basis, as well as other trips generated by on-campus housing. Therefore, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐

Less Than Significant Impact. Most development under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. As such, implementation of the proposed 2021 LRDP would generate a mix of traffic similar to existing conditions (primarily commuter traffic from students, faculty, and staff). With more students and employees, the volume of traffic across all modes would increase which may result in slower travel speeds for some modes. Fire and emergency access would remain the same. The proposed 2021 LRDP does not propose any substantive changes to the existing campus transportation network. Implementation of the proposed 2021 LRDP would not disrupt service or inhibit access to existing transit services.

The existing farm equipment used on campus generally follow internal routes on West Campus. At times, the farm equipment will cross over Martin Luther King Boulevard at the gates west of Iowa Avenue and at the intersection of Martin Luther King Boulevard and Parking Lot 30. Additionally, the farm equipment would cross Canyon Crest Drive and cross Iowa Avenue just south of the CARB facility. When there is work on East Campus, the farm equipment would travel on Canyon Crest Drive and take the campus loop to the fields. Staff participates in tractor safety training and are required to abide by State law when driving on streets. It is anticipated that the process, procedures, and safety would remain the same with implementation of the proposed 2021 LRDP.

Project-level details of campus planned development are not included in the proposed 2021 LRDP at this time as this is a long-range planning level document. Any new sidewalk or paths would be designed and constructed to UCR design standards, and potentially applicable City of Riverside standards (if within City of Riverside's public right-of-way), to minimize hazardous conditions and would undergo project-specific environmental review for project-scale hazards when the specific campus project advances through the development process. The campus project development process includes review of means of egress, safety to life and property from fire and other hazards attributed to the built environment, and safety to fire fighters and emergency responders during emergency operations. As part of campus project-level environmental review, input from emergency services, including the campus's designated Deputy State Fire Marshal, would be solicited to ensure that emergency access meets the standards of service providers (UCR 2018).

Policies proposed under the proposed 2021 LRDP will be reviewed in the forthcoming EIR to ensure that future campus projects comply with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. Therefore, while impacts related to transportation hazards are anticipated to be **less than significant**, further analysis will be included in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project result in inadequate emergency access?	☒	☐	☐	☐

Potentially Significant Impact. Vehicular access to and around the UCR campus would continue to be provided from University Avenue, Canyon Crest Drive, West Linden Street, Watkins Drive, and other local streets under the 2021 LRDP. Most development under the proposed 2021 LRDP would be infill development, consistent with the existing land use context. The proposed 2021 LRDP does not propose any substantive changes to the existing campus transportation network.

As discussed in criterion 9(f) of this Initial Study, roadways within the university are not designated evacuation routes for the City. Furthermore, the ramp for I-215 is accessible directly from the east/west campus exit on University Avenue and west campus exit on Martin Luther King Boulevard, which also serve as evacuation routes for the campus (City of Riverside 2018).

Implementation of specific campus projects under the proposed 2021 LRDP may result in temporary closure of on-campus traffic lanes or roadway segments in the project vicinity to permit the delivery of construction materials; to transport exported soil; or to provide adequate site access during construction of utility connections or other project-related features. Future campus projects may also include updates or minor realignments to existing on-campus circulation and bicycle and pedestrian facilities. However, activities associated with future campus projects would adhere to applicable UCR and UC system-wide policies and review procedures prior to implementation.

Project-level details of campus planned development are not included in the proposed 2021 LRDP at this time as this is a long-range planning level document. Any new sidewalk or paths would be designed and constructed to UCR design standards, and potentially applicable City of Riverside standards (if within City of Riverside's public right-of-way), to minimize hazardous conditions and would undergo project-specific environmental review for project-scale hazards when the specific campus project advances through the development process. The campus project development process includes review of means of egress, safety to life and property from fire and other hazards attributed to the built environment, and safety to fire fighters and emergency responders during emergency operations. As part of campus project-level environmental review, input from emergency services, including the campus's designated Deputy State Fire Marshal, would be solicited to ensure that emergency access meets the standards of service providers (UCR 2018).

Policies proposed under the 2021 LRDP will be reviewed in the forthcoming EIR to ensure that the campus projects comply with federal, State, and local management and reduction statutes and regulations related to the on-campus and off-campus circulation system. Therefore, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted.

18. Tribal Cultural Resources

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☒	☐	☐	☐

Potentially Significant Impact. Chapter 532, Statutes of 2014 (i.e., Assembly Bill 52), requires Lead Agencies evaluate a project's potential to impact "tribal cultural resources." Such resources include "[s]ites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe that are eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources." Assembly Bill 52 also gives Lead Agencies the discretion to determine, supported by substantial evidence, whether a resource qualifies as a "tribal cultural resource." Per Assembly Bill 52, Native American consultation is required upon request by a California Native American tribe that has previously requested that UCR provide it with notice of such projects.

To date, UCR has received six requests for project notification pursuant to AB 52 (from the Agua Caliente Band of Cahuilla Indians, Torres-Martinez Desert Cahuilla Indians, Cahuilla Band of Indians, Pechanga Band of Luiseño Indians, San Manuel Band of Mission Indians, and Rincon Band of Luiseño Indians). On May 2020, UCR provided these tribes with notification of the proposed 2021 LRDP.

As discussed in Section 5, *Cultural Resources*, of this Initial Study, UCR is currently undertaking an HRS report to identify any potential historical resources on campus. Future development near these resources or others identified in the HRS report may cause a potentially significant impact. The HRS may find potential resources that could be of importance to Native American tribes. Due to the potential to impact culturally sensitive tribal resources in the area, the project may have a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☒	☐	☐	☐

Potentially Significant Impact. As discussed in Section 5, *Cultural Resources*, of this Initial Study, there is potential for implementation of the project to disturb unknown cultural resources. To date, UCR has received six requests for project notification pursuant to AB 52 (from the Agua Caliente Band of Cahuilla Indians, Torres-Martinez Desert Cahuilla Indians, Cahuilla Band of Indians, Pechanga Band of Luiseño Indians, San Manuel Band of Mission Indians, and Rincon Band of Luiseño Indians). On May 2020, UCR provided these tribes with notification of the proposed 2021 LRDP.

Potential resources that may be exposed during ground disturbance activities could be of importance to Native American tribes. Due to the potential to impact potentially culturally sensitive tribal resources in the area, the project may have a **potentially significant impact** and further analysis in the forthcoming EIR is warranted.

19. Utilities and Service Systems

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☒	☐	☐	☐

Potentially Significant Impact. Development of projects under the proposed 2021 LRDP would be adjacent to existing campus development and would connect to existing wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities and infrastructure. However, the on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in demand on existing infrastructure, which may result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Therefore, the proposed 2021 LRDP may have **a potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☒	☐	☐	☐

Potentially Significant Impact. Riverside Public Utilities (RPU) supplies domestic water to UCR. The RPU service area is approximately 75 square miles, of which approximately 70 square miles are in Riverside's City boundaries. RPU's water supply consists primarily of groundwater, with additional sources, including recycled water and imported water. UCR also has rights to potable water in the Gage Canal. All existing and planned water supply entitlements, water rights, and/or water service contracts that may be used to serve future development associated with the proposed 2021 LRDP are set forth in the current City of Riverside Urban Water Management Plan (UWMP, RPU 2016). The 2015 UWMP identifies adequate potable water supplies to meet future demands through 2040 within the RPU's water supply service area under normal weather conditions. The 2015 UWMP projects surplus water supplies under all scenarios, including multiple dry years. RPU used SCAG regional forecasts of future population, land use data, and demographic trends for the 2015 UWMP, including demand associated with growth and expansion at UCR (RPU 2016). The Regents of the University of California can extract 554 acre-feet per year from the San Bernardino Basin area, which is considered in the UWMP.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. The proposed 2021 LRDP would accommodate 13,884 additional residents by the 2035 horizon year. The proposed 2021 LRDP would include approximately 7,489 new on-campus beds to accommodate projected future growth in student enrollment. An estimated 6,395 students, faculty, and staff would be accommodated by non-affiliated, off-campus housing in Riverside and surrounding region. Conservatively, the contribution of the proposed 2021 LRDP to the City of Riverside's forecasted population would account for approximately 3.6 percent of the city's forecasted growth.

The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in demand on water supplies. Further analysis is needed to determine if that increase in demand would be within the parameters of the demand forecasted in the UWMP. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Would the project result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☒	☐	☐	☐

Potentially Significant Impact. RPU's Sewage Systems Services Program and Treatment Services unit collects, treats, and disposes of all wastewater generated within the City of Riverside and is responsible for compliance with State and federal requirements governing the treatment and discharge of all domestic and industrial wastewater generated in its service area, including the UCR main campus. The Riverside Water Quality Control Plant (RWQCP) treats all campus-generated wastewater, with UCR operating its own collection system that connects to the City's system. The RWQCP currently treats an average of 30 million gallons per day (mgd) and has a capacity of 40 mgd. The RWQCP is currently being expanded and retrofitted and would have a capacity of 46 mgd. The City's Wastewater Integrated Master Plan addresses facility needs for projected wastewater influent flow through the year 2025 and identifies improvements that would increase the capacity of the RWQCP up to 52.2 mgd, although at this time, the City is increasing the treatment capacity of the RWQCP to 46 mgd (City of Riverside 2008).

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in demands on the wastewater treatment provider and its capacity to serve the future specific campus project's projected demand in addition to the provider's existing commitment. Further analysis is needed to determine if that increase in demand would be within the parameters of the demand forecasted in the City's Wastewater Integrated Master Plan. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☒	☐	☐	☐

Potentially Significant Impact. During and after construction of the campus projects implemented under the proposed 2021 LRDP, UCR would be required to comply with applicable elements of AB 1327, Chapter 18 (California Solid Waste Reuse and Recycling Access Act of 1991), and other applicable local, State, and Federal solid waste disposal standards. Further reduction in solid waste generation would occur with implementation of the UC Policy on Sustainable Practices (UC 2019c).

The City of Riverside Solid Waste Division is responsible for the collection and handling of residential refuse, recycling, and green waste (compostable organic waste) generated within the City of Riverside, including the UCR campus. Riverside County Department of Waste Resources (RCDWR) operates five landfills, has a contract agreement for waste disposal with an additional private landfill, and administers several transfer station leases (RCDWR 2020). One of these transfer stations is the Robert A. Nelson Transfer Station, located at 1830 Agua Mansa Road, which receives refuse from western Riverside County. The transfer station is operated by Burrtec Waste Industries, is permitted to accept up to 4,000 tons of solid waste per day, and currently processing approximately 2,500 to 3,000 tons of solid waste per day (UCR 2019c). Solid waste from UCR is disposed at the Badlands Landfill, in the City of Moreno Valley, which has an estimated capacity of approximately 15.7 million cubic yards. Based on the current permit, the landfill is expected to close in 2022. The Badlands Landfill is permitted for a maximum of 4,500 tons per day (tpd) for disposal plus 300 tpd for beneficial reuse (CalRecycle 2019). After the landfill closes in 2022, waste would go to the remaining landfills that RCDWR operates (i.e., Blythe, Desert Center, Lamb Canyon, Oasis). These facilities are regulated at the federal, State, and local levels and monitored for compliance.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. Campus projects implemented under the proposed 2021 LRDP would generate both construction and operational solid waste. The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in solid waste disposal. Further analysis is needed to determine if that increase in demand would be within the capacity of RCDWR operations and the Robert A. Nelson Transfer Station. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☒	☐	☐	☐

Potentially Significant Impact. During and after construction of the projects implemented under the 2021 LRDP, UCR would be required to comply with applicable elements of AB 1327, Chapter 18 (California Solid Waste Reuse and Recycling Access Act of 1991), and other applicable local, State, and federal solid waste disposal standards. Further reduction in solid waste generation would occur with implementation of the UC Policy on Sustainable Practices.

The California Integrated Waste Management Act of 1989 (AB 939) mandates that local jurisdictions divert at least 50 percent of all solid waste generated by 2020.

Consistent with the UC Sustainable Practices Policy, the UCR campus is committed to diverting at least 75 percent of its solid waste from landfills with a goal of diverting 100 percent. To accomplish this, UCR implements a waste/source reduction and recycling program that includes sorting and separating wastes to simplify the removal of recyclable materials and the expansion of composting procedures associated with landscaping and agriculture to reduce the solid waste flow. The campus has constructed a transfer station on the West Campus at Parking Lot 30. UCR collects the recyclables and waste on campus and delivers these materials to the transfer station for hauling. Athens Services picks up the recyclable material for recycling. UCR delivers waste, in UCR haul trucks, to the Nelson Transfer Station from which Burrtec Waste Industries then transports 100 percent of the non-recyclable material to a waste-to-energy facility. UCR composts all green wastes on campus. In addition, UCR is carrying out a shift in its procurement practices toward recyclable, second generation, or reusable products to the extent feasible. As of 2017-2018 (the most current available data year), UCR has achieved an approximately 68 percent solid waste diversion rate, including waste from construction and demolition (UC 2019b).

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities on the UCR campus, including student housing to accommodate future projected enrollment of 35,000 students. Campus projects implemented under the proposed 2021 LRDP would generate both construction and operational solid waste. The incremental on-campus and off-campus population growth accommodated under the proposed 2021 LRDP would result in an associated increase in solid waste disposal. LRDP policies will be reviewed under the forthcoming EIR to ensure that the proposed 2021 LRDP complies with federal, State, and local management and reduction statutes and regulations related to solid waste. Therefore, the proposed 2021 LRDP may have a **potentially significant impact**, and further analysis in the forthcoming EIR is warranted.

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20. Wildfire

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
a) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?	☒	☐	☐	☐

Potentially Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007).

The RFD has created emergency response maps for the open lands in the City of Riverside. The response maps were created through the collaborative efforts of Fire, Information Technology, and the Parks and Recreation Departments. According to the Box Canyon Reserve Incident Action Plan Emergency Response Map, the closest Reception Center and Staging Area to the areas of campus located in or near a VHFHSZ is at Islander Park on the corner of Big Springs Road and Mt. Vernon Avenue. Type I Engine fire access is available on certain trails at Islander Park, at the foothills of the Box Springs Mountain Reserve (City of Riverside 2018c).

As discussed in criterion 9(f) of this Initial Study, roadways within the university are not designated evacuation routes for the City. Furthermore, the ramp for I-215 is accessible directly from the east/west campus exit on University Avenue and west campus exit on Martin Luther King Boulevard, which also serve as evacuation routes for the campus (City of Riverside 2018).

The construction and operation of projects associated with the proposed 2021 LRDP would not substantially alter or otherwise interfere with public rights-of-way and would provide adequate internal ingress and egress for necessary emergency response vehicles. Implementation of the proposed 2021 LRDP would not interfere with traffic circulation on designated disaster routes during construction or operation. The proposed 2021 LRDP would be required to comply with all applicable California Fire Code (Title 24, CCR, Section 9) requirements.

Construction of facilities associated with the implementation of the proposed 2021 LRDP could result in lane or roadway closures on the edges of campus and within the campus circulation system. Future development could affect areas identified as emergency assembly areas. Implementation of future development under the proposed 2021 LRDP would be guided by existing and future LRDP planning strategies, including those concerning transportation where circulation and traffic management would be discussed. Future development on the campus would require the implementation of measures that require construction staging area be situated in such a way that they avoid designated evacuation zones, as in the current LRDP. Furthermore, new development would require Office of Emergency

Management (OEM) to update the Campus Emergency Operations Plan to account for the new development and increased student/faculty/staff population. These revisions would include changes to the campus evacuation zones, emergency assembly areas, staff responsibilities, and general procedures. Impacts are considered **potentially significant impact**; this impact will be discussed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☒	☐

Less Than Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007). The biggest factors for assessing wildfire risk include drought, slope, flammability of vegetation, and burn severity (length of time from last fire). Since fires burn faster uphill, slope is a crucial factor in fire spread. Vegetation provides fuel for fires. Rock and sand, water, and cultivated crops are considered non-burnable, while grasslands and hay are considered prime fuels for fire growth. Areas with steeper slopes often have more severe burns (Tufts University 2018). Low relative humidity and strong winds are critical weather conditions that could lead to rapid or dramatic increases in wildfire activity (CAL FIRE 2020).

The UCR campus is subject to Santa Ana winds, which are strong, extremely dry offshore winds that affect Southern California in autumn and winter. They can range from hot to cold, depending on the prevailing temperatures in the source regions, the Great Basin and upper Mojave Desert (Tufts University 2018). The winds are known for the hot dry weather (often the hottest of the year) that they bring in the fall and are infamous for fanning regional wildfires (UCR 2012). Santa Ana winds are a type of downslope windstorm that occur over Southern California from the coastal mountains westward and from Ventura County southward to the Mexican border (Rolinski et al. 2016).

Wildfire smoke produced from combustion of natural biomass contains thousands of individual compounds, including particulate matter, carbon dioxide, water vapor, carbon monoxide, hydrocarbons and other organic chemicals, nitrogen oxides, and trace minerals. Wildfires can move into the wildland urban interface, burning homes and structures and thereby consuming man-made materials in addition to natural fuels. Wildfire behavior will vary depending on natural fuel type; fires in forest fuels can range from mild to severe and can spread very slowly or extremely rapidly depending on weather and fuel conditions. Wildfires in forests can last for weeks or months and are often the type that results in the most severe and longest duration air quality impacts. Smoke levels in populated areas can be difficult to predict (USEPA 2019).

The 2021 LRDP would increase the density of development on campus, with new structures and infrastructure which would be constructed to modern fire code and safety standards. The campus is situated in an area that is largely developed with urban and commercial land uses, but the campus contains open space areas to the east that are sparsely vegetated grasslands with intermittent, non-native trees in areas of lower elevation. The 2021 LRDP would include potential redevelopment in areas previously disturbed and not within the steep, vegetated slopes and hillsides where fire risk is greatest. Development of new facilities under the 2021 LRDP would primarily be concentrated in the northern and central areas of East Campus, surrounded by existing urban development away from the open space areas prevalent near the base of the Box Springs Mountain east and south of campus. As Santa Ana winds generally move from northeast to southwest, most of the new development on campus would not exacerbate wildfire risk from winds. However, the proposed 2021 LRDP would potentially allow development of new facilities in or adjacent to the VHFHSZ in East Campus south of South Campus Drive and adjacent to the natural hillsides.

The UCR Fire Prevention and Life Safety Policy requires that all construction, alterations, renovations, and interior space dividers are subject to fire code review and inspection by UCR's Building and Safety Division, Fire Prevention, EH&S, OEM, and/or other UCR departments and staff. This includes approval of plans and specifications to verify compliance with applicable codes, including the following:

- Title 24, CCR, Building Regulations
- Uniform Fire Code
- National Fire Codes of the National Fire Protection Association
- Title 19, CCR, Public Safety
- Title 8, CCR, Occupational Safety
- California Health and Safety Code

During plan check review, the Campus Building Official and Campus Fire Marshal would review specific project plans to ensure that the design of the campus building complies with all the required codes noted above. Campus structures would be required to comply with the California Fire Code with regard to emergency/fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible.

While impacts related to exposing people to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire are anticipated to be **less than significant,** this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☒	☐

Less Than Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007). The proposed 2021 LRDP would direct new development on the UCR campus; however, utilities would be installed underground and would not exacerbate fire risk.

The UCR Fire Prevention and Life Safety Policy requires that all construction, alterations, renovations, and interior space dividers are subject to fire code review and inspection by UCR's Building and Safety Division, Fire Prevention, EH&S, OEM, and/or other UCR departments and staff. This includes approval of plans and specifications to verify compliance with applicable codes, including the following:

- Title 24, CCR, Building Regulations
- Uniform Fire Code
- National Fire Codes of the National Fire Protection Association
- Title 19, CCR, Public Safety
- Title 8, CCR, Occupational Safety
- California Health and Safety Code

During plan check review, the Campus Building Official and Campus Fire Marshal would review specific project plans to ensure that the design of the building complies with all the required codes noted above. New or relocated utilities and systems would comply with State fire codes to reduce the risk of fires and therefore would not exacerbate fire risk. While impacts related to fire risk from installation or maintenance of associated infrastructure anticipated to be **less than significant,** this will be analyzed further in the forthcoming EIR.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☒	☐

Less Than Significant Impact. According to the Fire and Resource Assessment Program *Very High Fire Hazard Severity Zones in LRA As Recommended by CAL FIRE* map for the City of Riverside, portions of the southeastern area of East Campus near South Campus Drive and East Campus Drive, including the southern portion of the UCR Botanic Gardens and the Open Space Reserve, are located in a VHFHSZ that includes the Box Springs Mountains (CAL FIRE 2007).

Slope instability from wildfire scarring of the landscape can result in slope instability in the form of more intensive flooding and landslides. These post-fire slope soils and altered drainage patterns can more easily creep away downslope sides of foundations and reduce lateral support. Major post-wildfire hazards are unstable hill slopes and altered drainage patterns. Slopes may suffer landslides, slumping, soil slips, and rockslides.

As discussed in criterion 10(d), the proposed 2021 LRDP would not expand or otherwise alter existing FEMA flood hazard areas and is not considered subject to inundation by the failure of a levee or dam. West Campus is relatively flat and not subject to landslides, while the southeastern portion of East Campus contains natural hillsides. However, the proposed 2021 LRDP would include potential redevelopment in areas previously disturbed and not within the steep, vegetated slopes and hillsides where fire risk slope instability is greatest and would not expose people or structures to downslope or downstream flooding or landslides. While impacts related to exposing people or structures to risks from post-fire slope instability or flooding are anticipated to be **less than significant,** this will be analyzed further in the forthcoming EIR.

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21. Mandatory Findings of Significance

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
The lead agency shall find that a project may have a significant effect on the environment and thereby require an EIR to be prepared for the project where there is substantial evidence, in light of the whole record, that any of the following conditions may occur. Where prior to commencement of the environmental analysis a project proponent agrees to mitigation measures or project modifications that would avoid any significant effect on the environment or would mitigate the significant environmental effect, a lead agency need not prepare an EIR solely because without mitigation the environmental effects would have been significant (per Section 15065 of the State CEQA Guidelines):				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP may result in potentially significant impacts to biological resources and encountering unknown archaeological and tribal cultural resources during ground disturbing activities. Potential degradation of the quality of the environment may occur, which would result in a **potentially significant impact**, and impacts will be analyzed further in the forthcoming EIR as part of the biological resource analysis and cultural resources/tribal cultural resources analyses.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project have the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals?	☒	☐	☐	☐

Potentially Significant Impact. The proposed 2021 LRDP is a long-term plan for campus growth and to meet program needs, and the plan would be developed with consideration of long-term environmental goals. For example, in conjunction with the proposed 2021 LRDP, UCR is preparing a GHGRS that would include measures to achieve long-term GHG environmental goals along with the proposed 2021 LRDP. However, as this topic is still under investigation at this time, the proposed 2021 LRDP may have **potentially significant impacts**, and further analysis in the forthcoming EIR is warranted as part of the individual resource areas.

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of past, present and probable future projects)?	☒	☐	☐	☐

Potentially Significant Impact. Implementation of the proposed 2021 LRDP, in conjunction with other projects in the surrounding area, may result in impacts that are cumulatively considerable. In addition, impacts directly associated with the proposed 2021 LRDP have the potential to be cumulatively considerable.

Impacts found to be potentially significant, or less than significant but warranting additional analysis in the forthcoming EIR, will also be analyzed for **potentially significant cumulatively considerable impacts**. These include impacts related to Aesthetics (Criterion a, c, and d), Agriculture and Forestry Resources (Criterion a and e), Air Quality (Criterion a, b, and c), Biological Resources (Criterion a, b, c, and d), Cultural Resources (Criterion a and b), Energy (Criterion a and b), Geology and Soils (Criterion a, c, and f), GHG Emissions (Criterion a and b), Hazards and Hazardous Materials (Criterion a [operational], b, c, and f), Hydrology and Water Quality (Criterion a, b, c, and e), Noise (Criterion a and b), Public Services

(Criterion a, c, and d), Recreation (Criterion a and b), Transportation (Criterion a, b, c, and d), Tribal Cultural Resources (Criterion a and b), Utilities and Service Systems (Criterion a, b, c, d, and e), and Wildfire (Criterion a, b, c, and d).

Impacts found to be less than significant and not warranting additional analysis in the EIR, and those areas with a conclusion of no impact, would inherently also not result in cumulatively considerable impacts and no further cumulative analysis is required in the forthcoming EIR. These topics include Aesthetics (Criterion b), Agriculture and Forestry Resources (Criterion b, c, and d), Air Quality (Criterion d), Biological Resources (Criterion e and f), Cultural Resources (Criterion c), Geology and Soils (Criterion b, d, and e), Hazards and Hazardous Materials (Criterion d, e, and g), Hydrology and Water Quality (Criterion d), Land Use and Planning (Criterion a and b), Mineral Resources (Criterion a and b), Noise (Criterion c), Population and Housing (Criterion a and b), and Public Services (Criterion b and e).

Threshold(s)	Potentially Significant Impact	Less Than Significant With Project-Level Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

Potentially Significant Impact. In general, impacts to human beings are associated with air quality, geological hazards, GHG emissions, hazards and hazardous materials, hydrologic hazards and water quality, noise, and wildfire impacts. As detailed in the preceding responses, the 2021 LRDP may result, directly or indirectly, in adverse hazards related to air quality (Section 3), geological hazards (Section 7), GHG emissions (Section 8), hazards and hazardous materials (Section 9), hydrologic hazards and water quality (Section 10), noise (Section 13), and wildfire (Section 20). Based on the analysis in this Initial Study, direct and indirect impacts to human beings because of implementing the proposed 2021 LRDP may be a **potentially significant impact** and will be analyzed further in the forthcoming EIR as part of the individual resource areas.

VIII. LIST OF PREPARERS

The University of California, Riverside prepared this Initial Study with the assistance of Rincon Consultants, Inc. University and Consultant staff involved in the preparation of the Initial Study are listed below.

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IX. SUPPORTING INFORMATION SOURCES

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Appendix A3

Scoping Comments

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STATE OF CALIFORNIA Gavin Newsom, Governor

NATIVE AMERICAN HERITAGE COMMISSION

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July 8, 2020

Stephanie Tang, Campus Environmental Planner
University of California, Riverside
1223 University Avenue, Suite 240
Riverside, CA 92507

Re: 2020070120, University of California, Riverside 2021 Long Range Development Plan Project, Riverside County

Dear Ms. Tang:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, §15064.5 (b) (CEQA Guidelines §15064.5 (b)). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1)). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements**. If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.

AB 52

AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project: Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

- **a.** A brief description of the project.
- **b.** The lead agency contact information.
- **c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
- **d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).

2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report: A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subds. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1(b)).

- **a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).

3. Mandatory Topics of Consultation If Requested by a Tribe: The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

- **a.** Alternatives to the project.
- **b.** Recommended mitigation measures.
- **c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).

4. Discretionary Topics of Consultation: The following topics are discretionary topics of consultation:

- **a.** Type of environmental review necessary.
- **b.** Significance of the tribal cultural resources.
- **c.** Significance of the project's impacts on tribal cultural resources.
- **d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).

5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process: With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).

6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document: If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

- **a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
- **b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

7. Conclusion of Consultation: Consultation with a tribe shall be considered concluded when either of the following occurs:

- **a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
- **b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).

8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document: Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).

9. Required Consideration of Feasible Mitigation: If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).

10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:

- **a.** Avoidance and preservation of the resources in place, including, but not limited to:
  - **i.** Planning and construction to avoid the resources and protect the cultural and natural context.
  - **ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- **b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - **i.** Protecting the cultural character and integrity of the resource.
  - **ii.** Protecting the traditional use of the resource.
  - **iii.** Protecting the confidentiality of the resource.
- **c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- **d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
- **e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
- **f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).

11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource: An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:

- **a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
- **b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
- **c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. Tribal Consultation: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. No Statutory Time Limit on SB 18 Tribal Consultation. There is no statutory time limit on SB 18 tribal consultation.
3. Confidentiality: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. Conclusion of SB 18 Tribal Consultation: Consultation should be concluded at the point in which:
    a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
    b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: http://nahc.ca.gov/resources/forms/.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
    a. If part or all of the APE has been previously surveyed for cultural resources.
    b. If any known cultural resources have already been recorded on or adjacent to the APE.
    c. If the probability is low, moderate, or high that cultural resources are located in the APE.
    d. If a survey is required to determine whether previously unrecorded cultural resources are present.

2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
    a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

b. The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.

3. Contact the NAHC for:

a. A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.

b. A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.

4. Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.

a. Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.

b. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.

c. Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

cc: State Clearinghouse

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Rincon Band of Luiseño Indians
CULTURAL RESOURCES DEPARTMENT
One Government Center Lane | Valley Center | CA 92082
(760) 749-1051 | Fax: (760) 749-8901 | rincon-nsn.gov

July 31, 2020

Sent via email: CEQA@ucr.edu
University of California Riverside
Stephanie Tang
Environmental Planner
1223 University Avenue, Suite 240
Riverside, CA 92507

Re: 2021 Long Range Development Plan

Dear Ms. Tang,

This letter is written on behalf of the Rincon Band of Luiseño Indians ("Rincon Band" or "Band"), a federally recognized Indian Tribe and sovereign government. The Band received the Notice of Preparation of an Environmental Impact Report.

The Band has reviewed the provided Cultural Resources and Initial Study and engaged in government-to-government consultation with the University of California. As stated in previous conversations, the Band has specific concerns that the project has the potential to impact tangible Tribal Cultural Resources (TCRs). Embedded in these resources are Rincon's history, culture, and continuing traditional identity.

We are looking forward to further discuss and consult on the project to avoid cultural resources and mitigate impacts to such resources. If you have additional questions or concerns, please do not hesitate to contact our office at your convenience at (760) 297-2635 or via electronic mail at cmadrigal@rincon-nsn.gov. We look forward to working together to protect and preserve our cultural assets.

Sincerely,

Cheryl Madrigal
Tribal Historic Preservation Officer
Cultural Resources Manager

CITY OF RIVERSIDE

Community Development
Department
Planning Division

City of Arts & Innovation

August 6, 2020

Stephanie Tang
Campus Environmental Planner
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

Subject: City of Riverside's Review of a Notice of Preparation of an Environmental Impact Report for UC Riverside's 2021 Long Range Development Plan

Dear Ms. Tang:

Thank you for the opportunity to comment on the Notice of Preparation of an Environmental Impact Report (EIR) for UCR's 2021 Long Range Development Plan (LRDP).

The City understands that the 2021 LRDP will guide development on the main UC Riverside campus for the next 15 years and includes long-range land use development, open space preservation and improvements, multi-modal mobility planning, and infrastructure sustainability and resiliency efforts. The City further understands that to accommodate the anticipated increase of approximately 11,078 students and 2,806 faculty and staff by academic year 2035/2036, the 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet of additional academic buildings, support facilities, and student housing of approximately 7,489 new on-campus beds.

The City has reviewed the Environmental Initial Study, and we wish to provide the following comments:

<u>Planning Division:</u>

- Agricultural and Forestry Resources, Threshold B – The Initial Study asserts that because the existing agricultural areas of the west campus are currently zoned Public Facilities, and the UC is not subject to municipal regulations, there will be no impact and no further analysis under the EIR. The City recommends an analysis be completed for this threshold because the proposed 2021 LDRP will provide direction for the west campus, which has been primarily identified as an agricultural land use area. The 2021 LDRP, has the potential to impact these areas that are already identified as agricultural.

- Cultural Resource, Threshold A – The Initial Study specifies that a historic resources survey will evaluate campus buildings for National Register and California Register eligibility. Per Sections 21048.1 and 15064.5(a)(2) of CEQA, structures need to be analyzed for local listing as well as national and state.

- Hazards and Hazardous Material, Threshold E – The majority of the campus is located within Zone E of the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan. Compatibility with this plan should be analyzed.

- Noise, Threshold C - The majority of the campus is located within Zone E of the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan. Compatibility with this plan should be analyzed.

- Population and Housing, Threshold A – The Initial Study indicates that there will be approximately 6,395 new students and faculty/staff expected to reside in non-university housing by 2035. The City sees this an impact to housing within the City and requests this section be analyzed in the EIR.

- Population and Housing, Threshold B – The Initial Study anticipates that the LRDP could generate a need of approximately 1,950 off campus housing units. The additional housing demand generated from the anticipated campus growth identified within the 2021 LRDP will result in cumulative impacts to the City. SCAG's Regional Housing Need Allocation (RHNA) for the sixth cycle Housing Element is 18,000 units that must be produced within 8 years. This is in addition to the approximately 4,000 units that are still unmet from the fifth cycle. The EIR should address how the 1,950 off-campus units cumulatively relate to and impact the City's RHNA obligation.

<u>Public Works Department:</u>

- The City's Traffic Engineering Division requests the opportunity to review the Scoped Traffic Impact Analysis (TIA) for the Draft EIR, and requests that the analysis follow the City's TIA Guidelines.

<u>Riverside Public Utilities Department:</u>

- Based on the 2021 LRDP scope, RPU/Water advises that a Water Supply Assessment will be needed. As specific projects get developed additional impacts to Hydrology and Water Quality and Utilities and Service Systems may be identified which will need to be evaluated further

- Riverside Public Utilities - Electric acknowledges that impacts to City electrical services are anticipated and will review the draft EIR accordingly.

Parks, Recreation, and Community Services Department:

- The City's PRCSD requests that the Gage Canal Trail project through the UCR campus be included in the 2021 LRDP and associated EIR at a programmatic level. The inclusion of the Gage Canal Trail within the 2021 LRDP would assist the City in leveraging grants to bring the trail to fruition.
- Please see attached memo for clarification and additional comments.

Fire Prevention:

- The City of Riverside Fire Marshal has reviewed the Initial Study for the Long-Range Development Plan (LRDP). Over the past four years, we have been working closely with the UCR Fire Marshal and have expressed our fire departments concerns as it relates to current and new development.
- The City of Riverside Fire Prevention Division has been involved with all new project submittals by the UCR Fire Marshal over the past four years and realizes that the campus will continue to grow with more students and additional buildings. We anticipated that the LRDP will increase the number of plan reviews and call volume for emergency assistance. Currently, the UCR Fire Marshal and City Fire Marshal are working together to develop a Memorandum of Understanding (MOU) which will define the various responsibilities that the City of Riverside Fire Department, the UCR Fire Marshal and the UCR Police Department will handle currently and during the growth of the campus.
- The City Fire Prevention Division is also requesting that the City of Riverside Fire Department management team and the Board of Regents of the University of California, have another discussion regarding placing a new fire station on or near the UCR campus as part of this LRDP. With UCR having a total of 35,000 students on campus during regular school sessions and with the additional increase of approximately 11,078 students and 2,806 faculty and staff, we want to ensure public safety is always a priority so we can continue to support any future development near or on the campus at all times. Although the additional academic buildings, support facilities, and student housing are not in place currently, we would like to remain proactive and look at other options for quicker responses and to better provide exceptional services to UCR as it grows in the future.

The City of Riverside appreciates your consideration of the comments provided in this letter. Please forward the pending Draft EIR for the 2021 LRDP to the City of Riverside Planning Division. Should you have any questions regarding this letter, please contact Scott Watson, Historic Preservation Officer, at (951) 826-5507, or by e-mail at swatson@riversideca.gov.

We thank you again for the opportunity to provide comments on this proposal and look forward to working with you in the future.

Sincerely,

For
David Murray
Principal Planner

cc: Rusty Bailey, Mayor
Riverside City Council Members
Al Zelinka, FAICP, CMSM, City Manager
Rafael Guzman, Assistant City Manager
David Welch, Community & Economic Development, Director
Mary Kopaskie-Brown, City Planner
Kris Martinez, Public Works Director
Todd Corbin, Public Utilities General Manager
Adolfo Cruz, Parks, Recreation and Community Services Director
Jennifer McDowell, Fire Marshal/Division Chief
Kristi Smith, Chief Assistant City Attorney

MEMO

Parks, Recreation and Community Services Department

DATE: 07/28/2020

TO: STEPHANIE TANG, UCR CAMPUS ENVIRONMENTAL PLANNER

FROM: ALISA SRAMALA, CITY OF RIVERSIDE PARKS, RECREATION AND COMMUNITY SERVICES DEPARTMENT, TRAILS COORDINATOR

CC: RANDY MCDANIEL, CITY OF RIVERSIDE PARKS, RECREATION AND COMMUNITY SERVICES DEPARTMENT, DEPUTY DIRECTOR

RE: INITIAL STUDY & EIR SCOPING FOR UCR LONG RANGE DEVELOPMENT PLAN

Thank you for the opportunity to review the initial study and offer comments on the EIR scope for the UCR Long Range Development Plan (LRDP). Our office is the department of Parks, Recreation and Community Services Department (PRCSD), Planning and Design Division. One of our areas of responsibility is the development and implementation of the City of Riverside's Parks Master Plan and the Trails Master Plan for a multi-purpose decomposed granite surfaced (gravel) trail system. In this work, we identify where planned development has the potential of impacting park land or the planned gravel trail system. The City's Trail Master Plan includes a multi-purpose trail segment through the UCR campus, connecting the campus population to neighboring residential neighborhoods, retail/commercial centers, services, open space and other points of interest. The LRDP has the potential to impact the planned trail system.

Request:

The PRCSD requests that the Gage Canal Trail project through the UCR campus be included in the LRDP and associated EIR at a programmatic level. The inclusion of the Gage Canal Trail within the LRDP would assist the City in leveraging grants to bring the trail to fruition.

Impacts:

As noted in section "5. Cultural Resources" of the Initial Study, the 2021 LRDP may result in a potentially significant impact to Cultural Resources and further analysis in the forthcoming EIR is warranted. The PRCSD asks that the analysis for the EIR include discussion of impacts specifically to the Gage Canal corridor running through UCR property. The Gage Canal is designated a City Historic Landmark, and the canal corridor is also the proposed site for a gravel trail and a parallel paved active transportation bikeway, spanning from the northern City limits near Palmyrita Avenue, through the UCR campus, and then southward through the greenbelt to the Citrus State Historic Park on the western end of the city. PRCSD's vision for the Gage Canal Trail includes interpretation of the historic significance of the canal to Riverside's citrus boom of the late 1800s, using interpretive signs and similar educational strategies. With UCR's approval and coordination, the proposed Gage Canal Trail would run through UCR's West Campus agricultural lands. The trail would support Mobility and Land Use objectives and policies within the LRDP and would support multi-modal access to the campus and reduction of conflicts between vehicular traffic and pedestrians/cyclists.

As noted in section "17. Transportation" of the Initial Study, the 2021 LRDP may result in a potentially significant impact to on-campus and off-campus circulation systems and further analysis is the forthcoming EIR is warranted. The PRCSD asks that the impacts of the LRDP on connectivity of the campus circulation/mobility system to the City of Riverside paved Bikeway and gravel Multi-Purpose Trail systems be analyzed in the EIR. Both the paved bikeway and gravel trail systems integrate into the campus to promote use of active transportation options connecting the campus population to off-campus resources such as surrounding residential neighborhoods, retail, services, business parks, nearby open spaces, and other points of interest. The two plans are routed through the campus using Blaine Street, Canyon Crest Drive, West Campus Drive, Martin Luther King Boulevard, and the Gage Canal corridor. In 2019, the City of Riverside received a $3.7 million grant from the California Department of Natural Resources to construct a dual-surface paved bikeway and gravel path within the Gage Canal corridor between Palmyrita Avenue and Blaine Street. For the future phases of the Gage Canal Trail development, the City will seek to coordinate with UC Riverside to implement the Gage Canal Trail through the UCR campus.

Background/Reference Documents:
Information about the City's Trails Master Plan can be found in the *2025 City of Riverside General Plan* and the *2020 Comprehensive Parks, Recreation and Community Services Master Plan*. Below are references and supporting objectives, goals and recommendations from the two plans to support the Gage Canal Trail project.

City of Riverside General Plan 2025 (https://riversideca.gov/cedd/planning/city-plans/general-plan-0):

- Figure CCM-6 Master Plan of Trails and Bikes page 30: https://riversideca.gov/planning/gp2025program/GP/12_Circulation_&_Community%20Mobility_Element_with%20maps.pdf
- General Plan, Circulation and Community Mobility Element, Policy CCM-10.7: Maintain an extensive trails network that supports bicycles, pedestrians and horses and is linked to the trails systems of adjacent jurisdictions."
- General Plan, Circulation and Community Mobility Element, Policy CCM-10.8: Maximize links between trails and major activity centers, residential neighborhoods, schools, shopping centers and employment centers."
- General Plan, Circulation and Community Mobility Element, Policy CCM-10.12: Encourage bicycling as a commute mode to school, work, etc.
- Riverside General Plan 2025 (Amended February 2018), page CCM- 4: "With smart growth, adequate and viable pedestrian and bicycle trails and support of local and regional transit expansion, Riversiders in 2025 will have viable mobility alternatives to the private automobile."

- General Plan, Parks and Recreation Element, page, Policy PR-2.3: Improve and create more connections and increase the safety of the bicycling, equestrian and pedestrian trail system within the City.

2020 Comprehensive Parks, Recreation and Community Services Master Plan (https://www.riversideca.gov/park_rec/park_rec/park_rec/park_rec/park_rec/park_rec/park_rec/sites/riversideca.gov.park_rec/files/56402%20Riverside%20Master%20Plan%20Final%2002-26-20.pdf):

- Section 2.9 Existing and Planned Trails and Bikeways
- Section 5.3 Summary of Park Facility Recommendations
- Policy PR-2.2: Implement recommend trail expansions, improvements and linkages between parks throughout the City's trails system as identified in the adopted Park Master Plan and Trails System Master Plan

If you have any questions please contact Alisa Sramala by email at asramala@riversideca.gov or by phone at (951) 826-2021.

JASON E. UHLEY
General Manager-Chief Engineer

1995 MARKET STREET
RIVERSIDE, CA 92501
951.955.1200
FAX 951.788.9965
www.rcflood.org

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

232323

July 17, 2020

City of Riverside
Planning Department
3900 Main Street
Riverside, CA 92522

Attention: Stephanie Tang

Re: 2021 Long Range
Development Plan (2021 LRDP)

The Riverside County Flood Control and Water Conservation District (District) does not normally recommend conditions for land divisions or other land use cases in incorporated cities. The District also does not plan check City land use cases, or provide State Division of Real Estate letters or other flood hazard reports for such cases. District comments/recommendations for such cases are normally limited to items of specific interest to the District including District Master Drainage Plan facilities, other regional flood control and drainage facilities which could be considered a logical component or extension of a master plan system, and District Area Drainage Plan fees (development mitigation fees). In addition, information of a general nature is provided.

The District's review is based on the above-referenced project transmittal, received July 8, 2020. The District **has not** reviewed the proposed project in detail, and the following comments do not in any way constitute or imply District approval or endorsement of the proposed project with respect to flood hazard, public health and safety, or any other such issue:

☒ This project would not be impacted by District Master Drainage Plan facilities, nor are other facilities of regional interest proposed.

☐ This project involves District proposed Master Drainage Plan facilities, namely ________, ________________. The District will accept ownership of such facilities on written request of the City. Facilities must be constructed to District standards, and District plan check and inspection will be required for District acceptance. Plan check, inspection, and administrative fees will be required.

☐ This project proposes channels, storm drains 36 inches or larger in diameter, or other facilities that could be considered regional in nature and/or a logical extension of the adopted ____ Master Drainage Plan. The District would consider accepting ownership of such facilities on written request of the City. Facilities must be constructed to District standards, and District plan check and inspection will be required for District acceptance. Plan check, inspection, and administrative fees will be required.

☐ This project is located within the limits of the District's _______ Area Drainage Plan for which drainage fees have been adopted. If the project is proposing to create additional impervious surface area, applicable fees should be paid by cashier's check or money order only to the Flood

Control District or City prior to issuance of grading or building permits. Fees to be paid should be at the rate in effect at the time of issuance of the actual permit.

☒ An encroachment permit shall be obtained for any construction related activities occurring within District right of way or facilities, namely, Box Springs Storm Drain or University Wash Spruce Street Storm Drain. For further information, contact the District's Encroachment Permit Section at 951.955.1266.

☐ The District's previous comments are still valid.

GENERAL INFORMATION

This project may require a National Pollutant Discharge Elimination System (NPDES) permit from the State Water Resources Control Board. Clearance for grading, recordation, or other final approval should not be given until the City has determined that the project has been granted a permit or is shown to be exempt.

If this project involves a Federal Emergency Management Agency (FEMA) mapped floodplain, then the City should require the applicant to provide all studies, calculations, plans, and other information required to meet FEMA requirements, and should further require that the applicant obtain a Conditional Letter of Map Revision (CLOMR) prior to grading, recordation, or other final approval of the project and a Letter of Map Revision (LOMR) prior to occupancy.

If a natural watercourse or mapped floodplain is impacted by this project, the City should require the applicant to obtain a Section 1602 Agreement from the California Department of Fish and Wildlife and a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers, or written correspondence from these agencies indicating the project is exempt from these requirements. A Clean Water Act Section 401 Water Quality Certification may be required from the local California Regional Water Quality Control Board prior to issuance of the Corps 404 permit.

Very truly yours,

Deborah de Chambeau

DEBORAH DE CHAMBEAU
Engineering Project Manager

c: Riverside County Planning Department
Attn: John Hildebrand

SLJ:blm

From: Stephanie Tang
To: Sally Schifman; Bill Vosti
Subject: [EXT] FW: UCR 2021 Long Range Development Plan - Notice of Preparation Environmental Impact Report
Date: Tuesday, July 21, 2020 10:23:32 AM
Attachments: UCR 2021 LRDP NOP_07-07-20.pdf

Hi,

Email from RTA stating no comments on the LRDP NOP.

Thank you,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Mauricio Alvarez <malvarez@riversidetransit.com>
Sent: Tuesday, July 21, 2020 5:19 AM
To: CEQA@ucr.edu
Subject: FW: UCR 2021 Long Range Development Plan - Notice of Preparation Environmental Impact Report

Good Morning,

RTA has reviewed the plans you have sent and we have no comments at this time.

Thanks,

Mauricio Alvarez, MBA
Planning Analyst
Riverside Transit Agency
p: 951.565.5260 | e: malvarez@riversidetransit.com
Website | Facebook | Twitter | Instagram
1825 Third Street, Riverside, CA 92507

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Tuesday, July 7, 2020 5:15 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: UCR 2021 Long Range Development Plan - Notice of Preparation Environmental Impact Report

Hi,

Attached, please find the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) in compliance with the California Environmental Quality Act (CEQA) for the 2021 Long Range Development Plan (2021 LRDP) at the University of California, Riverside.

We are requesting comments on the scope and contents of the EIR for the proposed 2021 LRDP. Comments can be submitted by US Mail at the address provided in the attached NOP or via email at CEQA@ucr.edu until 5:00 p.m. on August 6, 2020.

The NOP and Initial Study will be available beginning July 7, 2020 on our website: https://pdc.ucr.edu/environmental-planning-ceqa.
Please note that the University will hold a public scoping meeting on July 29, 2020 from 6:00 p.m. to 8:00 p.m. for the EIR. Due to the public safety concerns regarding COVID-19, the meeting will be held virtually. Information on how to join the virtual meeting is included in the attached NOP and at the website above.

Respectfully,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

SENT VIA E-MAIL:
CEQA@ucr.edu
Stephanie Tang, Campus Environmental Planner
University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

August 4, 2020

Notice of Preparation of Environmental Impact Report for the 2021 Long Range Development Plan

South Coast Air Quality Management District (South Coast AQMD) staff appreciates the opportunity to comment on the above-mentioned document. South Coast AQMD staff's comments are recommendations regarding the analysis of potential air quality impacts from the Proposed Project that should be included in the Environmental Impact Report (EIR). Please send a copy of the EIR upon its completion and public release directly to South Coast AQMD at the address shown in the letterhead. Note that copies of the EIR that are submitted to the State Clearinghouse are not forwarded to South Coast AQMD. **In addition, please send with the EIR all appendices or technical documents related to the air quality, health risk, and greenhouse gas analyses and electronic versions of all air quality modeling and health risk assessment files[1]. These include emission calculation spreadsheets and modeling input and output files (not PDF files). Without all files and supporting documentation, South Coast AQMD staff will be unable to complete our review of the air quality analyses in a timely manner. Any delays in providing all supporting documentation will require additional time for review beyond the end of the comment period.**

CEQA Air Quality Analysis

South Coast AQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. South Coast AQMD staff recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analyses. Copies of the Handbook are available from the South Coast AQMD's Subscription Services Department by calling (909) 396-3720. More recent guidance developed since this Handbook was published is also available on South Coast AQMD's website at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). South Coast AQMD staff also recommends that the Lead Agency use the CalEEMod land use emissions software. This software has recently been updated to incorporate up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. CalEEMod is the only software model maintained by the California Air Pollution Control Officers Association (CAPCOA) and replaces the now outdated URBEMIS. This model is available free of charge at: www.caleemod.com.

On March 3, 2017, the South Coast AQMD's Governing Board adopted the 2016 Air Quality Management Plan (2016 AQMP), which was later approved by the California Air Resources Board on March 23, 2017.

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[1] Pursuant to the CEQA Guidelines Section 15174, the information contained in an EIR shall include summarized technical data, maps, plot plans, diagrams, and similar relevant information sufficient to permit full assessment of significant environmental impacts by reviewing agencies and members of the public. Placement of highly technical and specialized analysis and data in the body of an EIR should be avoided through inclusion of supporting information and analyses as appendices to the main body of the EIR. Appendices to the EIR may be prepared in volumes separate from the basic EIR document, but shall be readily available for public examination and shall be submitted to all clearinghouses which assist in public review.

Built upon the progress in implementing the 2007 and 2012 AQMPs, the 2016 AQMP provides a regional perspective on air quality and the challenges facing the South Coast Air Basin. The most significant air quality challenge in the Basin is to achieve an additional 45 percent reduction in nitrogen oxide (NOx) emissions in 2023 and an additional 55 percent NOx reduction beyond 2031 levels for ozone attainment. The 2016 AQMP is available on South Coast AQMD's website at: http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan.

South Coast AQMD staff recognizes that there are many factors Lead Agencies must consider when making local planning and land use decisions. To facilitate stronger collaboration between Lead Agencies and South Coast AQMD to reduce community exposure to source-specific and cumulative air pollution impacts, South Coast AQMD adopted the Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning in 2005[2]. This Guidance Document provides suggested policies that local governments can use in their General Plans or through local planning to prevent or reduce potential air pollution impacts and protect public health. South Coast AQMD staff recommends that the Lead Agency review this Guidance Document as a tool when making local planning and land use decisions. Additional guidance on siting incompatible land uses (such as placing homes near freeways or other polluting sources) can be found in the California Air Resources Board's *Air Quality and Land Use Handbook: A Community Health Perspective*, which can be found at: http://www.arb.ca.gov/ch/handbook.pdf. Guidance[3] on strategies to reduce air pollution exposure near high-volume roadways can be found at: https://www.arb.ca.gov/ch/rd_technical_advisory_final.PDF.

South Coast AQMD has developed both regional and localized significance thresholds. South Coast AQMD staff recommends that the Lead Agency quantify criteria pollutant emissions and compare the emissions to South Coast AQMD's CEQA regional pollutant emissions significance thresholds[4] and localized significance thresholds (LSTs)[5] to determine the Proposed Project's air quality impacts. The localized analysis can be conducted by either using the LST screening tables or performing dispersion modeling.

When specific development is reasonably foreseeable as result of the goals, policies, and guidelines in the Proposed Project, the Lead Agency should identify any potential adverse air quality impacts and sources of air pollution that could occur using its best efforts to find out and a good-faith effort at full disclosure in the EIR. The degree of specificity will correspond to the degree of specificity involved in the underlying activity which is described in the EIR (CEQA Guidelines Section 15146). When quantifying air quality emissions, emissions from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips, and hauling trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, such as sources that generate or attract vehicular trips, should be included in the analysis. Furthermore, emissions from the overlapping construction and operational activities should be combined and compared to South Coast AQMD's regional air quality CEQA ***operational*** thresholds to determine the level of significance.

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[2] South Coast AQMD. 2005. Accessed at: http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf.

[3] In April 2017, CARB published a technical advisory, *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways: Technical Advisory*, to supplement CARB's Air Quality and Land Use Handbook: A Community Health Perspective. This technical advisory is intended to provide information on strategies to reduce exposures to traffic emissions near high-volume roadways to assist land use planning and decision-making in order to protect public health and promote equity and environmental justice. The technical advisory is available at: https://www.arb.ca.gov/ch/landuse.htm.

[4] South Coast AQMD's CEQA regional pollutant emissions significance thresholds can be found here: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

[5] Guidance for performing a localized air quality analysis can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds.

If the Proposed Project generates or attracts vehicular trips, especially heavy-duty diesel-fueled vehicles, it is recommended that the Lead Agency perform a mobile source health risk assessment[6]. An analysis of all toxic air contaminant impacts due to the use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

If the Proposed Project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate these impacts. Pursuant to CEQA Guidelines Section 15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed. Several resources are available to assist the Lead Agency with identifying possible mitigation measures for the Proposed Project, including:

- Chapter 11 "Mitigating the Impact of a Project" of South Coast AQMD's *CEQA Air Quality Handbook*
- South Coast AQMD's CEQA web pages available here: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mitigation-measures-and-control-efficiencies
- South Coast AQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook for controlling construction-related emissions and Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities
- California Air Pollution Control Officers Association's (CAPCOA) *Quantifying Greenhouse Gas Mitigation Measures* available here: http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf

South Coast AQMD Permits

In the event that implementation of the Proposed Project requires a permit from South Coast AQMD, South Coast AQMD should be identified as a Responsible Agency for the Proposed Project in the EIR. The assumptions in the air quality analysis in the EIR will be the basis for evaluating the permit under CEQA and imposing permit conditions and limits. For more information on permits, please visit South Coast AQMD's webpage at: http://www.aqmd.gov/home/permits. Questions on permits can be directed to South Coast AQMD's Engineering and Permitting staff at (909) 396-3385.

Data Sources

South Coast AQMD rules and relevant air quality reports and data are available by calling South Coast AQMD's Public Information Center at (909) 396-2001 or at South Coast AQMD's website at: http://www.aqmd.gov.

South Coast AQMD staff is available to work with the Lead Agency to ensure that project air quality and health risk impacts are accurately evaluated and mitigated to the extent feasible. If you have any questions regarding this letter, please contact me at lsun@aqmd.gov.

Sincerely,

Lijin Sun

Lijin Sun, J.D.
Program Supervisor, CEQA IGR
Planning, Rule Development & Area Sources

LS
RVC200708-14
Control Number

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[6] Guidance for performing a mobile source health risk assessment ("*Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis*") can be found at: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/mobile-source-toxics-analysis.

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From: Stephanie Tang
To: Sally Schifman; Bill Vosti
Subject: [EXT] FW: New subjects for upcoming LRDP (resending with correct year)
Date: Wednesday, July 29, 2020 8:15:19 PM

Comment letter from Kevin Dawson to be included as an LRDP comment letter.

Thanks,

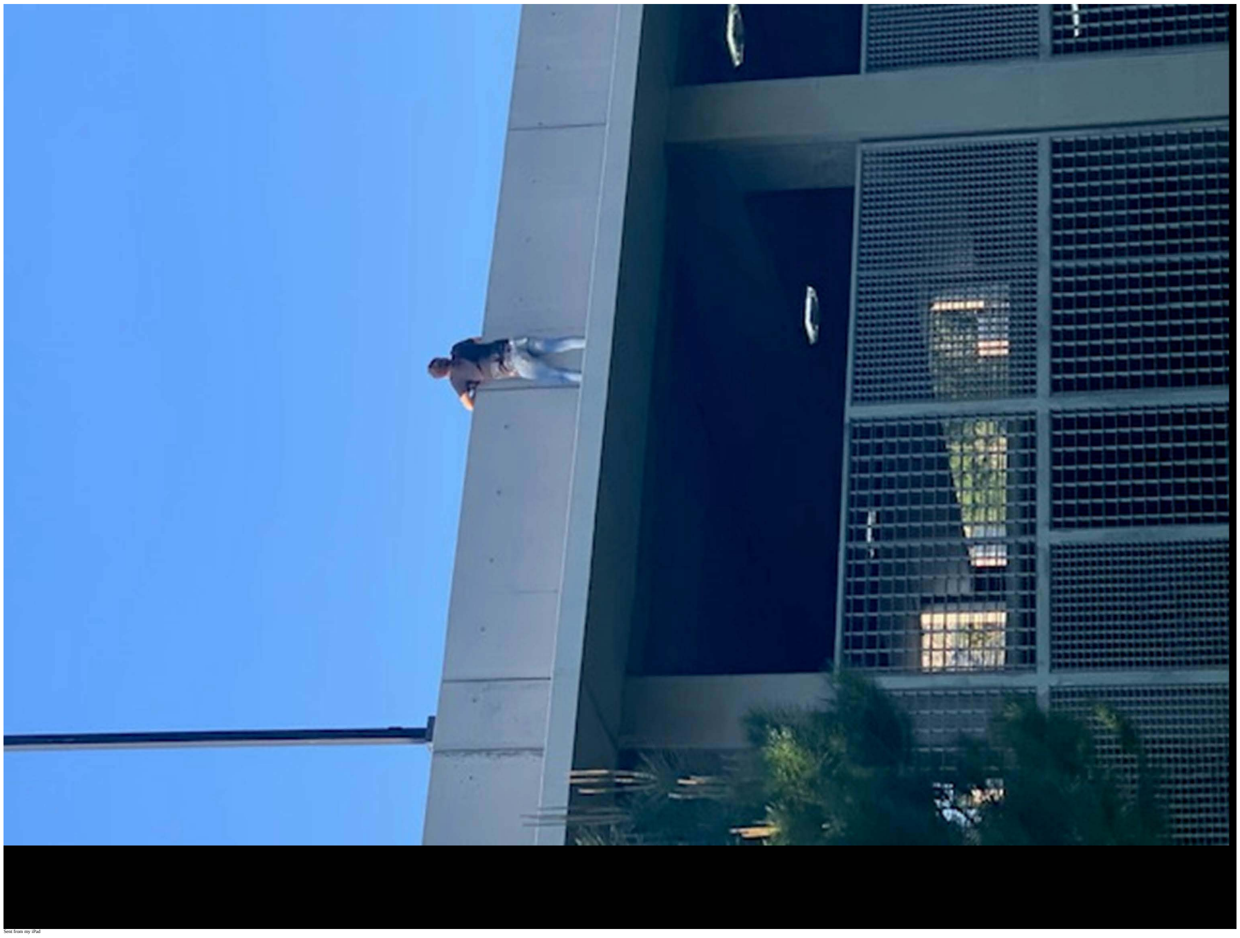
Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: KEVIN DAWSON <kevindaw@aol.com>
Sent: Wednesday, July 29, 2020 6:45 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: Fwd: New subjects for upcoming LRDP (resending with correct year)

Sent from my iPhone

Begin forwarded message:

> **From:** Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>
> **Date:** May 1, 2020 at 10:44:29 AM PDT
> **To:** Kevin Dawson <Kevindaw@aol.com>
> **Cc:** Jeff Kraus <jeff.kraus@ucr.edu>, Stephanie Tang <stephanie.tang@ucr.edu>
> **Subject: RE: New subjects for upcoming LRDP (resending with correct year)**
>
> Kevin,
>
> I just remembered I had not answered your question on the timeline for the EIR for the new LRDP.
>
> The EIR consultant team is now in place and different from the planning consultant team you met with in our working group meetings. Under Stephanie's direction, that team is currently working on drafting the initial study, and anticipates that the Initial Study/Notice of Preparation will go out for public review Summer 2020.
>
> Sincerely,
>
> Uma
>
> ---
>
> **From:** Uma Ramasubramanian
> **Sent:** Thursday, April 30, 2020 3:41 PM
> **To:** Kevin Dawson <kevindaw@aol.com>
> **Cc:** Jeff Kraus <Jeff.Kraus@ucr.edu>; Stephanie Tang <stephanie.tang@ucr.edu>
> **Subject:** RE: New subjects for upcoming LRDP
>
> Kevin,
>
> Thank you again for participating in the new LRDP process over this past year. While I am nearing completion of the planning phase, Stephanie Tang, copied on this email will be leading the environmental analysis and will also be reaching out to you. I recall you have met her in one of the community meetings.
>
> Thank you for your very thoughtful suggestions. For certain, we will consider those as we continue to work on the LRDP and its subsequent environmental analysis.
>
> I do hope you are continuing to stay healthy,
>
> Uma
>
> R. Umashankar **RLA | LEED AP**
> Principal Physical Planner
> Campus Planning
> 951.827.5610 | rumash@ucr.edu
> https://ucrengage.zoom.us/j/324973523
>
> ---
>
> **From:** Kevin Dawson <kevindaw@aol.com>
> **Sent:** Tuesday, April 21, 2020 1:25 PM
> **To:** Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>
> **Cc:** gkhalsa@nutritionnews.com; Richard Block <rblock31@charter.net>; Jeff Kraus <Jeff.Kraus@ucr.edu>
> **Subject:** New subjects for upcoming LRDP
>
> Hi Uma,
>
> I hope you are well.
>
> I've been reviewing the 05' LRDP and would like to know where you are on the timeline for preparing the EIR for the next LRDP. Have you already issued a NOP? I'd like to add two subjects to the study.
>
> The first would be specific section on light. Past LRDP and MND haven't specifically addressed light issues. New studies have determined elements of lighting can have significant impacts on human health and that of wildlife. Lighting has also been degrading the night sky, denying the general public and academic community access to celestial viewing.
>
> The second topic would have to do with human safety. I'm not sure how to title this. Last week, I observed a young woman standing out on a ledge of the top floor of the Glen Mor II parking structure. I called the police and luckily she was not having a suicidal event. But it made me wonder and issues surrounding suicides around parking structures. It turns out parking structures are a major magnet for suicidal people, in particular at collage campuses. There are design elements that can discourage suicide attempts. I am told the issue had become such a problem at UCI, that parking structures there have been retrofitting with suicide barriers.
>
> In looking at info on the proposed parking structure for lot 13, I'm not seeing any of the suggested suicide barriers or safety elements. In fact, I'm seeing an open architecture that would invite suicide attempts.
>
> My 18 year old nephew committed suicide a few years ago and so it is a real concern to me. I would like the campus to proactively adopt best practices to reduce risks.
>
> Here is a detail article on the subject of suicides at parking structures and safety elements that discourage attempts:
>
> https://www.parking.org/wp-content/uploads/2016/05/0416_Suicide_Book_web_final3.pdf
>
> Thanks,
>
> Kevin Dawson
>
> 951-850-7398 c



Sent from my iPad

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CITY OF
RIVERSIDE

City of Arts & Innovation

Stephanie Tang
Campus Environmental Planner
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

March 30, 2021

Subject: Future Water demand for UC Riverside 2021 Long Range development Plan.

Dear Ms. Tang,

This letter is in response to the University of California, Riverside (UC Riverside) projected water demand increase associated with the proposed 2021 Long Range Development Plan (LRDP). This plan is put forth by UC Riverside to guide the development on the main UC Riverside campus for the next 15 years. Through subsequent correspondences related to their proposed Development Plan, it was determined that an anticipated net water demand increase will reach about 1,000 acre-feet per year (AFY) by 2035 to 2036.

The water demand estimate presented in Table 1 summarizes the water demand increase due to the factors included in the table. As indicated in this table, the estimated new total demands for UC Riverside is projected to be about 1,950 AFY, a net increase of about 825 AFY.

Table 1 Water Demand Summary

	Actual	Projected
	Year: 2014	2021 LRDP (Year: 2035-2036)
Student Enrollment	21,600	35,000
Resident Beds	6,754	14,000
Faculty/Staff	42,50	7,545
Gross Square Feet of Development	7,360,521	12,750,000
Acre Feet of Water Needed per Year	1,125	1,950

Irrigated area is not easy to estimate but will decrease

RPU provides municipal water service to customers within its service area which includes the proposed project site. RPU has over 5,000 water supply connections; therefore, SB 610 (Water Code section 10912 (a)) requires RPU to prepare a water supply assessment when a project includes any of the following components: (1) more than 500 residential dwelling units, (2) a shopping center or business with more than 500,000 square feet of floor space or more than 1,000 employees, (3) a commercial office building with more than 250,000 square feet of floor space or more than 1,000 employees, (4) a hotel or motel with more than 500 rooms, (5) an industrial, manufacturing or processing plant, or an industrial park, with more than 650,000 square feet of floor area, more than 1,000 employees, or that occupies more than 40 acres, (6) a mixed-use project that includes one or more of the projects specified in the subdivision, or (7) a project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

In determining whether a project would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project, RPU uses the updated compliance target pursuant to the SB X7-7 as shown in Table 6-1 of the 2015 Urban Water Management Plan (UWMP) and the DWR Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001, Section 1, page 3. Within RPU's Service Area that amount is equivalent to 358 AFY.

RPU's analysis has determined that the net increase in water demand from the proposed project does exceed the requirements listed in Water Code section 10912 (a); thus, a water supply assessment shall be required for the proposed project.

The City's 2020 UWMP is currently being updated and will be adopted by June 2021. The UCR LRDP water demand projections will be included in the 2020 UWMP. Although it appears that RPU will have adequate water supplies to meet UCR LRDP increased demand which will be reflected in the 2020 UWMP, an updated WSA must be prepared by RPU and adopted by City Council prior to a formal determination.

If you have any questions, please contact Farid I. Boushaki, Water Resources Senior Engineer at (951) 826-2328.

Sincerely,

Todd Jorgenson
Utilities Assistant General Manager – Water
Riverside Public Utilities

CITY OF
RIVERSIDE
City of Arts & Innovation

April 16 ,2021

Stephanie Tang
Campus Environmental Planner
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

Subject: Future Water demand for UC Riverside 2021 Long Range development Plan.

Dear Ms. Tang,

The original letter dated March 01,2021 is amended with this version.

This letter is in response to the University of California, Riverside (UC Riverside) projected water demand increase associated with the proposed 2021 Long Range Development Plan (LRDP). This plan is put forth by UC Riverside to guide the development on the main UC Riverside campus for the next 15 years. Through subsequent correspondences related to their proposed Development Plan, it was determined that an anticipated net water demand increase will reach about 1,000 acre-feet per year (AFY) by 2035 to 2036.

The water demand estimate presented in Table 1 summarizes the water demand increase due to the factors included in the table. As indicated in this table, the estimated new total demands for UC Riverside is projected to be about 1,950 AFY, a net increase of about 825 AFY.

Table 1 Water Demand Summary

	Actual	Projected
	Year: 2014	2021 LRDP (Year: 2035-2036)
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Resident Beds	6,754	14,000
Faculty/Staff	42,50	7,545
Gross Square Feet of Development	7,360,521	12,750,000
Acre Feet of Water Needed per Year	1,125	1,950

Irrigated area is not easy to estimate but will decrease

Since the adoption of the UCR LRDP water supply assessment on August 26, 2003, the City has refined its projected water demand as well as water supplies. The projected water demand was refined based on several factors including projected land use, conservation measures, population, and including UCR LRDP. The refined projected water demand will be presented in the City's 2020 UWMP, which is currently being updated and will be adopted by June 2021. The projected water demand for the UCR LRDP in the 2020 UWMP is less than the demand presented in the 2015 UMWP as estimated in the table above. Therefore, pursuant to the information contained in RPU's 2020 UWMP it appears that there is sufficient surplus water supply available to RPU to meet UCR's incremental increase in water demand of 825 AFY through 2035.

If you have any questions, please contact Farid I. Boushaki, Water Resources Senior Engineer at (951) 826-2328.

Sincerely,

Todd Jorgenson
Utilities Assistant General Manager – Water
Riverside Public Utilities

Stephanie Tang

From:	Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Sent:	Thursday, April 22, 2021 7:03 AM
To:	Stephanie Tang
Cc:	Ferrando, Leo; Plinski, Michael; Jorgenson, Todd
Subject:	RE: [External] RE: City's UWMP and UCR's Proposed 2021 LRDP
Attachments:	Proposed 2021 LRDP letter.pdf

Good morning Stephanie,
Attached, please find the updated letter to UCR with regard to RPU's ability to provide water for the UCR LRDP.
Thank you

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Tuesday, April 20, 2021 10:21 AM
To: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Subject: [External] RE: City's UWMP and UCR's Proposed 2021 LRDP

Hi Farid,

Thank you for contacting me last week noting that the City will provide an updated memo. Do you know when we can get the updated memo for inclusion in our LRDP EIR?

Thank you for your help with this matter.

Kind regards,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Stephanie Tang
Sent: Thursday, April 8, 2021 2:28 PM
To: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Cc: Ferrando, Leo <LFerrando@riversideca.gov>; Plinski, Michael <MPlinski@riversideca.gov>; Jacqueline E Norman <jacqueline.norman@ucr.edu>; Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>; Jeff Kraus <Jeff.Kraus@ucr.edu>
Subject: RE: City's UWMP and UCR's Proposed 2021 LRDP

Hi Farid,

Thank you for the City's future water demand letter and noting that it appears RPU will have adequate water supplies to meet UCR's proposed 2021 Long Range Development Plan increased demand which will be reflected in the City's 2020 Urban Water Management Plan. RPU's letter also states that "analysis has determined that the new increase in water demand from the proposed project does exceed the requirements listed in Water Code section 10912(a); thus, a water supply assessment shall be required for the proposed project."

Water Supply Assessments (WSAs) are only required for a "city or county" (Water Code § 10910.). The University of California is a state agency created under Article IX, Section 9 of the California Constitution, and is not subject to preparation of a WSA.

If you would like to further discuss this clarification, I can be reached at the below contact information. Thank you.

Kind regards,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Sent: Wednesday, March 31, 2021 7:28 AM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Cc: Ferrando, Leo <LFerrando@riversideca.gov>; Plinski, Michael <MPlinski@riversideca.gov>
Subject: RE: [External] RE: City's UWMP and UCR's Proposed 2021 LRDP

Good Morning Stephanie,
Attached, please find copy of the letter from RPU to UCR regarding its 2021 LRDP. I'll also put a hard copy in the mail to you attention.
Thanks

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Wednesday, March 24, 2021 9:19 AM
To: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Subject: RE: [External] RE: City's UWMP and UCR's Proposed 2021 LRDP

Good morning Farid,

Just checking in to see if the City's Attorney's Office is still on track with providing you the letter memo today.

Thank you,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Sent: Thursday, March 11, 2021 3:06 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: RE: [External] RE: City's UWMP and UCR's Proposed 2021 LRDP

Hi Stephanie,

I just want to give you an update on the letter. I did hear from the City's Attorney's Office that a target date to respond to the letter is March 24, 2021.
Is this something urgent on your end, so I can try to see if there is a way to expedite that date or is it just for filling purpose.
Thanks

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Monday, March 8, 2021 3:21 PM
To: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Subject: [External] RE: City's UWMP and UCR's Proposed 2021 LRDP

Hi Farid,

Could you kindly check in with leadership to see when we can anticipate the signed letter?

Thanks so much,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Stephanie Tang
Sent: Monday, March 1, 2021 9:51 PM
To: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Subject: RE: [External] City's UWMP and UCR's Proposed 2021 LRDP

Hi Farid,

Great – thank you for the update!

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Sent: Monday, March 1, 2021 10:40 AM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: RE: [External] City's UWMP and UCR's Proposed 2021 LRDP

Good morning Stephanie,
A letter has been prepared and we will send it to you as soon as we get the signature.
Thanks

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Friday, February 26, 2021 8:44 AM

To: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>; Ferrando, Leo <LFerrando@riversideca.gov>
Cc: Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>; Plinski, Michael <MPlinski@riversideca.gov>
Subject: RE: [External] City's UWMP and UCR's Proposed 2021 LRDP

Thank you, Farid. Can we also get a memo from you documenting that the City has adequate water supply to support UCR's proposed 2021 LRDP per the information below and in the NOP I sent over?

Thank you,

Stephanie Tang
Campus Environmental Planner

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From: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Sent: Friday, February 26, 2021 6:45 AM
To: Stephanie Tang <stephanie.tang@ucr.edu>; Ferrando, Leo <LFerrando@riversideca.gov>
Cc: Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>; Plinski, Michael <MPlinski@riversideca.gov>
Subject: RE: [External] City's UWMP and UCR's Proposed 2021 LRDP

Thank you Stephanie,
We will make sure to account for that in the UWMP projections.
Thank you

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Thursday, February 25, 2021 5:29 PM
To: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>; Ferrando, Leo <LFerrando@riversideca.gov>
Cc: Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>; Plinski, Michael <MPlinski@riversideca.gov>
Subject: RE: [External] City's UWMP and UCR's Proposed 2021 LRDP

Hi Farid/Leo,

The 2016 Physical Master Plan Study noted that the total water demand for UCR in 2014 was about 1,125 AF. With implementation of the 2021 LRDP, the anticipated water demand would be about 1,945 AF. Please see table below for breakdown:

	Actual	Projected
	Year: 2014	2021 LRDP (Year: 2035-2036)
Student Enrollment	21,600	35,000
Resident Beds	6,754	14,000
Faculty/Staff	42,50	7,545
Gross Square Feet of Development	7,360,521	12,750,000
Irrigated area is not easy to estimate but will decrease		
Acre Feet of Water Needed	~1,125	~1,950

This aligns with the City's allocated assumption of 2,000 AF for UCR in the 2020 UWMP with implementation of UCR's 2021 Long Range Development Plan (2021 LRDP). Could you provide a memo documenting that the City can adequately serve the University with implementation of its 2021 Long Range Development Plan? Is this something we can get in the next week or so? I have attached the NOP to this email for your reference in case you need additional information to include in the memo.

Thank you!

Stephanie Tang
Campus Environmental Planner

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From: Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Sent: Monday, February 8, 2021 11:51 AM
To: Stephanie Tang <stephanie.tang@ucr.edu>; Ferrando, Leo <LFerrando@riversideca.gov>
Cc: Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>; Plinski, Michael <MPlinski@riversideca.gov>
Subject: RE: [External] City's UWMP and UCR's Proposed 2021 LRDP

Hi Stephanie,
Thank you for sending the link to the Chapter 6 of Physical Master Plan Study (PMPS). The report shows that the total demand for UCR in 2014 was about 1,125 AF of demand. I guess my questions is how much percentage increase would you say for the expansion in terms of students and irrigated area compared to 2014?
In any case and I'm emphasizing what we talked about in the meeting especially after looking at the demand calculated form the PMPS, that the allocated 2,000 AF for UCR in the 2020 UWMP is plenty of water to account for UCR needs.
Thank you

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Friday, February 5, 2021 10:02 AM
To: Ferrando, Leo <LFerrando@riversideca.gov>; Boushaki, Farid Ishak <FBoushaki@riversideca.gov>
Cc: Uma Ramasubramanian <uma.ramasubramanian@ucr.edu>
Subject: [External] City's UWMP and UCR's Proposed 2021 LRDP

Hi Leo/Farid,

Thank you for taking the time yesterday to chat with the UCR team on the University's proposed 2021 Long Range Development Plan (LRDP) and the City's upcoming 2020 Urban Water Management Plan (UWMP). Please include me (stephanie.tang@ucr.edu) in the City's upcoming noticing on the 2020 UWMP.

In 2018/2019, UCR had a total campus population of 28,661 (23,922 students and 4,739 faculty/staff) and about 4.8M assignable square feet (asf)/7.2M gross square feet (gsf) of campus development. The University contains 6,511 resident student beds. As noted in the meeting, the demand projections for UCR in the City's existing UWMP estimated to have 3,300 acre-feet of additional demand for the School of Medicine expansion on West Campus; however, that development did not occur and subsequently, the City will downgrade the water demand.

In the proposed 2021 LRDP, UCR is projecting a total campus population of 42,545 (35,000 students and 7,545 faculty/staff) and is proposing approximately 8.5M asf/13M gsf by the 2035/2036 academic year. The 2021 LRDP plans for up to 14,000 resident student beds.

I have attached some planning assumptions on flow rates, distribution, etc. that was captured in the 2016 Physical Master Plan Study (Chapter 6) for your reference: https://pdc.ucr.edu/sites/g/files/rcwecm2356/files/2019-08/ucriverside_pmps_chapter6_05242016.pdf. You should already have the LRDP Notice of Preparation (NOP) but for ease of access and review of other LRDP information and maps, refer to the attached PDF.

Please review and let us know if the City can adequately support the University's proposed 2021 LRDP growth projections. If you need additional information or have any questions, please feel free to reach out to me. Thank you.

Kind Regards,

Stephanie Tang
Campus Environmental Planner

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Appendix B

LRDP Program Model

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DRAFT LRDP Program Model

Last Updated July 12, 2021

CAMPUS POPULATION (headcount)

	2018 | BASE YEAR	2035 | PROGRAM MODEL	DIFFERENCE FROM BASE YEAR	PERCENT CHANGE
Students				
Undergraduate	20,581	28,000	7,419	36%
assumptions/notes	86% of total	80% of total		
Graduate/Professional	3,341	7,000	3,659	110%
Masters	1,188	3,710	2,522	212%
PhD	2,153	3,290	1,137	53%
assumptions/notes	14% of total	20% of total. See Note 3.		
Students Subtotal	**23,922**	**35,000**	**11,078**	**46%**
		See Note 1.		
Enrollment Growth Factor		***46%***		
Faculty and Staff (see note)				
Academic Faculty and Staff				
Ladder Rank Faculty	841	1,285	444	53%
assumptions/notes	28.4 students/ladder rank faculty. See Note 3.	27.2 students/ladder rank faculty (UC Average). Se Note 4		
Other Instructional Faculty	332	486	154	46%
assumptions/notes		growth by 46%. See Note 2.		
Non-Teaching Acad Appointments	529	774	245	46%
assumptions/notes		growth by 46%		
Academic Faculty and Staff Subtotal	*1,702*	*2,545*	*843*	*50%*
Non-Academic Staff				
Non-Academic Staff	3,037	5,000	1,963	65%
assumptions/notes	7.9 non-academic staff/student	7.0 non-academic staff/student ratio (UC Avg. for core funded activities). See Note 5.		
Faculty and Staff Subtotal	**4,739**	**7,545**	**2,806**	**59%**
CAMPUS POPULATION TOTAL	**28,661**	**42,545**	**13,884**	**48%**
Student Workers				
Non-Academic Student Staff	2,068	3,026	958	46%
assumptions/notes		growth by 46%		
Graduate Student Appointments	1,928	2,821	893	46%
assumptions/notes		growth by 46%		

Source: UCR Institutional Research

Definitions: *Ladder rank and equivalent = tenured, tenure-track, lecturers with promised security of employment. Other instructional faculty = clinical, visiting professors, adjunct, lecturers without security of employment. Academic student = medical residents, graduate researchers, teaching assistants (typically graduate students). Non-teaching academic appointments = agronomists and other academic titles, typically research-related.*

1. Note on 35,000 student enrollment: *This projection is based on current student enrollment, regional growth trends, and agreements between the University of California system and the State regarding resident student and transfer student enrollment objectives **.***

The Academics & Research Working Group considered the enrollment model that would bring the campus to approximately 35,000 students in 2035 and found the underlying assumptions to be reasonable. The Working Group considered campus enrollment trends during the past 18 years, going back to fall 2000 when UCR had approximately 13,000 students on campus. During this time, UCR added on average 538 net new students each year. Projecting this linear growth out over the next 17 years to 2035 implies an enrollment of approximately 33,000 students—very close to the planning model. The Working Group envisions a university in 2035 that has cultivated programs already known to have growth potential (BCOE, CHASS), and does not see signs of impending shifts in UCR's academic program portfolio that would have significant implications for space planning.

2. Note on growth factor: *The student enrollment is modeled to increase by 46%. The simplest approach and one of multiple methods used in this program model to estimate the need for additional faculty, staff, and campus space by expanding the existing value by 46%.*

3. Note on Undergraduate and Graduate Student Program Model: *The Academic & Research Working Group is supportive of growing graduate enrollment at a greater rate than overall enrollment, and feels that it is feasible to achieve 20% graduate students by 2035. Graduate students are currently 14% of total enrollment, with PhDs comprising around 9% of this total. While the proportion of PhDs is similar to that at other UC campuses, the proportion of Masters students is much smaller. Future PhD enrollments would scale with faculty growth, which planning models suggest would be roughly proportional to overall student growth. Thus there would need to be significant growth in Masters students to achieve the 20% figure. The desire to grow graduate enrollments, and Masters enrollments in particular, has been discussed since at least the last strategic planning effort in 2010 but little progress has been made. A more determined effort will be needed that may require new incentives. Overall, the working group feels that a campus of 35,000 students by 2035, including 20% graduate students, is reasonable, provided the university creates an environment in which faculty feel incentivized to grow Masters programs.*

4. Note on Ladder Rank Faculty Program Model: *Increase student/faculty ratio to equal that of the UC average. Current UCR ratio: 28.4 student/faculty Headcount (or 29.3 FTE). UC Average ratio: 27.2 student/faculty Headcount (or 28.0 FTE).*

5. Note on Non-Academic Staff Model: *The Academics and Research Working Group considered the projected increases in non-academic staffing that would bring the student:staff ratio down to the UC average (from 3,037 up to 5,607, or an 85% increase). However, it is important to understand that the UC averages do include health sciences and other non-core funded activities. Adjusting for "core" funded activities, 5000 could be a reasonable target to consider (which would include both core and some non-core growth, like housing).*

CAMPUS SPACE (assignable square feet)

	2018 | BASE YEAR	2035 | PROGRAM MODEL	DIFFERENCE FROM BASE YEAR	PERCENT CHANGE
Academics & Research				
Classroom and Service (seats)	6,947	12,978	6,031	87%
assumptions/notes	UCR is currently utilizing its classrooms well (near UCOP utilization expectations). The UV theater classrooms are oversized for their scheduled use, so they are excluded from the utilization analysis. See Note 6a and 6b.	**Modified UCOP** SmithGroup has modified the UCOP method for determining classroom need. The Program Model calibrates the UCOP model for the different classroom needs of undergraduate and graduate students. 10% of courses provided through alternative delivery methods that reduce classroom need. See note 7.		
Classroom and Service (ASF)	113,282	290,252	176,970	156%
assumptions/notes	does not include ASF in movie theaters	New classroom formats will vary from lecture halls to active learning classrooms. See note 8.		
Teaching Lab. and Service	102,729	165,800	63,071	61%
assumptions/notes	UCR is currently utilizing its teaching labs well (near UCOP utilization expectations).	Only new teaching labs will be constructed/ renovated per the UCOP student station size guidelines. Weekend scheduling. See Note 9.		
Open Lab. and Service	116,743	129,500	12,757	11%
assumptions/notes	See Note 10.	3.7 ASF/student (typical UC System)		
Research Lab. and Service	887,529	1,115,300	227,771	26%
assumptions/notes	MRB is not included in Base Year ASF	See Note 11.		
Academics and Research Subtotal	**1,220,283**	**1,700,852**	**480,569**	**39%**
	1,220,283	**1,700,852**	**480,569**	
	1,830,425	**2,551,277**	**720,853**	

Sources: UCR Space Planning (Existing ASF), FP&A (Research Projections)

Definitions

assignable square feet (ASF): *Assignable Square Feet (ASF) is defined as the area measured within the interior walls of a room that can be assigned to a program. ASF does not include circulation, mechanical, restrooms, or building service spaces.*

weekly credit hours (WCH): *number of hours per week a student station in an instructional space (classroom or teaching lab) is occupied*

6a. Note on Classrooms Base Year: *Number of seats and current utilization (32.7 WCH/classroom station) do not include 943 seats in UV theaters. The theaters are oversized for their scheduled use, and thus including them would disproportionately decrease average utilization. Base Year 226,946 WCH (total weekly student contact hours) in East Campus classrooms, 238,610 WSCH in all classrooms including UV theaters.*

6b. Note on Classrooms Base Year: *Renovations of existing classrooms will not reduce their capacity.*

7. Note on Classroom Model (Modified UCOP Method): *Undergraduate students = (15 WCH/student)/(35 WSCH/station) = @ 0.43 seats/student. Graduate students = (12 WCH/student)/(35 WSCH/station) = 0.34 seats/student. 10% alternative delivery.*

8. Note on Classroom ASF Program Model: *Future student seats are assumed to be 21 ASF/station. UCR's existing classrooms (excluding the movie theaters) have an average 15.5 ASF/station, which is typical for lecture-style classrooms. Active learning can require up to 25 ASF/station. The assumed 21 ASF/station in the model represents the average of the 15 - 25 ASF range for active learning classrooms. The ASF calculations add 4% for classroom service space for new classrooms, plus existing classroom and service ASF.*

9. Note on Teaching Lab Program Model: *Teaching labs are defined as rooms used for regularly or formally scheduled classes which require special equipment or configuration (ex: art studios, chemistry labs, engineering computer labs). Only new labs are sized and scheduled per UCOP guideline. Fall 2018 course schedule extrapolated to 2035. New labs adjusted to 24 WCH (higher than existing lab utilization of 16.9 WCH). UCOP recommends 20 WCH;* ***24 WCH assumes weekend scheduling assumption of up to 4 hours.*** *New labs constructed/renovated at recommended ASF/station (ASF varies by discipline). The model assumes that existing labs will maintain current lower utilization and station capacity.*

10. Note on Open Labs: *An open laboratory is designed for or furnished with equipment that serves the needs of a particular discipline or discipline group for individual or group instruction where 1) use of the space is not formally or regularly scheduled, or 2) access is limited to specific groups of students. Included in this category are spaces generally called music practice rooms, language laboratories used for individual instruction, studios for individualized instruction, special laboratories or learning laboratories (e.g., speech, hearing, law, psychology, and health-related professions) if discipline restricted, individual laboratories, and computer laboratories involving specialized restrictive software or where access is limited to specific categories of students. General purpose computer labs are not open labs, but rather classified as study rooms (Library & Collaborative Space).*

11. Note on Research Labs and Service Model: *A FP&A projected Direct Research Expenditures (Expenditure) by college for 2035 at $270.1m (average 6% annual increase in research expenditure; base year 2018-19 Expenditure projected at $96m), assuming additional faculty/researchers and increased expenditure/researcher. It should also be noted that the quality of existing research space is a significant concern and likely limiting factor towards increasing per researcher expenditure. Adapting a research-field methodology to the college-level direct expenditures projections. Space factors ranging from 120 ASF to 540 ASF per $100,000 in direct expenditures were applied to each college-level projection (see detailed table below). Space needs analysis was limited to direct expenditures (67% of total research expenditures), and do not include F&A expenditures (indirect costs) or land-based research expenditures.The model assumes that current proportion of land-based research remains (16.4% of total research expenditure); UC Riverside reaches 40% of UC average research expenditure per faculty member by 2035; assumes growth in UCR faculty as per LRDP model.*

College	**FY 2018-19 Research Exp.** (projected)	**FY 2034-25 Research Exp.** (projected)	**% Change**	**Space Factor (ASF)**	**ASF/$100000**
BCOE	$ 25,000,000	$ 69,600,000	178%	450	313,000
CHASS	$ 5,800,000	$ 13,900,000	140%	180	25,000
CNAS	$ 46,200,000	$ 115,400,000	150%	480	554,000
GSOE	$ 1,900,000	$ 3,300,000	74%	120	4,000
SOM	$ 6,700,000	$ 32,800,000	390%	540	177,000
SPP	$ 960,000	$ 1,090,000	14%	120	1,300
All Other	$ 9,400,000	$ 34,000,000	262%	120	41,000
Total	**$ 96,000,000**	**$ 270,100,000**			**1,115,300**

CAMPUS SPACE (assignable square feet) (continued)

	2018 | BASE YEAR	2035 | PROGRAM MODEL	DIFFERENCE FROM BASE YEAR	PERCENT CHANGE
Academic Support				
Offices and Services	996,834	1,583,415	586,581	59%
assumptions/notes	The total existing office space is slightly below guidelines.	New offices are constructed/renovated to UCR guidelines. Office size dependent on title and staff status. Space for conference and common spaces. See Note 12.		
Library & Collaborative Learning Space	337,551	514,789	177,238	53%
assumptions/notes	Library - 294,704 ASF Collaboration Spaces- 42,847 ASF	Library expansion program specific to UCR. Collaboration space outside of the library expanded. See Note 13.		
Assembly and Exhibit	54,988	117,000	62,012	113%
assumptions/notes		Common national space guidelines for universities with performing arts academic programs. See Note 14.		
Other Department Space	69,602	140,000	70,398	101%
assumptions/notes	See note 15.	4.0 ASF/student (SmithGroup benchmark)		
Admin and Support Subtotal	**1,458,975**	**2,355,204**	**896,229**	**61%**
	1,458,975	**2,355,204**	**896,229**	
	2,188,463	**3,532,806**	**1,344,344**	

Source: UCR Space Planning (Existing ASF)

Definition: *Collaborative spaces = the informal spaces outside of classrooms and teaching labs where faculty can informally meet with groups of students and where students can collaborate on group projects and conduct peer-peer learning*

12. Note on Offices and Services Program Model: *Allocation per person by employment type plus 40% factor for conference, service, and internal office suite circulation. Faculty and Staff - 120 ASF/person, Student Appointments - 60 ASF/person (ex: 2 TA's in a 120 ASF office), Student Staff - 30 ASF/person. The Faculty, Staff, and Student Appointment office sizes are UCR guidelines. UCR has no formal telecommuting policy - all employees are assumed to require office space.*

13. Note on Library and Collaborative Learning Space Program Model: *UCR Librarian prepared a UCR-specific needs calculation for a library to serve a 35,000-student enrollment (expansion by 128,875 ASF). There is no standard guideline for collaborative learning space distributed across campus outside of the library - the space type is too new. Through benchmarking and discussion with various universities, SmithGroup has found that an ASF allocation of 15% to 25% of the classroom and teaching lab ASF is appropriate.*

14. Note on Assembly and Exhibit Program Model: *CEFPI guidelines from Association for Learning Environments. Core facility of 14,000 ASF plus 2.5 ASF/student, plus factors for academic programs (8,000 ASF for a degree program in theater, 5,000 ASF for a degree program in music, and 2,500 ASF for a degree program in dance). UC Average Assembly and Exhibit ASF data is not available. The CEPFI guideline suggests ASF that is achievable. In recent SmithGroup projects, the CEFPI Assembly and Exhibit guidelines applied at other universities has indicated both surpluses and deficits in the existing condition.*

15. Note on Other Department Space: *Uses included in this category are those that do not fit in any other category. At UCR this includes space categorized by UCR as 510 (Armory), 530/535 (Media Production), 555 (Demonstration), 560 (Field Buildings), 570/575 (Animal Quarters), and 650 (Lounge). The 4.0 ASF/student benchmark is achievable. In recent SmithGroup projects, the Other Department Space guideline applied at other universities has indicated both surpluses and deficits in the existing condition.*

CAMPUS SPACE (assignable square feet) (continued)

	2018 | BASE YEAR	2035 | PROGRAM MODEL	DIFFERENCE FROM BASE YEAR	PERCENT CHANGE
Student Life				
Residential (beds)	6,511	14,000	7,489	115%
Freshmen (design capacity)	2,943	5,068	2,125	72%
Triples included in above	512	887	375	73%
Upperclass and Family	3,056	8,045	4,989	163%
assumptions/notes	27% residency. Does not include International Village.	40% residency, 15% of freshmen in triples (Fall '18 rate). See Note 16a and 16b.		
Residential (ASF)	1,525,647	3,643,620	2,117,973	139%
assumptions/notes	on-campus residential buildings, operating in Fall 2018	250 - 500 GSF / bed. See Note 17.		
Residential Dining (seats)	1,172	1,929	757	65%
assumptions/notes	As of Fall 2020- 28% residency. 342 seats Lothia, 830 seats Glasgow, 3.7 freshmen residents/seat. See Note 18.	40% residency 342 seats Lothian 830 seats Glasgow 600 seats North District **157 new seats** 3.1 freshman residents/		
Residential Dining (ASF)	55,802	94,527	38,725	69%
assumptions/notes	15,002 ASF Lothian 40,800 ASF Glasgow 48 ASF/seat average	49 ASF/seat. See Note 20.		
Student Health	14,117	24,500	10,383	74%
assumptions/notes	Vietsch	New Campus Health and Counseling Center early programming (2019)		
Student Union	97,122	187,422	90,300	93%
assumptions/notes	HUB, Hub 2, Hub Coffee, Costo Hall	Student Union Expansion Analysis (2015)		
Recreation Indoor	140,707	205,867	65,160	46%
assumptions/notes	SRC North, South	growth by 46%		
Recreation Outdoor (fields)	7	11	4	57%
assumptions/notes	Glen Mor fields, Sportsplex, Soccer Field	growth by 46%. See Note 21.		
Athletics	42,568	42,568	-	0%
assumptions/notes	indoor athletic facilities are shared with recreation	No program growth. See Note 22		
Student Life Subtotal (without Outdoor Recreation)	**1,875,963**	**4,198,504**	**2,322,541**	**124%**
	1,875,963	**4,198,504**	**2,322,541**	
	2,813,945	**6,297,756**	**3,483,811**	

Sources: UCR Space Planning (Existing ASF), Plumley Residential and Dining Demand Projections

16a. Note on Residential Beds Program Model: *Falkirk Apartments will be converted from upperclassmen to family within the next ten years, reducing the upperclassmen student beds by 345 beds.*

16b. Note on Residential Beds Program Model: *In Fall 2018, 15 percent of freshman were a third person in a two-person room (512 residents in 2,943 rooms).*

17. Note on Residential ASF Program Model: *New beds are designed to average 250 GSF/Freshmen bed, average 500 GSF/Upperclassmen-Family bed, 70% ASF/GSF efficiency. In Freshmen tripled rooms, three residents in a room sized for two residents.*

18. Note on Residential Dining Seats Base Year: *All space categories consider Fall 2018 as the base year, except Research Labs and Residential Dining Seats/ASF. The Residential Dining Base Year is Fall 2020, when Glasgow dining (830 seats) is open and Aberdeen-Inverness dining (500 seats) is closed. After Dundee Hall opens (820 beds), there will be 4,335 freshmen beds. [4,335 freshmen residents/1,172 seats=3.7 freshmen residents/seat]*

19. Note on Residential Dining Seats Program Model: *The completion of the North District will result in 5,470 freshmen beds and 1,772 dining seats (3.1 freshmen residents/seat). The Program Model maintains the 3.1 freshmen residents/seat ratio for 40% on-campus residency.*

20. Note on Residential Dining ASF Existing Year: *Lothian is 15,002 ASF and has 342 seats (44 ASF/seat). The Glasgow Dining Hall is planned to be 50,600 GSF/40,800 ASF and have 830 seats (49 ASF/seat).*

21. ***Note on Recreation Outdoor Fields:*** *In addition to the 3 fields at Glen Mor, UCR Recreation presently has shared use of the 3 fields of the Sportsplex with the City of Riverside and has access to the fields during the typical times for intramural and club sport competition. UCR Recreation also has shared use of the 1 athletics soccer competitive field.*

22. Note on Athletics Program Model: *No plans for growth in the Athletics program that would result in a need for additional space or outdoor facilities was expressed. However, quality of existing space is a concern.*

CAMPUS SPACE (assignable square feet) (continued)

	2018 | BASE YEAR	2035 | PROGRAM MODEL	DIFFERENCE FROM BASE YEAR	PERCENT CHANGE
Other				
Corporation Yard	248,279	248,279	-	0%
assumptions/notes		Common planning guideline. See Note 23.		
Other Subtotal	**248,279**	**248,279**	**-**	**0%**

Source: UCR Space Planning (Existing ASF)

23. Note on Corporation Yard Program Model: *Guidelines recommend 5% of all non-residential, non-facilities ASF. It is anticipated that UCR residence halls will have their own maintenance staff and work space, which is incorporated to the Residential Beds Program Model. Based on that assumption, current interior space for campus related needs is in line with the projected need in 2035.*

TOTAL CAMPUS SPACE (assignable square feet)

Campus LRDP Program Space Total	**4,803,500**	**8,502,839**	**3,699,338**	**77%**
Gross square feet equivalent	*7,205,252*	*12,754,258*	*5,549,006*	

Appendix C

Air Quality Supporting Information

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Appendix C1

Amicus Briefs:

Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno and Friant Ranch, L.P.

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S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,

Plaintiffs and Appellants,

v.

COUNTY OF FRESNO,

Defendant and Respondent,

and,

FRIANT RANCH, L.P.,

Real Party in Interest and Respondent.

SUPREME COURT
FILED

APR 13 2015

Frank A. McGuire Clerk

Deputy

After a Published Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726
Honorable Rosendo A. Pena, Jr.

APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND *[PROPOSED]* BRIEF OF *AMICUS CURIAE*

Kurt R. Wiese, General Counsel (SBN 127251)
*Barbara Baird, Chief Deputy Counsel (SBN 81507)
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765
Telephone: 909-396-2302; Facsimile: 909-396-2961
Email: bbaird@aqmd.gov
Counsel for [Proposed] Amicus Curiae,
SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

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TO THE HONORABLE CHIEF JUSTICE AND JUSTICES OF THE SUPREME COURT:

APPLICATION FOR LEAVE TO FILE *AMICUS CURIAE* BRIEF

Pursuant to Rule 8.520(f) of the California Rules of Court, the South Coast Air Quality Management District (SCAQMD) respectfully requests leave to file the attached *amicus curiae* brief. Because SCAQMD's position differs from that of either party, we request leave to submit this amicus brief in support of neither party.

HOW THIS BRIEF WILL ASSIST THE COURT

SCAQMD's proposed amicus brief takes a position on two of the issues in this case. In both instances, its position differs from that of either party. The issues are:

1) Does the California Environmental Quality Act (CEQA) require an environmental impact report (EIR) to correlate a project's air pollution emissions with specific levels of health impacts?
2) What is the proper standard of review for determining whether an EIR provides sufficient information on the health impacts caused by a project's emission of air pollutants?

This brief will assist the Court by discussing the practical realities of correlating identified air quality impacts with specific health outcomes. In short, CEQA requires agencies to provide detailed information about a project's air quality impacts that is sufficient for the public and decisionmakers to adequately evaluate the project and meaningfully understand its impacts. However, the level of analysis is governed by a rule of reason; CEQA only requires agencies to conduct analysis if it is reasonably feasible to do so.

With regard to health-related air quality impacts, an analysis that correlates a project's air pollution emissions with specific levels of health impacts will be feasible in some cases but not others. Whether it is feasible depends on a variety of factors, including the nature of the project and the nature of the analysis under consideration. The feasibility of analysis may also change over time as air districts and others develop new tools for measuring projects' air quality related health impacts. Because SCAQMD has among the most sophisticated air quality modeling and health impact evaluation capability of any of the air districts in the State, it is uniquely situated to express an opinion on the extent to which the Court should hold that CEQA requires lead agencies to correlate air quality impacts with specific health outcomes.

SCAQMD can also offer a unique perspective on the question of the appropriate standard of review. SCAQMD submits that the proper standard of review for determining whether an EIR is sufficient as an informational document is more nuanced than argued by either party. In our view, this is a mixed question of fact and law. It includes determining whether additional analysis is feasible, which is primarily a factual question that should be reviewed under the substantial evidence standard. However, it also involves determining whether the omission of a particular analysis renders an EIR insufficient to serve CEQA's purpose as a meaningful, informational document. If a lead agency has not determined that a requested analysis is infeasible, it is the court's role to determine whether the EIR nevertheless meets CEQA's purposes, and courts should not defer to the lead agency's conclusions regarding the legal sufficiency of an EIR's analysis. The ultimate question of whether an EIR's analysis is "sufficient" to serve CEQA's informational purposes is predominately a question of law that courts should review de novo.

This brief will explain the rationale for these arguments and may assist the Court in reaching a conclusion that accords proper respect to a lead agency's factual conclusions while maintaining judicial authority over the ultimate question of what level of analysis CEQA requires.

STATEMENT OF INTEREST OF *AMICUS CURIAE*

The SCAQMD is the regional agency primarily responsible for air pollution control in the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of the Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410; Cal. Code Regs., tit. 17, § 60104.) The SCAQMD participates in the CEQA process in several ways. Sometimes it acts as a lead agency that prepares CEQA documents for projects. Other times it acts as a responsible agency when it has permit authority over some part of a project that is undergoing CEQA review by a different lead agency. Finally, SCAQMD also acts as a commenting agency for CEQA documents that it receives because it is a public agency with jurisdiction by law over natural resources affected by the project.

In all of these capacities, SCAQMD will be affected by the decision in this case. SCAQMD sometimes submits comments requesting that a lead agency perform an additional type of air quality or health impacts analysis. On the other hand, SCAQMD sometimes determines that a particular type of health impact analysis is not feasible or would not produce reliable and informative results. Thus, SCAQMD will be affected by the Court's resolution of the extent to which CEQA requires EIRs to correlate emissions and health impacts, and its resolution of the proper standard of review.

CERTIFICATION REGARDING AUTHORSHIP AND FUNDING

No party or counsel in the pending case authored the proposed amicus curiae brief in whole or in part, or made any monetary contribution intended to fund the preparation or submission of the brief. No person or entity other than the proposed *Amicus Curiae* made any monetary contribution intended to fund the preparation or submission of the brief.

Respectfully submitted,

DATED: April 3, 2015

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BRIEF OF AMICUS CURIAE

SUMMARY OF ARGUMENT

The South Coast Air Quality Management District (SCAQMD) submits that this Court should not try to establish a hard-and-fast rule concerning whether lead agencies are required to correlate emissions of air pollutants with specific health consequences in their environmental impact reports (EIR). The level of detail required in EIRs is governed by a few, core CEQA (California Environmental Quality Act) principles. As this Court has stated, "[a]n EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project." (*Laurel Heights Improvement Assn. v. Regents of the Univ of Cal.* (1988) 47 Cal.3d 376, 405 ["*Laurel Heights I*"]) Accordingly, "an agency must use its best efforts to find out and disclose all that it reasonably can." (*Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 428 (quoting CEQA Guidelines § 15144)[1].). However, "[a]nalysis of environmental effects need not be exhaustive, but will be judged in light of what is reasonably feasible." (*Association of Irritated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390; CEQA Guidelines §§ 15151, 15204(a).)

With regard to analysis of air quality related health impacts, EIRs must generally quantify a project's pollutant emissions, but in some cases it is not feasible to correlate these emissions to specific, quantifiable health impacts (e.g., premature mortality; hospital admissions). In such cases, a general description of the adverse health impacts resulting from the pollutants at issue may be sufficient. In other cases, due to the magnitude

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[1] The CEQA Guidelines are found at Cal. Code Regs., tit. 14 §§ 15000, *et seq*.

or nature of the pollution emissions, as well as the specificity of the project involved, it may be feasible to quantify health impacts. Or there may be a less exacting, but still meaningful analysis of health impacts that can feasibly be performed. In these instances, agencies should disclose those impacts.

SCAQMD also submits that whether or not an EIR complies with CEQA's informational mandates by providing sufficient, feasible analysis is a mixed question of fact and law. Pertinent here, the question of whether an EIR's discussion of health impacts from air pollution is sufficient to allow the public to understand and consider meaningfully the issues involves two inquiries: (1) Is it feasible to provide the information or analysis that a commenter is requesting or a petitioner is arguing should be required?; and (2) Even if it is feasible, is the agency relying on other policy or legal considerations to justify not preparing the requested analysis? The first question of whether an analysis is feasible is primarily a question of fact that should be judged by the substantial evidence standard. The second inquiry involves evaluating CEQA's information disclosure purposes against the asserted reasons to not perform the requested analysis. For example, an agency might believe that its EIR meets CEQA's informational disclosure standards even without a particular analysis, and therefore choose not to conduct that analysis. SCAQMD submits that this is more of a legal question, which should be reviewed de novo as a question of law.

ARGUMENT

I. RELEVANT FACTUAL AND LEGAL FRAMEWORK.

A. Air Quality Regulatory Background

The South Coast Air Quality Management District (SCAQMD) is one of the local and regional air pollution control districts and air quality management districts in California. The SCAQMD is the regional air pollution agency for the South Coast Air Basin, which consists of all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. (Health & Saf. Code § 40410, 17 Cal. Code Reg. § 60104.) The SCAQMD also includes the Coachella Valley in Riverside County (Palm Springs area to the Salton Sea). (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "chapter 7" hyperlink; pp 7-1, 7-3 (last visited Apr. 1, 2015).) The SCAQMD's jurisdiction includes over 16 million residents and has the worst or nearly the worst air pollution levels in the country for ozone and fine particulate matter. (SCAQMD, *Final 2012 AQMP (Feb. 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "Executive Summary" hyperlink p. ES-1 (last visited Apr. 1, 2015).)

Under California law, the local and regional districts are primarily responsible for controlling air pollution from all sources except motor vehicles. (Health & Saf. Code § 40000.) The California Air Resources Board (CARB), part of the California Environmental Protection Agency, is primarily responsible for controlling pollution from motor vehicles. (*Id.*) The air districts must adopt rules to achieve and maintain the state and federal ambient air quality standards within their jurisdictions. (Health & Saf. Code § 40001.)

The federal Clean Air Act (CAA) requires the United States Environmental Protection Agency (EPA) to identify pollutants that are widely distributed and pose a threat to human health, developing a so-called "criteria" document. (42 U.S.C. § 7408; CAA § 108.) These pollutants are frequently called "criteria pollutants." EPA must then establish "national ambient air quality standards" at levels "requisite to protect public health", allowing "an adequate margin of safety." (42 U.S.C. § 7409; CAA § 109.) EPA has set standards for six identified pollutants: ozone, nitrogen dioxide, sulfur dioxide, carbon monoxide, particulate matter (PM), and lead. (U.S. EPA, National Ambient Air Quality Standards (NAAQS), http://www.epa.gov/air/criteria.html (last updated Oct. 21, 2014).)[2]

Under the Clean Air Act, EPA sets emission standards for motor vehicles and "nonroad engines" (mobile farm and construction equipment, marine vessels, locomotives, aircraft, etc.). (42 U.S.C. §§ 7521, 7547; CAA §§ 202, 213.) California is the only state allowed to establish emission standards for motor vehicles and most nonroad sources; however, it may only do so with EPA's approval. (42 U.S.C. §§ 7543(b), 7543(e); CAA §§ 209(b), 209(c).) Sources such as manufacturing facilities, power plants and refineries that are not mobile are often referred to as "stationary sources." The Clean Air Act charges state and local agencies with the primary responsibility to attain the national ambient air quality standards. (42 U.S.C. § 7401(a)(3); CAA § 101(a)(3).) Each state must adopt and implement a plan including enforceable measures to achieve and maintain the national ambient air quality standards. (42 U.S.C. § 7410; CAA § 110.) The SCAQMD and CARB jointly prepare portion of the plan for the South Coast Air Basin and submit it for approval by EPA. (Health & Saf. Code §§ 40460, et seq.)

The Clean Air Act also requires state and local agencies to adopt a permit program requiring, among other things, that new or modified "major" stationary sources use technology to achieve the "lowest achievable emission rate," and to control minor stationary sources as

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[2] Particulate matter (PM) is further divided into two categories: fine particulate or $PM_{2.5}$ (particles with a diameter of less than or equal to 2.5 microns) and coarse particulate (PM_{10}) (particles with a diameter of 10 microns or less). (U.S. EPA, Particulate Matter (PM), http://www.epa.gov/airquality/particlepollution/ (last visited Apr. 1, 2015).)

needed to help attain the standards. (42 U.S.C. §§ 7502(c)(5), 7503(a)(2), 7410(a)(2)(C); CAA §§ 172(c)(5), 173(a)(2), 110(a)(2)(C).) The air districts implement these permit programs in California. (Health & Saf. Code §§ 42300, et seq.)

The Clean Air Act also sets out a regulatory structure for over 100 so-called "hazardous air pollutants" calling for EPA to establish "maximum achievable control technology" (MACT) for sources of these pollutants. (42 U.S.C. § 7412(d)(2); CAA § 112(d)(2).) California refers to these pollutants as "toxic air contaminants" (TACs) which are subject to two state-required programs. The first program requires "air toxics control measures" for specific categories of sources. (Health & Saf. Code § 39666.) The other program requires larger stationary sources and sources identified by air districts to prepare "health risk assessments" for impacts of toxic air contaminants. (Health & Saf. Code §§ 44320(b), 44322, 44360.) If the health risk exceeds levels identified by the district as "significant," the facility must implement a "risk reduction plan" to bring its risk levels below "significant" levels. Air districts may adopt additional more stringent requirements than those required by state law, including requirements for toxic air contaminants. (Health & Saf. Code § 41508; *Western Oil & Gas Assn. v. Monterey Bay Unified APCD* (1989) 49 Cal.3d 408, 414.) For example, SCAQMD has adopted a rule requiring new or modified sources to keep their risks below specified levels and use best available control technology (BACT) for toxics. (SCAQMD, *Rule 1401-New Source Review of Toxic Air Contaminants*, http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiv; then follow "Rule 1401" hyperlink (last visited Apr. 1, 2015).)

B. The SCAQMD's Role Under CEQA

The California Environmental Quality Act (CEQA) requires public agencies to perform an environmental review and appropriate analysis for projects that they implement or approve. (Pub. Resources Code § 21080(a).) The agency with primary approval authority for a particular project is generally the "lead agency" that prepares the appropriate CEQA document. (CEQA Guidelines §§ 15050, 15051.) Other agencies having a subsequent approval authority over all or part of a project are called "responsible" agencies that must determine whether the CEQA document is adequate for their use. (CEQA Guidelines §§ 15096(c), 15381.) Lead agencies must also consult with and circulate their environmental impact reports to "trustee agencies" and agencies "with jurisdiction by law" including "authority over resources which may be affected by the project." (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines §§ 15086(a)(3), 15073(c).) The SCAQMD has a role in all these aspects of CEQA.

Fulfilling its responsibilities to implement its air quality plan and adopt rules to attain the national ambient air quality standards, SCAQMD adopts a dozen or more rules each year to require pollution reductions from a wide variety of sources. The SCAQMD staff evaluates each rule for any adverse environmental impact and prepares the appropriate CEQA document. Although most rules reduce air emissions, they may have secondary environmental impacts such as use of water or energy or disposal of waste—e.g., spent catalyst from control equipment.[3]

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[3] The SCAQMD's CEQA program for its rules is a "Certified Regulatory Program" under which it prepares a "functionally equivalent" document in lieu of a negative declaration or EIR. (Pub. Resources Code § 21080.5, CEQA Guidelines § 15251(l).)

The SCAQMD also approves a large number of permits every year to construct new, modified, or replacement facilities that emit regulated air pollutants. The majority of these air pollutant sources have already been included in an earlier CEQA evaluation for a larger project, are currently being evaluated by a local government as lead agency, or qualify for an exemption. However, the SCAQMD sometimes acts as lead agency for major projects where the local government does not have a discretionary approval. In such cases, SCAQMD prepares and certifies a negative declaration or environmental impact report (EIR) as appropriate.[4] SCAQMD evaluates perhaps a dozen such permit projects under CEQA each year. SCAQMD is often also a "responsible agency" for many projects since it must issue a permit for part of the projects (e.g., a boiler used to provide heat in a commercial building). For permit projects evaluated by another lead agency under CEQA, SCAQMD has the right to determine that the CEQA document is inadequate for its purposes as a responsible agency, but it may not do so because its permit program already requires all permitted sources to use the best available air pollution control technology. (SCAQMD, *Rule 1303(a)(1) – Requirements*, http://www.aqmd.gov/home/regulations/rules/scaqmd-rule-book/regulation-xiii; then follow "Rule 1303" hyperlink (last visited Apr. 1, 2015).)

Finally, SCAQMD receives as many as 60 or more CEQA documents each month (around 500 per year) in its role as commenting agency or an agency with "jurisdiction by law" over air quality—a natural resource affected by the project. (Pub. Resources Code §§ 21104(a), 21153; CEQA Guidelines § 15366(a)(3).) The SCAQMD staff provides comments on as many as 25 or 30 such documents each month.

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[4] The SCAQMD's permit projects are not included in its Certified Regulatory Program, and are evaluated under the traditional local government CEQA analysis. (Pub. Resources Code §§ 21150-21154.)

(SCAQMD Governing Board Agenda, Apr. 3, 2015, Agenda Item 16, Attachment A, http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-april-3-2015; then follow "16. Lead Agency Projects and Environmental Documents Received by SCAQMD" hyperlink (last visited Apr. 1, 2015).) Of course, SCAQMD focuses its commenting efforts on the more significant projects.

Typically, SCAQMD comments on the adequacy of air quality analysis, appropriateness of assumptions and methodology, and completeness of the recommended air quality mitigation measures. Staff may comment on the need to prepare a health risk assessment detailing the projected cancer and noncancer risks from toxic air contaminants resulting from the project, particularly the impacts of diesel particulate matter, which CARB has identified as a toxic air contaminant based on its carcinogenic effects. (California Air Resources Board, Resolution 98-35, Aug. 27, 1998, http://www.arb.ca.gov/regact/diesltac/diesltac.htm; then follow Resolution 98-35 hyperlink (last visited Apr. 1, 2015).) Because SCAQMD already requires new or modified stationary sources of toxic air contaminants to use the best available control technology for toxics and to keep their risks below specified levels, (SCAQMD Rule 1401, supra, note 15), the greatest opportunity to further mitigate toxic impacts through the CEQA process is by reducing emissions—particularly diesel emissions—from vehicles.

II. THIS COURT SHOULD NOT SET A HARD-AND-FAST RULE CONCERNING THE EXTENT TO WHICH AN EIR MUST CORRELATE A PROJECT'S EMISSION OF POLLUTANTS WITH RESULTING HEALTH IMPACTS.

Numerous cases hold that courts do not review the correctness of an EIR's conclusions but rather its sufficiency as an informative document. (*Laurel Heights 1*, *supra*, 47 Cal.3d at p. 392; *Citizens of Goleta Valley v.*

Bd. of Supervisors (1990) 52 Cal.3d 553, 569; *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1197.)

As stated by the Court of Appeal in this case, where an EIR has addressed a topic, but the petitioner claims that the information provided about that topic is insufficient, courts must "draw[] a line that divides *sufficient* discussions from those that are *insufficient*." (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) The Court of Appeal readily admitted that "[t]he terms themselves – sufficient and insufficient – provide little, if any, guidance as to where the line should be drawn. They are simply labels applied once the court has completed its analysis." (*Id.*)

The CEQA Guidelines, however, provide guidance regarding what constitutes a sufficient discussion of impacts. Section 15151 states that "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." Case law reflects this: "Analysis of environmental effects need not be exhaustive, but will be judged in light of what was reasonably feasible." (*Association of Irritated Residents v. County of Madera, supra,* 107 Cal.App.4th at p. 1390; see also CEQA Guidelines § 15204(a).)

Applying this test, this Court cannot realistically establish a hard-and-fast rule that an analysis correlating air pollution impacts of a project to quantified resulting health impacts is always required, or indeed that it is never required. Simply put, in some cases such an analysis will be "feasible"; in some cases it will not.

For example, air pollution control districts often require a proposed new source of toxic air contaminants to prepare a "health risk assessment" before issuing a permit to construct. District rules often limit the allowable cancer risk the new source may cause to the "maximally exposed individual" (worker and residence exposures). (*See, e.g.*, SCAQMD Rule 1401(c)(8); 1401(d)(1), *supra* note 15.) In order to perform this analysis, it is necessary to have data regarding the sources and types of air toxic contaminants, location of emission points, velocity of emissions, the meteorology and topography of the area, and the location of receptors (worker and residence). (SCAQMD, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics "Hot Spots" Information and Assessment Act (AB2588), pp. 11-16*; (last visited Apr. 1, 2015) http://www.aqmd.gov/home/library/documents-support-material; "Guidelines" hyperlink; AB2588; then follow AB2588 Risk Assessment Guidelines hyperlink.)

Thus, it is feasible to determine the health risk posed by a new gas station locating at an intersection in a mixed use area, where receptor locations are known. On the other hand, it may not be feasible to perform a health risk assessment for airborne toxics that will be emitted by a generic industrial building that was built on "speculation" (i.e., without knowing the future tenant(s)). Even where a health risk assessment can be prepared, however, the resulting maximum health risk value is only a calculation of risk—it does not necessarily mean anyone will contract cancer as a result of the project.

In order to find the "cancer burden" or expected additional cases of cancer resulting from the project, it is also necessary to know the numbers and location of individuals living within the "zone of impact" of the project: i.e., those living in areas where the projected cancer risk from the project exceeds one in a million. (SCAQMD, Health Risk Assessment Summary form, http://www.aqmd.gov/home/forms ; filter by "AB2588" category; then "Health Risk Assessment" hyperlink (last visited Apr. 1, 2015).) The affected population is divided into bands of those exposed to at least 1 in a million risk, those exposed to at least 10 in a million risk, etc. up to those exposed at the highest levels. (*Id.*) This data allows agencies to calculate an approximate number of additional cancer cases expected from the project. However, it is not possible to predict which particular individuals will be affected.

For the so-called criteria pollutants[5], such as ozone, it may be more difficult to quantify health impacts. Ozone is formed in the atmosphere from the chemical reaction of the nitrogen oxides (NO_x) and volatile organic compounds (VOC) in the presence of sunlight. (U.S. EPA, Ground Level Ozone, http://www.epa.gov/airquality/ozonepollution/ (last updated Mar. 25, 2015).) It takes time and the influence of meteorological conditions for these reactions to occur, so ozone may be formed at a distance downwind from the sources. (U.S. EPA, *Guideline on Ozone Monitoring Site Selection* (Aug. 1998) EPA-454/R-98-002 § 5.1.2, http://www.epa.gov/ttnamti1/archive/cpreldoc.html (last visited Apr. 1, 2015).) NO_x and VOC are known as "precursors" of ozone.

Scientifically, health effects from ozone are correlated with increases in the ambient level of ozone in the air a person breathes. (U.S. EPA, *Health Effects of Ozone in the General Population,* Figure 9, http://www.epa.gov/apti/ozonehealth/population.html#levels (last visited Apr. 1, 2015).) However, it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels over an entire region. For example, the SCAQMD's 2012 AQMP showed that reducing NO_x by 432 tons per day (157,680 tons/year) and reducing VOC by 187 tons per day (68,255 tons/year) would reduce ozone levels at the SCAQMD's monitor site with the highest levels by only 9 parts per billion. (South Coast Air Quality Management District, *Final 2012 AQMP (February 2013)*, http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan; then follow "Appendix V: Modeling & Attainment Demonstrations" hyperlink,

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[5] See discussion of types of pollutants, supra, Part I.A.

pp. v-4-2, v-7-4, v-7-24.) SCAQMD staff does not currently know of a way to accurately quantify ozone-related health impacts caused by NO_x or VOC emissions from relatively small projects.

On the other hand, this type of analysis may be feasible for projects on a regional scale with very high emissions of NO_x and VOCs, where impacts are regional. For example, in 2011 the SCAQMD performed a health impact analysis in its CEQA document for proposed Rule 1315, which authorized various newly-permitted sources to use offsets from the districts "internal bank" of emission reductions. This CEQA analysis accounted for essentially *all* the increases in emissions due to new or modified sources in the District between 2010 and 2030.[6] The SCAQMD was able to correlate this very large emissions increase (e.g., 6,620 pounds per day NO_x (1,208 tons per year), 89,180 pounds per day VOC (16,275 tons per year)) to expected health outcomes from ozone and particulate matter (e.g., 20 premature deaths per year and 89,947 school absences in the year 2030 due to ozone).[7] (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System* (see hyperlink in fn 6*)* at p. 4.1-35, Table 4.1-29.)

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[6] (SCAQMD Governing Board Agenda, February 4, 2011, Agenda Item 26, Attachment G, *Assessment for: Re-adoption of Proposed Rule 1315 – Federal New Source Review Tracking System, Vol. 1, p.4.0-6*, http://www.aqmd.gov/home/library/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-february-4-2011; the follow "26. Adopt Proposed Rule 1315 – Federal New Source Review Tracking System" (last visited April 1, 2015).)

[7] The SCAQMD was able to establish the location of future NO_x and VOC emissions by assuming that new projects would be built in the same locations and proportions as existing stationary sources. This CEQA document was upheld by the Los Angeles County Superior Court in *Natural Res. Def. Council v SCAQMD*, Los Angeles Superior Court No. BS110792).

However, a project emitting only 10 tons per year of NO_x or VOC is small enough that its regional impact on ambient ozone levels may not be detected in the regional air quality models that are currently used to determine ozone levels. Thus, in this case it would not be feasible to directly correlate project emissions of VOC or NO_x with specific health impacts from ozone. This is in part because ozone formation is not linearly related to emissions. Ozone impacts vary depending on the location of the emissions, the location of other precursor emissions, meteorology and seasonal impacts, and because ozone is formed some time later and downwind from the actual emission. (EPA Guideline on Ozone Monitoring Site Selection (Aug. 1998) EPA-454/R-98-002, § 5.1.2; https://www.epa.gov/ttnamti1/archive/cpreldoc.html; then search "Guideline on Ozone Monitoring Site Selection" click on pdf) (last viewed Apr. 1, 2015).)

SCAQMD has set its CEQA "significance" threshold for NO_x and VOC at 10 tons per year (expressed as 55 lb/day). (SCAQMD, *Air Quality Analysis Handbook*, http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook; then follow "SCAQMD Air Quality Significance Thresholds" hyperlink (last visited Apr. 1, 2015).) This is because the federal Clean Air Act defines a "major" stationary source for "extreme" ozone nonattainment areas such as SCAQMD as one emitting 10 tons/year. (42 U.S.C. §§ 7511a(e), 7511a(f); CAA §§ 182(e), 182(f).) Under the Clean Air Act, such sources are subject to enhanced control requirements (42 U.S.C. §§ 7502(c)(5), 7503; CAA §§ 172(c)(5), 173), so SCAQMD decided this was an appropriate threshold for making a CEQA "significance" finding and requiring feasible mitigation. Essentially, SCAQMD takes the position that a source that emits 10 tons/year of NO_x or VOC would contribute cumulatively to ozone formation. Therefore, lead agencies that use SCAQMD's thresholds of significance may determine that many projects have "significant" air quality impacts and must apply all feasible mitigation measures, yet will not be able to precisely correlate the project to quantifiable health impacts, unless the emissions are sufficiently high to use a regional modeling program.

In the case of particulate matter ($PM_{2.5}$)[8], another "criteria" pollutant, SCAQMD staff is aware of two possible methods of analysis. SCAQMD used regional modeling to predict expected health impacts from its proposed Rule 1315, as mentioned above. Also, the California Air Resources Board (CARB) has developed a methodology that can predict expected mortality (premature deaths) from large amounts of $PM_{2.5.}$ (California Air Resources Board, *Health Impacts Analysis: PM Premature Death Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort_arch.htm (last reviewed Jan. 19, 2012).) SCAQMD used the CARB methodology to predict impacts from three very large power plants (e.g., 731-1837 lbs/day). (Final Environmental Assessment for Rule 1315, *supra*, pp 4.0-12, 4.1-13, 4.1-37 (e.g., 125 premature deaths in the entire SCAQMD in 2030), 4.1-39 (0.05 to 1.77 annual premature deaths from power plants.) Again, this project involved large amounts of additional $PM_{2.5}$ in the District, up to 2.82 tons/day (5,650 lbs/day of $PM_{2.5}$, or, or 1029 tons/year. (*Id.* at table 4.1-4, p. 4.1-10.)

However, the primary author of the CARB methodology has reported that this $PM_{2.5}$ health impact methodology is not suited for small projects and may yield unreliable results due to various uncertainties.[9] (SCAQMD, *Final Subsequent Mitigated Negative Declaration for: Warren*

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[8] SCAQMD has not attained the latest annual or 24-hour national ambient air quality standards for "$PM_{2.5}$" or particulate matter less than 2.5 microns in diameter.

[9] Among these uncertainties are the representativeness of the population used in the methodology, and the specific source of PM and the corresponding health impacts. (*Id.* at p. 2-24.)

E&P, Inc. WTU Central Facility, New Equipment Project (certified July 19, 2011), http://www.aqmd.gov/home/library/documents-support-material/lead-agency-permit-projects/permit-project-documents---year-2011; then follow "Final Subsequent Mitigated Negative Declaration for Warren E&P Inc. WTU Central Facility, New Equipment Project" hyperlink, pp. 2-22, 2-23 (last visited Apr. 1, 2015).) Therefore, when SCAQMD prepared a CEQA document for the expansion of an existing oil production facility, with very small $PM_{2.5}$ increases (3.8 lb/day) and a very small affected population, staff elected not to use the CARB methodology for using estimated $PM_{2.5}$ emissions to derive a projected premature mortality number and explained why it would be inappropriate to do so. (*Id.* at pp 2-22 to 2-24.) SCAQMD staff concluded that use of this methodology for such a small source could result in unreliable findings and would not provide meaningful information. (*Id.* at pp. 2-23, 2-25.) This CEQA document was not challenged in court.

In the above case, while it may have been technically possible to plug the data into the methodology, the results would not have been reliable or meaningful. SCAQMD believes that an agency should not be required to perform analyses that do not produce reliable or meaningful results. This Court has already held that an agency may decline to use even the "normal" "existing conditions" CEQA baseline where to do so would be misleading or without informational value. (*Neighbors for Smart Rail v. Exposition Metro Line* (2013) 57 Cal.4th 439, 448, 457.) The same should be true for a decision that a particular study or analysis would not provide reliable or meaningful results.[10]

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[10] Whether a particular study would result in "informational value" is a part of deciding whether it is "feasible." CEQA defines "feasible" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, and

Therefore, it is not possible to set a hard-and-fast rule on whether a correlation of air quality impacts with specific quantifiable health impacts is required in all cases. Instead, the result turns on whether such an analysis is reasonably feasible in the particular case.[11] Moreover, what is reasonably feasible may change over time as scientists and regulatory agencies continually seek to improve their ability to predict health impacts. For example, CARB staff has been directed by its Governing Board to reassess and improve the methodology for estimating premature deaths. (California Air Resources Board, *Health Impacts Analysis: PM Mortality Relationship*, http://www.arb.ca.gov/research/health/pm-mort/pm-mort.htm (last reviewed Dec. 29, 2010).) This factor also counsels against setting any hard-and-fast rule in this case.

III. THE QUESTION OF WHETHER AN EIR CONTAINS SUFFICIENT ANALYSIS TO MEET CEQA'S REQUIREMENTS IS A MIXED QUESTION OF FACT AND LAW GOVERNED BY TWO DIFFERENT STANDARDS OF REVIEW.

A. Standard of Review for Feasibility Determination and Sufficiency as an Informative Document

A second issue in this case is whether courts should review an EIR's informational sufficiency under the "substantial evidence" test as argued by Friant Ranch or the "independent judgment" test as argued by Sierra Club.

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technological factors." (Pub. Resources Code § 21061.1.) A study cannot be "accomplished in a *successful* manner" if it produces unreliable or misleading results.

[11] In this case, the lead agency did not have an opportunity to determine whether the requested analysis was feasible because the comment was non-specific. Therefore, SCAQMD suggests that this Court, after resolving the legal issues in the case, direct the Court of Appeal to remand the case to the lead agency for a determination of whether the requested analysis is feasible. Because Fresno County, the lead agency, did not seek review in this Court, it seems likely that the County has concluded that at least some level of correlation of air pollution with health impacts is feasible.

As this Court has explained, "a reviewing court must adjust its scrutiny to the nature of the alleged defect, depending on whether the claim is predominantly one of improper procedure or a dispute over the facts." (*Vineyard Area Citizens v. City of Rancho Cordova, supra,* 40 Cal.4th at 435.) For questions regarding compliance with proper procedure or other legal questions, courts review an agency's action de novo under the "independent judgment" test. (*Id.*) On the other hand, courts review factual disputes only for substantial evidence, thereby "accord[ing] greater deference to the agency's substantive factual conclusions." (*Id.*)

Here, Friant Ranch and Sierra Club agree that the case involves the question of whether an EIR includes sufficient information regarding a project's impacts. However, they disagree on the proper standard of review for answering this question: Sierra Club contends that courts use the independent judgment standard to determine whether an EIR's analysis is sufficient to meet CEQA's informational purposes,[12] while Friant Ranch contends that the substantial evidence standard applies to this question.

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[12] Sierra Club acknowledges that courts use the substantial evidence standard when reviewing predicate factual issues, but argues that courts ultimately decide as a matter of law what CEQA requires. (Answering Brief, pp. 14, 23.)

SCAQMD submits that the issue is more nuanced than either party contends. We submit that, whether a CEQA document includes sufficient analysis to satisfy CEQA's informational mandates is a mixed question of fact and law,[13] containing two levels of inquiry that should be judged by different standards.[14]

The state CEQA Guidelines set forth standards for the adequacy of environmental analysis. Guidelines Section 15151 states:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure.

In this case, the basic question is whether the underlying analysis of air quality impacts made the EIR "sufficient" as an informative document. However, whether the EIR's analysis was sufficient is judged in light of what was reasonably feasible. This represents a mixed question of fact and law that is governed by two different standards of review.

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[13] Friant Ranch actually states that the claim that an EIR lacks sufficient relevant information is, "most properly thought of as raising mixed questions of fact and law." (Opening Brief, p. 27.) However, the remainder of its argument claims that the court should apply the substantial evidence standard of review to all aspects of the issue.

[14] Mixed questions of fact and law issues may implicate predominantly factual subordinate questions that are reviewed under the substantial evidence test even though the ultimate question may be reviewed by the independent judgment test. *Crocker National Bank v. City and County of San Francisco* (1989) 49 Cal.3d 881, 888-889.

SCAQMD submits that an EIR's sufficiency as an informational document is ultimately a legal question that courts should determine using their independent judgment. This Court's language in *Laurel Heights I* supports this position. As this Court explained: "The court does not pass upon the correctness of the EIR's environmental conclusions, but only upon its *sufficiency as an informative document*." (*Laurel Heights I, supra,* 47 Cal.3d at 392-393) (emphasis added.) As described above, the Court in *Vineyard Area Citizens v. City of Rancho Cordova, supra,* 40 Cal.4th at 431, also used its independent judgment to determine what level of analysis CEQA requires for water supply impacts. The Court did not defer to the lead agency's opinion regarding the law's requirements; rather, it determined for itself what level of analysis was necessary to meet "[t]he law's informational demands." (*Id.* at p. 432.) Further, existing case law also holds that where an agency fails to comply with CEQA's information disclosure requirements, the agency has "failed to proceed in the manner required by law." (*Save Our Peninsula Comm. v. Monterey County Bd. of Supervisors* (2001) 87 Cal.App.4th 99, 118.)

However, whether an EIR satisfies CEQA's requirements depends in part on whether it was reasonably feasible for an agency to conduct additional or more thorough analysis. EIRs must contain "a detailed statement" of a project's impacts (Pub. Res. Code § 21061), and an agency must "use its best efforts to find out and disclose all that it reasonably can." (CEQA Guidelines § 15144.) Nevertheless, "the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible." (CEQA Guidelines § 15151.)

SCAQMD submits that the question of whether additional analysis or a particular study suggested by a commenter is "feasible" is generally a question of fact. Courts have already held that whether a particular alternative is "feasible" is reviewed by the substantial evidence test.

(*Uphold Our Heritage v. Town of Woodside* (2007) 147 Cal.App.4th 587, 598-99; *Center for Biological Diversity v. County of San Bernardino* (2010) 185 Cal.App.4th 866, 883.) Thus, if a lead agency determines that a particular study or analysis is infeasible, that decision should generally be judged by the substantial evidence standard. However, SCAQMD urges this Court to hold that lead agencies must explain the basis of any determination that a particular analysis is infeasible in the EIR itself. An EIR must discuss information, including issues related to the feasibility of particular analyses "in sufficient detail to enable meaningful participation and criticism by the public. '[W]hatever is required to be considered in an EIR must be in that formal report; what any official might have known from other writings or oral presentations cannot supply what is lacking in the report.'" (*Laurel Heights I*, *supra*, 47 Cal.3d at p. 405 (quoting *Santiago County Water District v. County of Orange* (1981) 118 Cal.App.3d 818, 831) (discussing analysis of alternatives).) The evidence on which the determination is based should also be summarized in the EIR itself, with appropriate citations to reference materials if necessary. Otherwise commenting agencies such as SCAQMD would be forced to guess where the lead agency's evidence might be located, thus thwarting effective public participation.

Moreover, if a lead agency determines that a particular study or analysis would not result in reliable or useful information and for that reason is not feasible, that determination should be judged by the substantial evidence test. (See *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority*, *supra*, 57 Cal.4th 439, 448, 457:

whether "existing conditions" baseline would be misleading or uninformative judged by substantial evidence standard.[15])

If the lead agency's determination that a particular analysis or study is not feasible is supported by substantial evidence, then the agency has not violated CEQA's information disclosure provisions, since it would be infeasible to provide additional information. This Court's decisions provide precedent for such a result. For example, this Court determined that the issue of whether the EIR should have included a more detailed discussion of future herbicide use was resolved because substantial evidence supported the agency's finding that "the precise parameters of future herbicide use could not be predicted." *Ebbetts Pass Forest Watch v. California Dept. of Forestry & Fire Protection* (2008) 43 Cal.4th 936, 955.

Of course, SCAQMD expects that courts will continue to hold lead agencies to their obligations to consult with, and not to ignore or misrepresent, the views of sister agencies having special expertise in the area of air quality. (*Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* (2007) 91 Cal.App.4th 1344, 1364 n.11.) In some cases, information provided by such expert agencies may establish that the purported evidence relied on by the lead agency is not in fact "substantial". (*Id.* at pp. 1369-1371.)

In sum, courts retain ultimate responsibility to determine what CEQA requires. However, the law does not require exhaustive analysis, but only what is reasonably feasible. Agencies deserve deference for their factual determinations regarding what type of analysis is reasonably feasible. On the other hand, if a commenter requests more information, and the lead agency declines to provide it but does *not* determine that the

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[15] The substantial evidence standard recognizes that the courts "have neither the resources nor the scientific expertise" to weigh conflicting evidence on technical issues. (*Laurel Heights I, supra,* 47 Cal.3d 376, 393.)

requested study or analysis would be infeasible, misleading or uninformative, the question becomes whether the omission of that analysis renders the EIR inadequate to satisfy CEQA's informational purposes. (*Id.* at pp. 1370-71.) Again, this is predominantly a question of law and should be judged by the de novo or independent judgment standard of review. Of course, this Court has recognized that a "project opponent or reviewing court can always imagine some additional study or analysis that might provide helpful information. It is not for them to design the EIR. That further study...might be helpful does not make it necessary." (*Laurel Heights I, supra,* 47 Cal.3d 376, 415 – see also CEQA Guidelines § 15204(a) [CEQA "does not require a lead agency to conduct every test. . . recommended or demanded by commenters."].) Courts, then, must adjudicate whether an omission of particular information renders an EIR inadequate to serve CEQA's informational purposes.[16]

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[16] We recognize that there is case law stating that the substantial evidence standard applies to "challenges to the scope of an EIR's analysis of a topic" as well as the methodology used and the accuracy of the data relied on in the document "because these types of challenges involve factual questions." (*Bakersfield Citizens for Local Control v. City of Bakersfield, supra,* 124 Cal.App.4th 1184, 1198, and cases relied on therein.) However, we interpret this language to refer to situations where the question of the scope of the analysis really is factual—that is, where it involves whether further analysis is feasible, as discussed above. This interpretation is supported by the fact that the *Bakersfield* court expressly rejected an argument that a claimed "omission of information from the EIR should be treated as inquiries whether there is substantial evidence supporting the decision approving the project. " *Bakersfield, supra,* 124 Cal.App.4th at p. 1208. And the *Bakersfield* court ultimately decided that the lead agency must analyze the connection between the identified air pollution impacts and resulting health impacts, even though the EIR already included some discussion of air-pollution-related respiratory illnesses. *Bakersfield, supra,* 124 Cal.App.4th at p. 1220. Therefore, the court must not have interpreted this question as one of the "scope of the analysis" to be judged by the substantial evidence standard.

B. Friant Ranch's Rationale for Rejecting the Independent Judgment Standard of Review is Unsupported by Case Law.

In its brief, Friant Ranch makes a distinction between cases where a required CEQA topic is not discussed at all (to be reviewed by independent judgment as a failure to proceed in the manner required by law) and cases where a topic is discussed, but the commenter claims the information provided is insufficient (to be judged by the substantial evidence test). (Opening Brief, pp. 13-17.) The Court of Appeal recognized these two types of cases, but concluded that both raised questions of law. (*Sierra Club v. County of Fresno* (2014) 226 Cal.App.4th 704 (superseded by grant of review) 172 Cal.Rptr.3d 271, 290.) We believe the distinction drawn by Friant Ranch is unduly narrow, and inconsistent with cases which have concluded that CEQA documents are insufficient. In many instances, CEQA's requirements are stated broadly, and the courts must interpret the law to determine what level of analysis satisfies CEQA's mandate for providing meaningful information, even though the EIR discusses the issue to some extent.

For example, the CEQA Guidelines require discussion of the existing environmental baseline. In *County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 954-955, the lead agency had discussed the environmental baseline by describing historic month-end water levels in the affected lakes. However, the court held that this was not an adequate baseline discussion because it failed to discuss the timing and amounts of past actual water releases, to allow comparison with the proposed project. The court evidently applied the independent judgment test to its decision, even though the agency discussed the issue to some extent.

Likewise, in *Vineyard Area Citizens* (2007) 40 Cal.4th 412, this Court addressed the question of whether an EIR's analysis of water supply impacts complied with CEQA. The parties agreed that the EIR was required to analyze the effects of providing water to the development project, "and that in order to do so the EIR had, in some manner, to identify the planned sources of that water." (*Vineyard Area Citizens, supra,* at p. 428.) However, the parties disagreed as to the level of detail required for this analysis and "what level of uncertainty regarding the availability of water supplies can be tolerated in an EIR . . . ." (*Id.*) In other words, the EIR had analyzed water supply impacts for the project, but the petitioner claimed that the analysis was insufficient.

This Court noted that neither CEQA's statutory language or the CEQA Guidelines specifically addressed the question of how precisely an EIR must discuss water supply impacts. (*Id.*) However, it explained that CEQA "states that '[w]hile foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can.'" (*Id.*, [Guidelines § 15144].) The Court used this general principle, along with prior precedent, to elucidate four "principles for analytical adequacy" that are necessary in order to satisfy "CEQA's informational purposes." (*Vineyard Area Citizens, supra,* at p. 430.) The Court did not defer to the agency's determination that the EIR's analysis of water supply impacts was sufficient. Rather, this Court used its independent judgment to determine for itself the level of analysis required to satisfy CEQA's fundamental purposes. (*Vineyard Area Citizens, supra*, at p. 441: an EIR does not serve its purposes where it neglects to explain likely sources of water and "… leaves long term water supply considerations to later stages of the project.")

Similarly, the CEQA Guidelines require an analysis of noise impacts of the project. (Appendix G, "Environmental Checklist Form."[17]) In *Gray v. County of Madera* (2008) 167 Cal.App.4th 1099, 1123, the court held that the lead agency's noise impact analysis was inadequate even though it had addressed the issue and concluded that the increase would not be noticeable. If the court had been using the substantial evidence standard, it likely would have upheld this discussion.

Therefore, we do not agree that the issue can be resolved on the basis suggested by Friant Ranch, which would apply the substantial evidence standard to *every* challenge to an analysis that addresses a required CEQA topic. This interpretation would subvert the courts' proper role in interpreting CEQA and determining what the law requires.

Nor do we agree that the Court of Appeal in this case violated CEQA's prohibition on courts interpreting its provisions "in a manner which imposes procedural or substantive requirements beyond those explicitly stated in this division or in the state guidelines." (Pub. Resources Code § 21083.1.) CEQA requires an EIR to describe *all* significant impacts of the project on the environment. (Pub. Resources Code § 21100(b)(2); *Vineyard Area Citizens, supra,* at p. 428.) Human beings are part of the environment, so CEQA requires EIRs to discuss a project's significant impacts on human health. However, except in certain particular circumstances,[18] neither the CEQA statute nor Guidelines specify the precise level of analysis that agencies must undertake to satisfy the law's requirements. (see, e.g., CEQA Guidelines § 15126.2(a) [EIRs must describe "health and safety problems caused by {a project's} physical changes"].) Accordingly, courts must interpret CEQA as a whole to

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[17] Association of Environmental Professionals, 2015 CEQA Statute and Guidelines (2015) p.287.

[18] E.g., Pub. Resources Code § 21151.8(C)(3)(B)(iii) (requiring specific type of health risk analysis for siting schools).

determine whether a particular EIR is sufficient as an informational document. A court determining whether an EIR's discussion of human health impacts is legally sufficient does not constitute imposing a new substantive requirement.[19] Under Friant Ranch's theory, the above-referenced cases holding a CEQA analysis inadequate would have violated the law. This is not a reasonable interpretation.

IV. COURTS MUST SCRUPULOUSLY ENFORCE THE REQUIREMENTS THAT LEAD AGENCIES CONSULT WITH AND OBTAIN COMMENTS FROM AIR DISTRICTS

Courts must "scrupulously enforce" CEQA's legislatively mandated requirements. (*Vineyard Area Citizens, supra*, 40 Cal.4th 412, 435.) Case law has firmly established that lead agencies must consult with the relevant air pollution control district before conducting an initial study, and must provide the districts with notice of the intention to adopt a negative declaration (or EIR). (*Schenck v. County of Sonoma* (2011) 198 Cal.App.4th 949, 958.) As *Schenck* held, neither publishing the notice nor providing it to the State Clearinghouse was a sufficient substitute for sending notice directly to the air district. (*Id.*) Rather, courts "must be satisfied that [administrative] agencies have fully complied with the procedural requirements of CEQA, since only in this way can the important public purposes of CEQA be protected from subversion." *Schenck,* 198 Cal.App.4th at p. 959 (citations omitted).[20]

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[19] We submit that Public Resources Code Section 21083.1 was intended to prevent courts from, for example, holding that an agency must analyze economic impacts of a project where there are no resulting environmental impacts (see CEQA Guidelines § 15131) , or imposing new procedural requirements, such as imposing additional public notice requirements not set forth in CEQA or the Guidelines.

[20] Lead agencies must consult air districts, as public agencies with jurisdiction by law over resources affected by the project, *before* releasing an EIR. (Pub. Resources Code §§ 21104(a); 21153.) Moreover, air

Lead agencies should be aware, therefore, that failure to properly seek and consider input from the relevant air district constitutes legal error which may jeopardize their project approvals. For example, the court in *Fall River Wild Trout Foundation v. County of Shasta,* (1999) 70 Cal.App.4th 482, 492 held that the failure to give notice to a trustee agency (Department of Fish and Game) was prejudicial error requiring reversal. The court explained that the lack of notice prevented the Department from providing any response to the CEQA document. (*Id.* at p. 492.) It therefore prevented relevant information from being presented to the lead agency, which was prejudicial error because it precluded informed decision-making. (*Id.*)[21]

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districts should be considered "state agencies" for purposes of the requirement to consult with "trustee agencies" as set forth in Public Resources Code § 20180.3(a). This Court has long ago held that the districts are not mere "local agencies" whose regulations are superseded by those of a state agency regarding matters of statewide concern, but rather have concurrent jurisdiction over such issues. (*Orange County Air Pollution Control District v. Public Util. Com.* (1971) 4 Cal.3d 945, 951, 954.) Since air pollution is a matter of statewide concern, *Id* at 952, air districts should be entitled to trustee agency status in order to ensure that this vital concern is adequately protected during the CEQA process.

[21] In *Schenck,* the court concluded that failure to give notice to the air district was not prejudicial, but this was partly because the trial court had already corrected the error before the case arrived at the Court of Appeal. The trial court issued a writ of mandate requiring the lead agency to give notice to the air district. The air district responded by concurring with the lead agency that air impacts were not significant. (*Schenck,* 198 Cal.App.4th 949, 960.) We disagree with the *Schenck* court that the failure to give notice to the air district would not have been prejudicial (even in the absence of the trial court writ) merely because the lead agency purported to follow the air district's published CEQA guidelines for significance. (*Id.*, 198 Cal.App.4th at p. 960.) In the first place, absent notice to the air district, it is uncertain whether the lead agency properly followed those guidelines. Moreover, it is not realistic to expect that an air district's published guidelines would necessarily fully address all possible air-quality related issues that can arise with a CEQA project, or that those

Similarly, lead agencies must obtain additional information requested by expert agencies, including those with jurisdiction by law, if that information is necessary to determine a project's impacts. (*Sierra Club v. State Bd. Of Forestry* (1994) 7 Cal.4th 1215, 1236-37.) Approving a project without obtaining that information constitutes a failure to proceed in the manner prescribed by CEQA. (*Id.* at p. 1236.)

Moreover, a lead agency can save significant time and money by consulting with the air district early in the process. For example, the lead agency can learn what the air district recommends as an appropriate analysis on the facts of its case, including what kinds of health impacts analysis may be available, and what models are appropriate for use. This saves the lead agency from the need to do its analysis all over again and possibly needing to recirculate the document after errors are corrected, if new significant impacts are identified. (CEQA Guidelines § 15088.5(a).) At the same time, the air district's expert input can help the lead agency properly determine whether another commenter's request for additional analysis or studies is reasonable or feasible. Finally, the air district can provide input on what mitigation measures would be feasible and effective.

Therefore, we suggest that this Court provide guidance to lead agencies reminding them of the importance of consulting with the relevant air districts regarding these issues. Otherwise, their feasibility decisions may be vulnerable to air district evidence that establishes that there is no substantial evidence to support the lead agency decision not to provide specific analysis. (*See Berkeley Keep Jets Over the Bay*, *supra*, 91 Cal.App.4th 1344, 1369-1371.)

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guidelines would necessarily be continually modified to reflect new developments. Therefore we believe that, had the trial court not already ordered the lead agency to obtain the air district's views, the failure to give notice would have been prejudicial, as in *Fall River, supra,* 70 Cal.App.4th 482, 492.

CONCLUSION

The SCAQMD respectfully requests this Court *not* to establish a hard-and-fast rule concerning whether CEQA requires a lead agency to correlate identified air quality impacts of a project with resulting health outcomes. Moreover, the question of whether an EIR is "sufficient as an informational document" is a mixed question of fact and law containing two levels of inquiry. Whether a particular proposed analysis is feasible is predominantly a question of fact to be judged by the substantial evidence standard of review. Where the requested analysis is feasible, but the lead agency relies on legal or policy reasons not to provide it, the question of whether the EIR is nevertheless sufficient as an informational document is predominantly a question of law to be judged by the independent judgment standard of review.

Respectfully submitted,

DATED: April 3, 2015

SOUTH COAST AIR QUALITY
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CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.520(c)(1) of the California Rules of Court, I hereby certify that this brief contains 8,476 words, including footnotes, but excluding the Application, Table of Contents, Table of Authorities, Certificate of Service, this Certificate of Word Count, and signature blocks. I have relied on the word count of the Microsoft Word Vista program used to prepare this Certificate.

DATED: April 3, 2015 Respectfully submitted,

Barbara Baird

Barbara Baird

PROOF OF SERVICE

I am employed in the County of Los Angeles, California. I am over the age of 18 years and not a party to the within action. My business address is 21865 Copley Drive, Diamond Bar, California 91765.

On April 3, 2015 I served true copies of the following document(s) described as **APPLICATION OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT FOR LEAVE TO FILE BRIEF OF *AMICUS CURIAE* IN SUPPORT OF NEITHER PARTY AND *[PROPOSED]* BRIEF OF *AMICUS CURIAE*** by placing a true copy of the foregoing document(s) in a sealed envelope addressed as set forth on the attached service list as follows:

BY MAIL: I enclosed the document(s) in a sealed envelope or package addressed to the persons at the addresses listed in the Service List and placed the envelope for collection and mailing following our ordinary business practices. I am readily familiar with this District's practice for collection and processing of correspondence for mailing. Under that practice, the correspondence would be deposited with the United States Postal Service, with postage thereon fully prepaid at Diamond Bar, California, in the ordinary course of business. I am aware that on motion of the party served, service is presumed invalid if postal cancellation date or postage meter date is more than one day after date of deposit for mailing in affidavit.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on April 3, 2015 at Diamond Bar, California.

Patricia Anderson

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SUPREME COURT COPY

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

SUPREME COURT
FILED

APR 13 2015

Frank A. McGuire Clerk

Deputy

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.

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APPLICATION

Pursuant to California Rules of Court 8.520(f)(1), proposed Amicus Curiae San Joaquin Valley Unified Air Pollution Control District hereby requests permission from the Chief Justice to file an amicus brief in support of Defendant and Respondent, County of Fresno, and Defendant and Real Parties in Interest Friant Ranch, L.P. Pursuant to Rule 8.520(f)(5) of the California Rules of Court, the proposed amicus curiae brief is combined with this Application. The brief addresses the following issue certified by this Court for review:

> Is an EIR adequate when it identifies the health impacts of air pollution and quantifies a project's expected emissions, or does CEQA further require the EIR to *correlate* a project's air quality emissions to specific health impacts?

As of the date of this filing, the deadline for the final reply brief on the merits was March 5, 2015. Accordingly, under Rule 8.520(f)(2), this application and brief are timely.

1. Background and Interest of San Joaquin Valley Unified Air Pollution Control District

The San Joaquin Valley Unified Air Pollution Control District ("Air District") regulates air quality in the eight counties comprising the San Joaquin Valley ("Central Valley"): Kern, Tulare, Madera, Fresno, Merced, San Joaquin, Stanislaus, and Kings, and is primarily responsible for attaining air quality standards within its jurisdiction. After billions of dollars of investment by Central Valley businesses, pioneering air quality regulations, and consistent efforts by residents, the Central Valley air basin has made historic improvements in air quality.

The Central Valley's geographical, topographical and meteorological features create exceptionally challenging air quality conditions. For example, it receives air pollution transported from the San Francisco Bay Area and northern Central Valley communities, and the southern portion of the Central Valley includes three mountain ranges (Sierra, Tehachapi, and Coastal) that, under some meteorological conditions, effectively trap air pollution. Central Valley air pollution is only a fraction of what the Bay Area and Los Angeles produce, but these natural conditions result in air quality conditions that are only marginally better than Los Angeles, even though about ten times more pollution is emitted in the Los Angeles region. Bay Area air quality is much better than the Central Valley's, even though the Bay Area produces about six times more pollution. The Central Valley also receives air pollution transported from the Bay Area and northern counties in the Central Valley, including Sacramento, and transboundary anthropogenic ozone from as far away as China.

Notwithstanding these challenges, the Central Valley has reduced emissions at the same or better rate than other areas in California and has achieved unparalleled milestones in protecting public health and the environment:

- In the last decade, the Central Valley became the first air basin classified by the federal government under the Clean Air Act as a "serious nonattainment" area to come into attainment of health-based National Ambient Air Quality Standard ("NAAQS") for coarse particulate matter (PM10), an achievement made even more notable given the Valley's extensive agricultural sector. Unhealthy levels of particulate matter can cause and exacerbate a range of chronic and acute illnesses.
- In 2013, the Central Valley became the first air basin in the country to improve from a federal designation of "extreme" nonattainment to

actually attain (and quality for an attainment designation) of the 1-hour ozone NAAQS; ozone creates "smog" and, like PM10, causes adverse health impacts.

- The Central Valley also is in full attainment of federal standards for lead, nitrogen dioxide, sulfur dioxide, and carbon monoxide.
- The Central Valley continues to make progress toward compliance with its last two attainment standards, with the number of exceedences for the 8-hour ozone NAAQS reduced by 74% (for the 1997 standard) and 38% (for the 2008 standard) since 1991, and for the small particulate matter (PM2.5) NAAQS reduced by 85% (for the 1997 standard) and 61% (for the 2006 standard).

Sustained improvement in Central Valley air quality requires a rigorous and comprehensive regulatory framework that includes prohibitions (e.g., on wood-burning fireplaces in new residences), mandates (e.g., requiring the installation of best available pollution reduction technologies on new and modified equipment and industrial operations), innovations (e.g., fees assessed against residential development to fund pollution reduction actions to "offset" vehicular emissions associated with new residences), incentive programs (e.g., funding replacements of older, more polluting heavy duty trucks and school buses)[1], ongoing planning for continued air quality improvements, and enforcement of Air District permits and regulations.

The Air District is also an expert air quality agency for the eight counties and cities in the San Joaquin Valley. In that capacity, the Air District has developed air quality emission guidelines for use by the Central

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[1] San Joaquin's incentive program has been so successful that through 2012, it has awarded over $ 432 million in incentive funds and has achieved 93,349 tons of lifetime emissions reductions. *See* SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 2012 PM2.5 PLAN, 6-6 (2012) *available at* http://www.valleyair.org/Workshops/postings/2012/12-20-12PM25/FinalVersion/06%20Chapter%206% 20Incentives.pdf.

Valley counties and cities that implement the California Environment Quality Act (CEQA).[2] In its guidance, the Air District has distinguished between toxic air contaminants and criteria air pollutants.[3] Recognizing this distinction, the Air District's CEQA Guidance has adopted distinct thresholds of significance for *criteria* pollutants (i.e., ozone, PM2.5 and their respective precursor pollutants) based upon scientific and factual data which demonstrates the level that can be accommodated on a cumulative basis in the San Joaquin Valley without affecting the attainment of the applicable NAAQS.[4] For *toxic air* pollutants, the District has adopted different thresholds of significance which scientific and factual data demonstrates has the potential to expose sensitive receptors (i.e., children, the elderly) to levels which may result in localized health impacts.[5]

The Air District's CEQA Guidance was followed by the County of Fresno in its environment review of the Friant Ranch project, for which the Air District also served as a commenting agency. The Court of Appeal's holding, however, requiring correlation between the project's criteria

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[2] *See, e.g.*, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, PLANNING DIVISION, GUIDE FOR ASSESSING AND MITIGATING AIR QUALITY IMPACTS (2015), *available at* http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf ("CEQA Guidance").

[3] Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from toxic air contaminants and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of toxic air contaminants occurs solely under section 112 of the Act. Compare 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 with 42 U.S.C. § 7411.

[4] See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 64-66, 80.

[5] See, e.g., CEQA Guidance at http://www.valleyair.org/transportation/GAMAQI_3-19-15.pdf, pp. 66, 99-101.

pollutants and local health impacts, departs from the Air District's Guidance and approved methodology for assessing criteria pollutants. A close reading of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants (for which a local health risk assessment is feasible and routinely performed) and criteria air pollutants (for which a local health risk assessment is not feasible and would result in speculative results).[6] The Air District has a direct interest in ensuring the lawfulness and consistent application of its CEQA Guidance, and will explain how the Court of Appeal departed from the Air District's long-standing CEQA Guidance in addressing criteria pollutants and toxic air contaminants in this amicus brief.

2. How the Proposed Amicus Curiae Brief Will Assist the Court

As counsel for the proposed amicus curiae, we have reviewed the briefs filed in this action. In addition to serving as a "commentary agency" for CEQA purposes over the Friant Ranch project, the Air District has a strong interest in assuring that CEQA is used for its intended purpose, and believes that this Court would benefit from additional briefing explaining the distinction between criteria pollutants and toxic air contaminants and the different methodologies employed by local air pollution control agencies such as the Air District to analyze these two categories of air pollutants under CEQA. The Air District will also explain how the Court of Appeal's opinion is based upon a fundamental misunderstanding of these two different approaches by requiring the County of Fresno to correlate the project's *criteria* pollution emissions with *local* health impacts. In doing

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[6] CEQA does not require speculation. *See, e.g.*, *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.*, 6 Cal. 4th 1112, 1137 (1993) (upholding EIR that failed to evaluate cumulative toxic air emission increases given absence of any acceptable means for doing so).

so, the Air District will provide helpful analysis to support its position that at least insofar as criteria pollutants are concerned, CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible.

Rule 8.520 Disclosure

Pursuant to Cal. R. 8.520(f)(4), neither the Plaintiffs nor the Defendant or Real Party In Interest or their respective counsel authored this brief in whole or in part. Neither the Plaintiffs nor the Defendant or Real Party in Interest or their respective counsel made any monetary contribution towards or in support of the preparation of this brief.

CONCLUSION

On behalf of the San Joaquin Valley Unified Air Pollution Control District, we respectfully request that this Court accept the filing of the attached brief.

Dated: April 2, 2015

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SAN JOAQUIN VALLEY UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CASE NO. S219783

IN THE SUPREME COURT OF CALIFORNIA

SIERRA CLUB, REVIVE THE SAN JOAQUIN, and
LEAGUE OF WOMEN VOTERS OF FRESNO,
Plaintiffs and Appellants

v.

COUNTY OF FRESNO,
Defendant and Respondent

FRIANT RANCH, L.P.,
Real Party in Interest and Respondent

After a Decision by the Court of Appeal, filed May 27, 2014
Fifth Appellate District Case No. F066798

Appeal from the Superior Court of California, County of Fresno
Case No. 11CECG00726

AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO AND REAL PARTY IN INTEREST AND RESPONDENT, FRIANT RANCH, L.P.

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I. INTRODUCTION.

The San Joaquin Valley Unified Air Pollution Control District ("Air District") respectfully submits that the Court of Appeal erred when it held that the air quality analysis contained in the Environmental Impact Report ("EIR") for the Friant Ranch development project was inadequate under the California Environmental Quality Act ("CEQA") because it did not include an analysis of the correlation between the project's criteria air pollutants and the potential adverse human health impacts. A close reading of the portion of the administrative record that gave rise to this issue demonstrates that the Court's holding is based on a misunderstanding of the distinction between toxic air contaminants and criteria air pollutants.

Toxic air contaminants, also known as hazardous air pollutants, are those pollutants that are known or suspected to cause cancer or other serious health effects, such as birth defects. There are currently 189 toxic air contaminants (hereinafter referred to as "TACs") regulated by the United States Environmental Protection Agency ("EPA") and the states pursuant to the Clean Air Act. 42 U.S.C. § 7412. Common TACs include benzene, perchloroethylene and asbestos. *Id.* at 7412(b).

In contrast, there are only six (6) criteria air pollutants: ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide and lead. Although criteria air pollutants can also be harmful to human health, they are distinguishable from TACs and are regulated separately. For instance, while criteria pollutants are regulated by numerous sections throughout Title I of the Clean Air Act, the regulation of TACs occurs solely under section 112 of the Act. *Compare* 42 U.S.C. §§ 7407 – 7411 & 7501 – 7515 *with* 42 U.S.C. § 7411.

The most relevant difference between criteria pollutants and TACs for purposes of this case is the manner in which human health impacts are accounted for. While it is common practice to analyze the correlation between an individual facility's TAC emissions and the expected localized human health impacts, such is not the case for criteria pollutants. Instead, the human health impacts associated with criteria air pollutants are analyzed and taken into consideration when EPA sets the national ambient air quality standard ("NAAQS") for each criteria pollutant. 42 U.S.C. § 7409(b)(1). The health impact of a particular criteria pollutant is analyzed on a regional and not a facility level based on how close the area is to complying with (attaining) the NAAQS. Accordingly, while the type of individual facility / health impact analysis that the Court of Appeal has required is a customary practice for TACs, it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task.

It is clear from a reading of both the administrative record and the Court of Appeal's decision that the Court did not have the expertise to fully appreciate the difference between TACs and criteria air pollutants. As a result, the Court has ordered the County of Fresno to conduct an analysis that is not practicable and not likely yield valid information. The Air District respectfully requests that this portion of the Court of Appeal's decision be reversed.

II. THE COURT OF APPEAL ERRED IN FINDING THE FRIANT RANCH EIR INADEQUATE FOR FAILING TO ANALYZE THE SPECIFIC HUMAN HEALTH IMPACTS ASSOCIATED CRITERIA AIR POLLUTANTS.

Although the Air District does not take lightly the amount of air emissions at issue in this case, it submits that the Court of Appeal got it wrong when it required Fresno County to revise the Friant Ranch EIR to include an analysis correlating the criteria air pollutant emissions associated with the project with specific, localized health-impacts. The type of analysis the Court of Appeal has required will not yield reliable information because currently available modeling tools are not well suited for this task. Further, in reviewing this issue de novo, the Court of Appeal failed to appreciate that it lacked the scientific expertise to appreciate the significant differences between a health risk assessment commonly performed for toxic air contaminants and a similar type of analysis it felt should have been conducted for criteria air pollutants.

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A. Currently Available Modeling Tools are not Equipped to Provide a Meaningful Analysis of the Correlation between an Individual Development Project's Air Emissions and Specific Human Health Impacts.

In order to appreciate the problematic nature of the Court of Appeals' decision requiring a health risk type analysis for criteria air pollutants, it is important to understand how the relevant criteria pollutants (ozone and particulate matter) are formed, dispersed and regulated.

Ground level ozone (smog) is not directly emitted into the air, but is formed when precursor pollutants such as oxides of nitrogen (NOx) and volatile organic compounds (VOCs) are emitted into the atmosphere and undergo complex chemical reactions in the process of sunlight.[1] Once formed, ozone can be transported long distances by wind.[2] Because of the complexity of ozone formation, a specific tonnage amount of NOx or VOCs emitted in a particular area does not equate to a particular concentration of ozone in that area. In fact, even rural areas that have relatively low tonnages of emissions of NOx or VOCs can have high levels of ozone concentration simply due to wind transport.[3] Conversely, the San Francisco Bay Area has six times more NOx and VOC emissions per square mile than the San Joaquin Valley, but experiences lower

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[1] *See* United States Environmental Protection Agency, *Ground-level Ozone: Basic Information*, available at: http://www.epa.gov/airquality/ozonepollution/basic.html (visited March 10, 2015).
[2] *Id.*
[3] *Id.*

concentrations of ozone (and better air quality) simply because sea breezes disperse the emissions.[4]

Particulate matter ("PM") can be divided into two categories: directly emitted PM and secondary PM.[5] While directly emitted PM can have a localized impact, the tonnage emitted does not always equate to the local PM concentration because it can be transported long distances by wind.[6] Secondary PM, like ozone, is formed via complex chemical reactions in the atmosphere between precursor chemicals such as sulfur dioxides (SOx) and NOx.[7] Because of the complexity of secondary PM formation, the tonnage of PM-forming precursor emissions in an area does not necessarily result in an equivalent concentration of secondary PM in that area.

The disconnect between the *tonnage* of precursor pollutants (NOx, SOx and VOCs) and the *concentration* of ozone or PM formed is important because it is not necessarily the tonnage of precursor pollutants that causes human health effects, but the concentration of resulting ozone or PM. Indeed, the national ambient air quality standards ("NAAQS"), which are statutorily required to be set by the United States Environmental Protection

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[4] *San Joaquin Valley Air Pollution Control District 2007 Ozone Plan*, Executive Summary p. ES-6, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/03%20Executive%20Summary.pdf (visited March 10, 2015).

[5] United States Environmental Protection Agency, *Particulate Matter: Basic Information*, available at: http://www.epa.gov/airquality/particlepollution/basic.html (visited March 10, 2015).

[6] *Id.*

[7] *Id.*

Agency ("EPA") at levels that are "requisite to protect the public health," 42 U.S.C. § 7409(b)(1), are established as concentrations of ozone or particulate matter and not as tonnages of their precursor pollutants.[8]

Attainment of a particular NAAQS occurs when the concentration of the relevant pollutant remains below a set threshold on a consistent basis throughout a particular region. For example, the San Joaquin Valley attained the 1-hour ozone NAAQS when ozone concentrations remained at or below 0.124 parts per million Valley-wide on 3 or fewer days over a 3-year period.[9] Because the NAAQS are focused on achieving a particular concentration of pollution region-wide, the Air District's tools and plans for attaining the NAAQS are regional in nature.

For instance, the computer models used to simulate and predict an attainment date for the ozone or particulate matter NAAQS in the San Joaquin Valley are based on regional inputs, such as regional inventories of precursor pollutants (NOx, SOx and VOCs) and the atmospheric chemistry and meteorology of the Valley.[10] At a very basic level, the models simulate future ozone or PM levels based on predicted changes in precursor

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[8] See, e.g., United States Environmental Protection Agency, *Table of National Ambient Air Quality Standards*, available at: http://www.epa.gov/air/criteria.html#3 (visited March 10, 2015).

[9] *San Joaquin Valley Unified Air Pollution Control District 2013 Plan for the Revoked 1-Hour Ozone Standard*, Ch. 2 p. 2-16, available at: http://www.valleyair.org/Air_Quality_Plans/OzoneOneHourPlan2013/02Chapter2ScienceTrendsModeling.pdf (visited March 10, 2015).

[10] *Id.* at Ch. 2 p. 2-19 (visited March 12, 2015); *San Joaquin Valley Unified Air Pollution Control District 2008 PM2.5 Plan*, Appendix F, pp. F-2 – F-5, available at: http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Final_Adopted_PM2.5/20%20Appendix%20F.pdf
(visited March 19, 2015).

emissions Valley wide.[11] Because the NAAQS are set levels necessary to protect human health, the closer a region is to attaining a particular NAAQS, the lower the human health impact is from that pollutant.

The goal of these modeling exercises is not to determine whether the emissions generated by a particular factory or development project will affect the date that the Valley attains the NAAQS. Rather, the Air District's modeling and planning strategy is regional in nature and based on the extent to which *all* of the emission-generating sources in the Valley (current and future) must be controlled in order to reach attainment.[12]

Accordingly, the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the Valley can accommodate without affecting the attainment date for the NAAQS.[13] The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources permitted by the Air District must "offset" their emissions.[14] This "offset"

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[11] *Id.*

[12] Although the Air District does have a dispersion modeling tool used during its air permitting process that is used to predict whether a particular project's directly emitted PM will either cause an exceedance of the PM NAAQS or contribute to an existing exceedance, this model bases the prediction on a worst case scenario of emissions and meteorology and has no provision for predicting any associated human health impacts. Further, this analysis is only performed for stationary sources (factories, oil refineries, etc.) that are required to obtain a New Source Review permit from the Air District and not for development projects such as Friant Ranch over which the Air District has no preconstruction permitting authority. *See* San Joaquin Valley Unified Air Pollution Control District Rule 2201 §§ 2.0; 3.3.9; 4.14.1, available at: http://www.valleyair.org/rules/currntrules/Rule22010411.pdf (visited March 19, 2015).

[13] *San Joaquin Valley Unified Air Pollution Control District Guide to Assessing and Mitigating Air Quality Impacts*, (March 19, 2015) p. 22, available at: http://www.valleyair.org/transportation/CEQA%20Rules/GAMAQI%20Jan%202002%20Rev.pdf (visited March 30, 2015).

[14] *Id.* at pp. 22, 25.

level allows for growth while keeping the cumulative effects of all new sources at a level that will not impede attainment of the NAAQS.[15] In the Valley, these thresholds are 15 tons per year of PM, and 10 tons of NOx or VOC per year. *Sierra Club*, *supra*, 172 Cal.Rptr.3d at 303; AR 4554. Thus, the CEQA air quality analysis for criteria pollutants is not really a localized, project-level impact analysis but one of regional, "cumulative impacts."

Accordingly, the significance thresholds applied in the Friant Ranch EIR (15 tons per year of PM and 10 tons of NOx or VOCs) are not intended to be indicative of any localized human health impact that the project may have. While the health effects of air pollution are of primary concern to the Air District (indeed, the NAAQS are established to protect human health), the Air District is simply not equipped to analyze whether and to what extent the criteria pollutant emissions of an individual CEQA project directly impact human health in a particular area. This is true even for projects with relatively high levels of emissions of criteria pollutant precursor emissions.

For instance, according to the EIR, the Friant Ranch project is estimated to emit 109.52 tons per year of ROG (VOC), 102.19 tons per year of NOx, and 117.38 tons per year of PM. Although these levels well

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[15] [15] *San Joaquin Valley Unified Air Pollution Control District Environmental Review Guidelines* (Aug. 2000) p. 4-11, available at: http://www.valleyair.org/transportation/CEQA%20Rules/ERG%20Adopted%20_August%202000_.pdf (visited March 12, 2015).

exceed the Air District's CEQA significance thresholds, this does not mean that one can easily determine the concentration of ozone or PM that will be created at or near the Friant Ranch site on a particular day or month of the year, or what specific health impacts will occur. Meteorology, the presence of sunlight, and other complex chemical factors all combine to determine the ultimate concentration and location of ozone or PM. This is especially true for a project like Friant Ranch where most of the criteria pollutant emissions derive not from a single "point source," but from area wide sources (consumer products, paint, etc.) or mobile sources (cars and trucks) driving to, from and around the site.

In addition, it would be extremely difficult to model the impact on NAAQS attainment that the emissions from the Friant Ranch project may have. As discussed above, the currently available modeling tools are equipped to model the impact of *all* emission sources in the Valley on attainment. According to the most recent EPA-approved emission inventory, the NOx inventory for the Valley is for the year 2014 is 458.2 tons per day, or 167,243 tons per year and the VOC (or ROG) inventory is 361.7 tons per day, or 132,020.5 tons per year.[16] Running the photochemical grid model used for predicting ozone attainment with the

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[16] *San Joaquin Valley Unified Air Pollution Control District 2007 Ozone Plan*, Appendix B pp. B-6, B-9,
available at:
http://www.valleyair.org/Air_Quality_Plans/docs/AQ_Ozone_2007_Adopted/19%20Appendix%20B%20April%202007.pdf (visited March 12, 2015).

emissions solely from the Friant Ranch project (which equate to less than one-tenth of one percent of the total NOx and VOC in the Valley) is not likely to yield valid information given the relative scale involved.

Finally, even once a model is developed to accurately ascertain local increases in concentrations of photochemical pollutants like ozone and some particulates, it remains impossible, using today's models, to correlate that increase in concentration to a specific health impact. The reason is the same: such models are designed to determine regional, population-wide health impacts, and simply are not accurate when applied at the local level.

For these reasons, it is not the norm for CEQA practitioners, including the Air District, to conduct an analysis of the localized health impacts associated with a project's criteria air pollutant emissions as part of the EIR process. When the accepted scientific method precludes a certain type of analysis, "the court cannot impose a legal standard to the contrary." *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal.App.3d 692, 717 n. 8. However, that is exactly what the Court of Appeal has done in this case. Its decision upends the way CEQA air quality analysis of criteria pollutants occurs and should be reversed.

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B. The Court of Appeal Improperly Extrapolated a Request for a Health Risk Assessment for Toxic Air Contaminants into a Requirement that the EIR contain an Analysis of Localized Health Impacts Associated with Criteria Air Pollutants.

The Court of Appeal's error in requiring the new health impact analysis for criteria air pollutants clearly stems from a misunderstanding of terms of art commonly used in the air pollution field. More specifically, the Court of Appeal (and Appellants Sierra Club et al.) appear to have confused the health risk analysis ("HRA") performed to determine the health impacts associated with a project's toxic air contaminants ("TACs"), with an analysis correlating a project's criteria air pollutants (ozone, PM and the like) with specific localized health impacts.

The first type of analysis, the HRA, is commonly performed during the Air District's stationary source permitting process for projects that emit TACs and is, thus, incorporated into the CEQA review process. An HRA is a comprehensive analysis to evaluate and predict the dispersion of TACs emitted by a project and the potential for exposure of human populations. It also assesses and quantifies both the individual and population-wide health risks associated with those levels of exposure. There is no similar analysis conducted for criteria air pollutants. Thus, the second type of analysis (required by the Court of Appeal), is not currently part of the Air District's process because, as outlined above, the health risks associated with exposure to criteria pollutants are evaluated on a regional level based on the region's attainment of the NAAQS.

The root of this confusion between the types of analyses conducted for TACs versus criteria air pollutants appears to stem from a comment that was presented to Fresno County by the City of Fresno during the administrative process.

In its comments on the draft EIR, the City of Fresno (the only party to raise this issue) stated:

> [t]he EIR must disclose the human health related effects of the Project's air pollution impacts. (CEQA Guidelines section 15126.2(a).) The EIR fails completely in this area. The EIR should be revised to disclose and determine the significance of TAC impacts, and of human health risks due to exposure to Project-related air emissions.

(AR 4602.)

In determining that the issue regarding the correlation between the Friant Ranch project's criteria air pollutants and adverse health impacts was adequately exhausted at the administrative level, the Court of Appeal improperly read the first two sentences of the City of Fresno's comment in isolation rather than in the context of the entire comment. *See Sierra Club v. County of Fresno* (2014) 172 Cal.Rptr.3d 271, 306. Although the comment first speaks generally in terms of "human health related effects" and "air pollution," it requests only that the EIR be revised to disclose "the significance of TACs" and the "human health risks due to exposure."

The language of this request in the third sentence of the comment is significant because, to an air pollution practitioner, the language would only have indicated only that a HRA for TACs was requested, and not a separate analysis of the health impacts associated with the project's criteria air pollutants. Fresno County clearly read the comment as a request to perform an HRA for TACs and limited its response accordingly. (AR 4602.)[17] The Air District submits that it would have read the City's comment in the same manner as the County because the City's use of the terms "human health risks" and "TACs" signal that an HRA for TACs is being requested. Indeed, the Air District was also concerned that an HRA be conducted, but understood that it was not possible to conduct such an analysis until the project entered the phase where detailed site specific information, such as the types of emission sources and the proximity of the sources to sensitive receptors became available. (AR 4553.)[18] The City of Fresno was apparently satisfied with the County's discussion of human health risks, as it did not raise the issue again when it commented on the final EIR. (AR 8944 – 8960.)

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[17] Appellants do not challenge the manner in which the County addressed TACs in the EIR. (Appellants' Answer Brief p. 28 fn. 7.)

[18] Appellants rely on the testimony of Air District employee, Dan Barber, as support for their position that the County should have conducted an analysis correlating the project's criteria air pollutant emissions with localized health impacts. (Appellants Answer Brief pp. 10-11; 28.) However, Mr. Barber's testimony simply reinforces the Air District's concern that a risk assessment (HRA) be conducted once the actual details of the project become available. (AR 8863.) As to criteria air pollutants, Mr. Barber's comments are aimed at the Air District's concern about the amount of emissions and the fact that the emissions will make it "more difficult for Fresno County and the Valley to reach attainment which means that the health of Valley residents maybe [sic] adversely impacted." Mr. Barber says nothing about conducting a separate analysis of the localized health impacts the project's emissions may have.

The Court of Appeal's holding, which incorrectly extrapolates a request for an HRA for TACs into a new analysis of the localized health impacts of the project's criteria air pollutants, highlights two additional errors in the Court's decision.

First, the Court of Appeal's holding illustrates why the Court should have applied the deferential substantial evidence standard of review to the issue of whether the EIR's air quality analysis was sufficient. The regulation of air pollution is a technical and complex field and the Court of Appeal lacked the expertise to fully appreciate the difference between TACs and criteria air pollutants and tools available for analyzing each type of pollutant.

Second, it illustrates that the Court likely got it wrong when it held that the issue regarding the criteria pollutant / localized health impact analysis was properly exhausted during the administrative process. In order to preserve an issue for the court, '[t]he "exact issue" must have been presented to the administrative agency....' [Citation.] *Citizens for Responsible Equitable Environmental Development v. City of San Diego*, (2011) 196 Cal.App.4th 515, 527 129 Cal.Rptr.3d 512, 521; *Sierra Club v. City of Orange* (2008) 163 Cal.App.4th 523, 535, 78 Cal.Rptr.3d 1, 13. "'[T]he objections must be sufficiently specific so that the agency has the opportunity to evaluate and respond to them.' [Citation.]" *Sierra Club v. City of Orange*,163 Cal.App.4th at 536.[19]

As discussed above, the City's comment, while specific enough to request a commonly performed HRA for TACs, provided the County with no notice that it should perform a new type of analysis correlating criteria pollutant tonnages to specific human health effects. Although the parties have not directly addressed the issue of failure to exhaust administrative remedies in their briefs, the Air District submits that the Court should consider how it affects the issues briefed by the parties since "[e]xhaustion of administrative remedies is a jurisdictional prerequisite to maintenance of a CEQA action." *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1199, 22 Cal.Rptr.3d 203.

III. CONCLUSION

For all of the foregoing reasons, the Air District respectfully requests that the portion of the Court of Appeal's decision requiring an analysis correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

---

[19] *Sierra Club v. City of Orange*, is illustrative here. In that case, the plaintiffs challenged an EIR approved for a large planned community on the basis that the EIR improperly broke up the various environmental impacts by separate project components or "piecemealed" the analysis in violation of CEQA. In evaluating the defense that the plaintiffs had failed to adequately raise the issue at the administrative level, the Court held that comments such as *"the use of a single document for both a project-level and a program-level EIR [is] 'confusing'."* and *"[t]he lead agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project,"* were too vague to fairly raise the argument of piecemealing before the agency. *Sierra Club v. City of Orange*, 163 Cal.App.4th at 537.

correlating the localized human health impacts associated with an individual project's criteria air pollutant emissions be reversed.

Respectfully submitted,

Dated: April 2, 2015

Catherine T. Redmond
Attorney for Proposed Amicus
Curiae

SAN JOAQUIN VALLEY
UNIFIED
AIR POLLUTION CONTROL
DISTRICT

CERTIFICATE OF WORD COUNT

Pursuant to Rule 8.204 of the California Rules of Court, I hereby certify that this document, based on the Word County feature of the Microsoft Word software program used to compose and print this document, contains, exclusive of caption, tables, certificate of word count, signature block and certificate of service, 3806 words.

Dated: April 2, 2015

Annette A. Ballatore-Williamson
District Counsel (SBN 192176)

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

PROOF OF SERVICE

I am over the age of 18 years and not a p[arty to the above-captioned action; that my business address is San Joaquin Valley Unified Air Pollution Control District located at 1990 E. Gettysburg Avenue, Fresno, California 93726.

On April 2, 2015, I served the document described below:

APPLICATION FOR LEAVE TO FILE AMICUS CURIAE BRIEF OF SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT IN SUPPORT OF DEFENDANT AND RESPONDENT, COUNTY OF FRESNO

On all parties to this action at the following addresses and in the following manner:

PLEASE SEE ATTACHED SERVICE LIST

(XX) **(BY MAIL)** I caused a true copy of each document(s) to be laced in a sealed envelope with first-class postage affixed and placed the envelope for collection. Mail is collected daily at my office and placed in a United State Postal Service collection box for pick-up and delivery that same day.

( ) **(BY ELECTRONIC MAIL)** I caused a true and correct scanned image (.PDF file) copy to be transmitted via electronic mail transfer system in place at the San Joaquin Valley Unified Air Pollution Control District ("District"), originating from the undersigned at 1990 E. Gettysburg Avenue, Fresno, CA, to the address(es) indicated below.

( ) **(BY OVERNIGHT MAIL)** I caused a true and correct copy to be delivered via Federal Express to the following person(s) or their representative at the address(es) listed below.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that I executed this document on April 2, 2015, at Fresno, California.

Esthela Soto

SERVICE LIST

Sierra Club et al, v. County of Fresno, et al
Supreme Court of California Case No.: S219783
Fifth District Court of Appeal Case No.: F066798
Fresno County Superior Court Case No.: 11CECG00726

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Appendix C2

CalEEMod Results

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19-07846 Long Range Development Plan EIR - Construction 2022

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	171.90	1000sqft	3.95	171,896.00	0
Research & Development	82.64	1000sqft	1.90	82,644.00	0
Health Club	12.50	1000sqft	0.29	12,498.00	0
Apartments Mid Rise	432.96	Dwelling Unit	11.39	432,963.00	1238

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 700k SF in first year

Trips and VMT -

Demolition -

Grading -

Architectural Coating -

Woodstoves -

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - 75% of construction equipment would be Tier 4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	35.00
tblConstructionPhase	NumDays	300.00	155.00
tblGrading	MaterialExported	0.00	64,815.00
tblGrading	MaterialImported	0.00	64,815.00
tblLandUse	LandUseSquareFeet	171,900.00	171,896.00
tblLandUse	LandUseSquareFeet	82,640.00	82,644.00
tblLandUse	LandUseSquareFeet	12,500.00	12,498.00
tblLandUse	LandUseSquareFeet	432,960.00	432,963.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	3.0351	4.7714	3.8088	0.0141	0.8117	0.1266	0.9383	0.2595	0.1182	0.3777	0.0000	1,307.3466	1,307.3466	0.1468	0.0000	1,311.0164
Maximum	**3.0351**	**4.7714**	**3.8088**	**0.0141**	**0.8117**	**0.1266**	**0.9383**	**0.2595**	**0.1182**	**0.3777**	**0.0000**	**1,307.3466**	**1,307.3466**	**0.1468**	**0.0000**	**1,311.0164**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	2.9530	3.8248	3.8840	0.0141	0.6479	0.0764	0.7243	0.1930	0.0722	0.2652	0.0000	1,307.3462	1,307.3462	0.1468	0.0000	1,311.0160
Maximum	**2.9530**	**3.8248**	**3.8840**	**0.0141**	**0.6479**	**0.0764**	**0.7243**	**0.1930**	**0.0722**	**0.2652**	**0.0000**	**1,307.3462**	**1,307.3462**	**0.1468**	**0.0000**	**1,311.0160**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**2.71**	**19.84**	**-1.97**	**0.00**	**20.18**	**39.64**	**22.81**	**25.65**	**38.88**	**29.79**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-3-2022**	**4-2-2022**	2.6891	2.1379
2	**4-3-2022**	**7-2-2022**	0.9085	0.7493
3	**7-3-2022**	**9-30-2022**	0.9085	0.7493
		Highest	2.6891	2.1379

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.3418	0.1638	7.2219	7.2600e-003		0.4382	0.4382		0.4382	0.4382	45.9929	95.6753	141.6682	0.1442	3.1200e-003	146.2032
Energy	0.0544	0.4759	0.2774	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	3,292.4364	3,292.4364	0.0706	0.0223	3,300.8574
Mobile	1.3571	6.6166	18.4951	0.0737	6.3857	0.0523	6.4380	1.7111	0.0486	1.7597	0.0000	6,817.4108	6,817.4108	0.3083	0.0000	6,825.1181
Waste						0.0000	0.0000		0.0000	0.0000	88.6177	0.0000	88.6177	5.2372	0.0000	219.5467
Water						0.0000	0.0000		0.0000	0.0000	31.7680	1,030.9409	1,062.7089	3.2854	0.0817	1,169.1943
Total	**5.7533**	**7.2563**	**25.9945**	**0.0839**	**6.3857**	**0.5280**	**6.9137**	**1.7111**	**0.5244**	**2.2355**	**166.3786**	**11,236.4635**	**11,402.8421**	**9.0456**	**0.1072**	**11,660.9196**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.3418	0.1638	7.2219	7.2600e-003		0.4382	0.4382		0.4382	0.4382	45.9929	95.6753	141.6682	0.1442	3.1200e-003	146.2032
Energy	0.0544	0.4759	0.2774	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	3,292.4364	3,292.4364	0.0706	0.0223	3,300.8574
Mobile	1.3571	6.6166	18.4951	0.0737	6.3857	0.0523	6.4380	1.7111	0.0486	1.7597	0.0000	6,817.4108	6,817.4108	0.3083	0.0000	6,825.1181
Waste						0.0000	0.0000		0.0000	0.0000	88.6177	0.0000	88.6177	5.2372	0.0000	219.5467
Water						0.0000	0.0000		0.0000	0.0000	31.7680	1,030.9409	1,062.7089	3.2854	0.0817	1,169.1943
Total	**5.7533**	**7.2563**	**25.9945**	**0.0839**	**6.3857**	**0.5280**	**6.9137**	**1.7111**	**0.5244**	**2.2355**	**166.3786**	**11,236.4635**	**11,402.8421**	**9.0456**	**0.1072**	**11,660.9196**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/31/2022	2/11/2022	5	10	
3	Grading	Grading	2/14/2022	4/1/2022	5	35	
4	Building Construction	Building Construction	4/4/2022	11/4/2022	5	155	
5	Paving	Paving	11/7/2022	12/2/2022	5	20	
6	Architectural Coating	Architectural Coating	12/5/2022	12/30/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 876,750; Residential Outdoor: 292,250; Non-Residential Indoor: 400,557; Non-Residential Outdoor: 133,519; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	515.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	12,817.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	398.00	90.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0557	0.0000	0.0557	8.4400e-003	0.0000	8.4400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0264	0.2572	0.2059	3.9000e-004		0.0124	0.0124		0.0116	0.0116	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0264**	**0.2572**	**0.2059**	**3.9000e-004**	**0.0557**	**0.0124**	**0.0681**	**8.4400e-003**	**0.0116**	**0.0200**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8000e-003	0.0619	0.0141	1.9000e-004	4.4300e-003	1.7000e-004	4.6000e-003	1.2200e-003	1.7000e-004	1.3800e-003	0.0000	18.9995	18.9995	1.2900e-003	0.0000	19.0318
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.2000e-004	4.8300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3821	1.3821	3.0000e-005	0.0000	1.3830
Total	**2.3900e-003**	**0.0624**	**0.0189**	**2.1000e-004**	**6.0800e-003**	**1.8000e-004**	**6.2600e-003**	**1.6600e-003**	**1.8000e-004**	**1.8300e-003**	**0.0000**	**20.3816**	**20.3816**	**1.3200e-003**	**0.0000**	**20.4147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0251	0.0000	0.0251	3.8000e-003	0.0000	3.8000e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0142	0.1201	0.2212	3.9000e-004		5.7100e-003	5.7100e-003		5.4000e-003	5.4000e-003	0.0000	33.9902	33.9902	9.5500e-003	0.0000	34.2289
Total	**0.0142**	**0.1201**	**0.2212**	**3.9000e-004**	**0.0251**	**5.7100e-003**	**0.0308**	**3.8000e-003**	**5.4000e-003**	**9.2000e-003**	**0.0000**	**33.9902**	**33.9902**	**9.5500e-003**	**0.0000**	**34.2289**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8000e-003	0.0619	0.0141	1.9000e-004	4.4300e-003	1.7000e-004	4.6000e-003	1.2200e-003	1.7000e-004	1.3800e-003	0.0000	18.9995	18.9995	1.2900e-003	0.0000	19.0318
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.2000e-004	4.8300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3821	1.3821	3.0000e-005	0.0000	1.3830
Total	**2.3900e-003**	**0.0624**	**0.0189**	**2.1000e-004**	**6.0800e-003**	**1.8000e-004**	**6.2600e-003**	**1.6600e-003**	**1.8000e-004**	**1.8300e-003**	**0.0000**	**20.3816**	**20.3816**	**1.3200e-003**	**0.0000**	**20.4147**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0159	0.1654	0.0985	1.9000e-004		8.0600e-003	8.0600e-003		7.4200e-003	7.4200e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**0.0159**	**0.1654**	**0.0985**	**1.9000e-004**	**0.0903**	**8.0600e-003**	**0.0984**	**0.0497**	**7.4200e-003**	**0.0571**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.5000e-004	2.9000e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8293	0.8293	2.0000e-005	0.0000	0.8298
Total	**3.5000e-004**	**2.5000e-004**	**2.9000e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8293**	**0.8293**	**2.0000e-005**	**0.0000**	**0.8298**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9300e-003	0.0629	0.1024	1.9000e-004		2.9500e-003	2.9500e-003		2.7300e-003	2.7300e-003	0.0000	16.7197	16.7197	5.4100e-003	0.0000	16.8549
Total	**6.9300e-003**	**0.0629**	**0.1024**	**1.9000e-004**	**0.0407**	**2.9500e-003**	**0.0436**	**0.0223**	**2.7300e-003**	**0.0251**	**0.0000**	**16.7197**	**16.7197**	**5.4100e-003**	**0.0000**	**16.8549**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5000e-004	2.5000e-004	2.9000e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8293	0.8293	2.0000e-005	0.0000	0.8298
Total	**3.5000e-004**	**2.5000e-004**	**2.9000e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8293**	**0.8293**	**2.0000e-005**	**0.0000**	**0.8298**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0634	0.6798	0.5082	1.0900e-003		0.0286	0.0286		0.0263	0.0263	0.0000	95.4356	95.4356	0.0309	0.0000	96.2072
Total	**0.0634**	**0.6798**	**0.5082**	**1.0900e-003**	**0.1518**	**0.0286**	**0.1804**	**0.0629**	**0.0263**	**0.0893**	**0.0000**	**95.4356**	**95.4356**	**0.0309**	**0.0000**	**96.2072**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0447	1.5415	0.3498	4.8100e-003	0.1102	4.3500e-003	0.1145	0.0303	4.1600e-003	0.0344	0.0000	472.8466	472.8466	0.0322	0.0000	473.6504
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.7000e-004	0.0113	4.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.2249	3.2249	8.0000e-005	0.0000	3.2269
Total	**0.0461**	**1.5425**	**0.3611**	**4.8500e-003**	**0.1140**	**4.3800e-003**	**0.1184**	**0.0313**	**4.1900e-003**	**0.0355**	**0.0000**	**476.0714**	**476.0714**	**0.0322**	**0.0000**	**476.8773**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0683	0.0000	0.0683	0.0283	0.0000	0.0283	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0381	0.3746	0.5355	1.0900e-003		0.0147	0.0147		0.0136	0.0136	0.0000	95.4354	95.4354	0.0309	0.0000	96.2071
Total	**0.0381**	**0.3746**	**0.5355**	**1.0900e-003**	**0.0683**	**0.0147**	**0.0830**	**0.0283**	**0.0136**	**0.0419**	**0.0000**	**95.4354**	**95.4354**	**0.0309**	**0.0000**	**96.2071**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0447	1.5415	0.3498	4.8100e-003	0.1102	4.3500e-003	0.1145	0.0303	4.1600e-003	0.0344	0.0000	472.8466	472.8466	0.0322	0.0000	473.6504
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3700e-003	9.7000e-004	0.0113	4.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.2249	3.2249	8.0000e-005	0.0000	3.2269
Total	**0.0461**	**1.5425**	**0.3611**	**4.8500e-003**	**0.1140**	**4.3800e-003**	**0.1184**	**0.0313**	**4.1900e-003**	**0.0355**	**0.0000**	**476.0714**	**476.0714**	**0.0322**	**0.0000**	**476.8773**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1322	1.2102	1.2682	2.0900e-003		0.0627	0.0627		0.0590	0.0590	0.0000	179.5871	179.5871	0.0430	0.0000	180.6627
Total	**0.1322**	**1.2102**	**1.2682**	**2.0900e-003**		**0.0627**	**0.0627**		**0.0590**	**0.0590**	**0.0000**	**179.5871**	**179.5871**	**0.0430**	**0.0000**	**180.6627**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0186	0.6399	0.1582	1.7400e-003	0.0440	1.1800e-003	0.0451	0.0127	1.1300e-003	0.0138	0.0000	168.7929	168.7929	0.0104	0.0000	169.0519
Worker	0.1207	0.0858	0.9925	3.1400e-003	0.3384	2.4700e-003	0.3409	0.0899	2.2700e-003	0.0921	0.0000	284.2049	284.2049	7.1400e-003	0.0000	284.3834
Total	**0.1393**	**0.7258**	**1.1507**	**4.8800e-003**	**0.3824**	**3.6500e-003**	**0.3860**	**0.1026**	**3.4000e-003**	**0.1060**	**0.0000**	**452.9977**	**452.9977**	**0.0175**	**0.0000**	**453.4353**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1007	0.8580	1.2833	2.0900e-003		0.0409	0.0409		0.0391	0.0391	0.0000	179.5869	179.5869	0.0430	0.0000	180.6625
Total	**0.1007**	**0.8580**	**1.2833**	**2.0900e-003**		**0.0409**	**0.0409**		**0.0391**	**0.0391**	**0.0000**	**179.5869**	**179.5869**	**0.0430**	**0.0000**	**180.6625**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0186	0.6399	0.1582	1.7400e-003	0.0440	1.1800e-003	0.0451	0.0127	1.1300e-003	0.0138	0.0000	168.7929	168.7929	0.0104	0.0000	169.0519
Worker	0.1207	0.0858	0.9925	3.1400e-003	0.3384	2.4700e-003	0.3409	0.0899	2.2700e-003	0.0921	0.0000	284.2049	284.2049	7.1400e-003	0.0000	284.3834
Total	**0.1393**	**0.7258**	**1.1507**	**4.8800e-003**	**0.3824**	**3.6500e-003**	**0.3860**	**0.1026**	**3.4000e-003**	**0.1060**	**0.0000**	**452.9977**	**452.9977**	**0.0175**	**0.0000**	**453.4353**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0110**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.2000e-004	4.8300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3821	1.3821	3.0000e-005	0.0000	1.3830
Total	**5.9000e-004**	**4.2000e-004**	**4.8300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3821**	**1.3821**	**3.0000e-005**	**0.0000**	**1.3830**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.9200e-003	0.0617	0.1594	2.3000e-004		3.0300e-003	3.0300e-003		2.8000e-003	2.8000e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.9200e-003**	**0.0617**	**0.1594**	**2.3000e-004**		**3.0300e-003**	**3.0300e-003**		**2.8000e-003**	**2.8000e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.9000e-004	4.2000e-004	4.8300e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3821	1.3821	3.0000e-005	0.0000	1.3830
Total	**5.9000e-004**	**4.2000e-004**	**4.8300e-003**	**2.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3821**	**1.3821**	**3.0000e-005**	**0.0000**	**1.3830**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.5923					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.5944**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1300e-003	2.2300e-003	0.0257	8.0000e-005	8.7800e-003	6.0000e-005	8.8400e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.3712	7.3712	1.9000e-004	0.0000	7.3758
Total	**3.1300e-003**	**2.2300e-003**	**0.0257**	**8.0000e-005**	**8.7800e-003**	**6.0000e-005**	**8.8400e-003**	**2.3300e-003**	**6.0000e-005**	**2.3900e-003**	**0.0000**	**7.3712**	**7.3712**	**1.9000e-004**	**0.0000**	**7.3758**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.5923					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**2.5944**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1300e-003	2.2300e-003	0.0257	8.0000e-005	8.7800e-003	6.0000e-005	8.8400e-003	2.3300e-003	6.0000e-005	2.3900e-003	0.0000	7.3712	7.3712	1.9000e-004	0.0000	7.3758
Total	**3.1300e-003**	**2.2300e-003**	**0.0257**	**8.0000e-005**	**8.7800e-003**	**6.0000e-005**	**8.8400e-003**	**2.3300e-003**	**6.0000e-005**	**2.3900e-003**	**0.0000**	**7.3712**	**7.3712**	**1.9000e-004**	**0.0000**	**7.3758**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3571	6.6166	18.4951	0.0737	6.3857	0.0523	6.4380	1.7111	0.0486	1.7597	0.0000	6,817.4108	6,817.4108	0.3083	0.0000	6,825.1181
Unmitigated	1.3571	6.6166	18.4951	0.0737	6.3857	0.0523	6.4380	1.7111	0.0486	1.7597	0.0000	6,817.4108	6,817.4108	0.3083	0.0000	6,825.1181

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,879.18	2,766.61	2537.15	9,616,686	9,616,686
General Office Building	1,896.06	422.87	180.50	4,640,585	4,640,585
Health Club	411.63	260.88	334.13	810,632	810,632
Research & Development	670.21	157.02	91.73	1,737,494	1,737,494
Total	5,857.08	3,607.38	3,143.50	16,805,398	16,805,398

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
General Office Building	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Health Club	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Research & Development	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,753.8415	2,753.8415	0.0602	0.0125	2,759.0619
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,753.8415	2,753.8415	0.0602	0.0125	2,759.0619
NaturalGas Mitigated	0.0544	0.4759	0.2774	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	538.5949	538.5949	0.0103	9.8700e-003	541.7955
NaturalGas Unmitigated	0.0544	0.4759	0.2774	2.9700e-003		0.0376	0.0376		0.0376	0.0376	0.0000	538.5949	538.5949	0.0103	9.8700e-003	541.7955

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	6.40524e+006	0.0345	0.2951	0.1256	1.8800e-003		0.0239	0.0239		0.0239	0.0239	0.0000	341.8083	341.8083	6.5500e-003	6.2700e-003	343.8395
General Office Building	596479	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8304	31.8304	6.1000e-004	5.8000e-004	32.0196
Health Club	406060	2.1900e-003	0.0199	0.0167	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6689	21.6689	4.2000e-004	4.0000e-004	21.7977
Research & Development	2.6851e+006	0.0145	0.1316	0.1106	7.9000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	143.2874	143.2874	2.7500e-003	2.6300e-003	144.1388
Total		**0.0544**	**0.4759**	**0.2774**	**2.9700e-003**		**0.0376**	**0.0376**		**0.0376**	**0.0376**	**0.0000**	**538.5949**	**538.5949**	**0.0103**	**9.8800e-003**	**541.7955**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	6.40524e+006	0.0345	0.2951	0.1256	1.8800e-003		0.0239	0.0239		0.0239	0.0239	0.0000	341.8083	341.8083	6.5500e-003	6.2700e-003	343.8395
General Office Building	596479	3.2200e-003	0.0292	0.0246	1.8000e-004		2.2200e-003	2.2200e-003		2.2200e-003	2.2200e-003	0.0000	31.8304	31.8304	6.1000e-004	5.8000e-004	32.0196
Health Club	406060	2.1900e-003	0.0199	0.0167	1.2000e-004		1.5100e-003	1.5100e-003		1.5100e-003	1.5100e-003	0.0000	21.6689	21.6689	4.2000e-004	4.0000e-004	21.7977
Research & Development	2.6851e+006	0.0145	0.1316	0.1106	7.9000e-004		0.0100	0.0100		0.0100	0.0100	0.0000	143.2874	143.2874	2.7500e-003	2.6300e-003	144.1388
Total		**0.0544**	**0.4759**	**0.2774**	**2.9700e-003**		**0.0376**	**0.0376**		**0.0376**	**0.0376**	**0.0000**	**538.5949**	**538.5949**	**0.0103**	**9.8800e-003**	**541.7955**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.97764e+006	1,189.1617	0.0260	5.3800e-003	1,191.4160
General Office Building	1.63645e+006	984.0051	0.0215	4.4500e-003	985.8704
Health Club	126855	76.2783	1.6700e-003	3.5000e-004	76.4229
Research & Development	838837	504.3964	0.0110	2.2800e-003	505.3526
Total		**2,753.8415**	**0.0602**	**0.0125**	**2,759.0619**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.97764e +006	1,189.161 7	0.0260	5.3800e-003	1,191.416 0
General Office Building	1.63645e +006	984.0051	0.0215	4.4500e-003	985.8704
Health Club	126855	76.2783	1.6700e-003	3.5000e-004	76.4229
Research & Development	838837	504.3964	0.0110	2.2800e-003	505.3526
Total		**2,753.841 5**	**0.0602**	**0.0125**	**2,759.061 9**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.3418	0.1638	7.2219	7.2600e-003		0.4382	0.4382		0.4382	0.4382	45.9929	95.6753	141.6682	0.1442	3.1200e-003	146.2032
Unmitigated	4.3418	0.1638	7.2219	7.2600e-003		0.4382	0.4382		0.4382	0.4382	45.9929	95.6753	141.6682	0.1442	3.1200e-003	146.2032

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5295					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4183	0.1123	2.7525	7.0200e-003		0.4135	0.4135		0.4135	0.4135	45.9929	88.3753	134.3681	0.1372	3.1200e-003	138.7273
Landscaping	0.1349	0.0515	4.4694	2.4000e-004		0.0247	0.0247		0.0247	0.0247	0.0000	7.3001	7.3001	7.0300e-003	0.0000	7.4759
Total	**4.3418**	**0.1638**	**7.2219**	**7.2600e-003**		**0.4382**	**0.4382**		**0.4382**	**0.4382**	**45.9929**	**95.6754**	**141.6682**	**0.1442**	**3.1200e-003**	**146.2032**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.2592					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.5295					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	1.4183	0.1123	2.7525	7.0200e-003		0.4135	0.4135		0.4135	0.4135	45.9929	88.3753	134.3681	0.1372	3.1200e-003	138.7273
Landscaping	0.1349	0.0515	4.4694	2.4000e-004		0.0247	0.0247		0.0247	0.0247	0.0000	7.3001	7.3001	7.0300e-003	0.0000	7.4759
Total	**4.3418**	**0.1638**	**7.2219**	**7.2600e-003**		**0.4382**	**0.4382**		**0.4382**	**0.4382**	**45.9929**	**95.6754**	**141.6682**	**0.1442**	**3.1200e-003**	**146.2032**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1,062.7089	3.2854	0.0817	1,169.1943
Unmitigated	1,062.7089	3.2854	0.0817	1,169.1943

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	28.2091 / 17.784	348.6209	0.9266	0.0232	378.7124
General Office Building	30.5524 / 18.7257	374.0027	1.0035	0.0252	406.5872
Health Club	0.739289 / 0.453113	9.0499	0.0243	6.1000e-004	9.8384
Research & Development	40.6336 / 0	331.0355	1.3310	0.0327	374.0563
Total		**1,062.7089**	**3.2854**	**0.0817**	**1,169.1943**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	28.2091 / 17.784	348.6209	0.9266	0.0232	378.7124
General Office Building	30.5524 / 18.7257	374.0027	1.0035	0.0252	406.5872
Health Club	0.739289 / 0.453113	9.0499	0.0243	6.1000e-004	9.8384
Research & Development	40.6336 / 0	331.0355	1.3310	0.0327	374.0563
Total		**1,062.7089**	**3.2854**	**0.0817**	**1,169.1943**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	88.6177	5.2372	0.0000	219.5467
Unmitigated	88.6177	5.2372	0.0000	219.5467

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	199.16	40.4277	2.3892	0.0000	100.1579
General Office Building	159.87	32.4522	1.9179	0.0000	80.3989
Health Club	71.25	14.4631	0.8548	0.0000	35.8317
Research & Development	6.28	1.2748	0.0753	0.0000	3.1582
Total		**88.6177**	**5.2372**	**0.0000**	**219.5467**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	199.16	40.4277	2.3892	0.0000	100.1579
General Office Building	159.87	32.4522	1.9179	0.0000	80.3989
Health Club	71.25	14.4631	0.8548	0.0000	35.8317
Research & Development	6.28	1.2748	0.0753	0.0000	3.1582
Total		**88.6177**	**5.2372**	**0.0000**	**219.5467**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Construction 2022

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	171.90	1000sqft	3.95	171,896.00	0
Research & Development	82.64	1000sqft	1.90	82,644.00	0
Health Club	12.50	1000sqft	0.29	12,498.00	0
Apartments Mid Rise	432.96	Dwelling Unit	11.39	432,963.00	1238

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 700k SF in first year

Trips and VMT -

Demolition -

Grading -

Architectural Coating -

Woodstoves -

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - 75% of construction equipment would be Tier 4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	35.00
tblConstructionPhase	NumDays	300.00	155.00
tblGrading	MaterialExported	0.00	64,815.00
tblGrading	MaterialImported	0.00	64,815.00
tblLandUse	LandUseSquareFeet	171,900.00	171,896.00
tblLandUse	LandUseSquareFeet	82,640.00	82,644.00
tblLandUse	LandUseSquareFeet	12,500.00	12,498.00
tblLandUse	LandUseSquareFeet	432,960.00	432,963.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	259.7513	124.4954	49.1260	0.3412	18.2675	1.8834	19.8815	9.9840	1.7418	11.4689	0.0000	36,244.3816	36,244.3816	3.9395	0.0000	36,342.8702
Maximum	**259.7513**	**124.4954**	**49.1260**	**0.3412**	**18.2675**	**1.8834**	**19.8815**	**9.9840**	**1.7418**	**11.4689**	**0.0000**	**36,244.3816**	**36,244.3816**	**3.9395**	**0.0000**	**36,342.8702**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	259.7513	107.0584	50.6844	0.3412	10.5254	1.0877	11.6131	4.5222	1.0138	5.0689	0.0000	36,244.3816	36,244.3816	3.9395	0.0000	36,342.8702
Maximum	**259.7513**	**107.0584**	**50.6844**	**0.3412**	**10.5254**	**1.0877**	**11.6131**	**4.5222**	**1.0138**	**5.0689**	**0.0000**	**36,244.3816**	**36,244.3816**	**3.9395**	**0.0000**	**36,342.8702**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**14.01**	**-3.17**	**0.00**	**42.38**	**42.25**	**41.59**	**54.71**	**41.80**	**55.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821
Energy	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785
Mobile	9.1450	39.8861	121.6955	0.4790	40.5953	0.3259	40.9212	10.8613	0.3031	11.1644		48,802.5040	48,802.5040	2.1382		48,855.9579
Total	**139.2641**	**51.8895**	**379.1734**	**1.0589**	**40.5953**	**33.8059**	**74.4012**	**10.8613**	**33.7830**	**44.6443**	**4,055.8757**	**59,913.3910**	**63,969.2667**	**14.3579**	**0.3349**	**64,428.0185**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821
Energy	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785
Mobile	9.1450	39.8861	121.6955	0.4790	40.5953	0.3259	40.9212	10.8613	0.3031	11.1644		48,802.5040	48,802.5040	2.1382		48,855.9579
Total	**139.2641**	**51.8895**	**379.1734**	**1.0589**	**40.5953**	**33.8059**	**74.4012**	**10.8613**	**33.7830**	**44.6443**	**4,055.8757**	**59,913.3910**	**63,969.2667**	**14.3579**	**0.3349**	**64,428.0185**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/31/2022	2/11/2022	5	10	
3	Grading	Grading	2/14/2022	4/1/2022	5	35	
4	Building Construction	Building Construction	4/4/2022	11/4/2022	5	155	
5	Paving	Paving	11/7/2022	12/2/2022	5	20	
6	Architectural Coating	Architectural Coating	12/5/2022	12/30/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 876,750; Residential Outdoor: 292,250; Non-Residential Indoor: 400,557; Non-Residential Outdoor: 133,519; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	515.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	12,817.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	398.00	90.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5713	0.0000	5.5713	0.8435	0.0000	0.8435			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.5713**	**1.2427**	**6.8140**	**0.8435**	**1.1553**	**1.9988**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1774	6.0193	1.3633	0.0195	0.4500	0.0174	0.4673	0.1233	0.0166	0.1399		2,110.8690	2,110.8690	0.1399		2,114.3672
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		160.1586	160.1586	4.0400e-003		160.2595
Total	**0.2368**	**6.0564**	**1.8858**	**0.0211**	**0.6176**	**0.0186**	**0.6362**	**0.1678**	**0.0177**	**0.1855**		**2,271.0276**	**2,271.0276**	**0.1440**		**2,274.6267**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5071	0.0000	2.5071	0.3796	0.0000	0.3796			0.0000			0.0000
Off-Road	1.4222	12.0068	22.1193	0.0388		0.5707	0.5707		0.5398	0.5398	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**1.4222**	**12.0068**	**22.1193**	**0.0388**	**2.5071**	**0.5707**	**3.0778**	**0.3796**	**0.5398**	**0.9194**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1774	6.0193	1.3633	0.0195	0.4500	0.0174	0.4673	0.1233	0.0166	0.1399		2,110.8690	2,110.8690	0.1399		2,114.3672
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		160.1586	160.1586	4.0400e-003		160.2595
Total	**0.2368**	**6.0564**	**1.8858**	**0.0211**	**0.6176**	**0.0186**	**0.6362**	**0.1678**	**0.0177**	**0.1855**		**2,271.0276**	**2,271.0276**	**0.1440**		**2,274.6267**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		192.1903	192.1903	4.8400e-003		192.3114
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**192.1903**	**192.1903**	**4.8400e-003**		**192.3114**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.3851	12.5799	20.4708	0.0380		0.5893	0.5893		0.5454	0.5454	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**1.3851**	**12.5799**	**20.4708**	**0.0380**	**8.1298**	**0.5893**	**8.7191**	**4.4688**	**0.5454**	**5.0142**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		192.1903	192.1903	4.8400e-003		192.3114
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**192.1903**	**192.1903**	**4.8400e-003**		**192.3114**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5232	85.6025	19.3878	0.2770	6.3989	0.2469	6.6458	1.7536	0.2362	1.9898		30,019.4263	30,019.4263	1.9900		30,069.1750
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0495	0.6967	2.1400e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		213.5448	213.5448	5.3800e-003		213.6794
Total	**2.6024**	**85.6520**	**20.0845**	**0.2792**	**6.6224**	**0.2485**	**6.8709**	**1.8129**	**0.2377**	**2.0506**		**30,232.9711**	**30,232.9711**	**1.9953**		**30,282.8543**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	2.1746	21.4064	30.5999	0.0621		0.8392	0.8392		0.7761	0.7761	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**2.1746**	**21.4064**	**30.5999**	**0.0621**	**3.9030**	**0.8392**	**4.7422**	**1.6184**	**0.7761**	**2.3945**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5232	85.6025	19.3878	0.2770	6.3989	0.2469	6.6458	1.7536	0.2362	1.9898		30,019.4263	30,019.4263	1.9900		30,069.1750
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0495	0.6967	2.1400e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		213.5448	213.5448	5.3800e-003		213.6794
Total	**2.6024**	**85.6520**	**20.0845**	**0.2792**	**6.6224**	**0.2485**	**6.8709**	**1.8129**	**0.2377**	**2.0506**		**30,232.9711**	**30,232.9711**	**1.9953**		**30,282.8543**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2349	8.1480	1.9251	0.0228	0.5760	0.0150	0.5910	0.1658	0.0143	0.1802		2,430.5321	2,430.5321	0.1428		2,434.1018
Worker	1.5759	0.9843	13.8645	0.0426	4.4487	0.0318	4.4805	1.1798	0.0293	1.2091		4,249.5413	4,249.5413	0.1071		4,252.2192
Total	**1.8107**	**9.1322**	**15.7895**	**0.0654**	**5.0247**	**0.0468**	**5.0715**	**1.3457**	**0.0436**	**1.3893**		**6,680.0734**	**6,680.0734**	**0.2499**		**6,686.3210**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2991	11.0706	16.5593	0.0269		0.5283	0.5283		0.5040	0.5040	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.2991**	**11.0706**	**16.5593**	**0.0269**		**0.5283**	**0.5283**		**0.5040**	**0.5040**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2349	8.1480	1.9251	0.0228	0.5760	0.0150	0.5910	0.1658	0.0143	0.1802		2,430.5321	2,430.5321	0.1428		2,434.1018
Worker	1.5759	0.9843	13.8645	0.0426	4.4487	0.0318	4.4805	1.1798	0.0293	1.2091		4,249.5413	4,249.5413	0.1071		4,252.2192
Total	**1.8107**	**9.1322**	**15.7895**	**0.0654**	**5.0247**	**0.0468**	**5.0715**	**1.3457**	**0.0436**	**1.3893**		**6,680.0734**	**6,680.0734**	**0.2499**		**6,686.3210**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		160.1586	160.1586	4.0400e-003		160.2595
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**160.1586**	**160.1586**	**4.0400e-003**		**160.2595**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6916	6.1701	15.9381	0.0228		0.3027	0.3027		0.2799	0.2799	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6916**	**6.1701**	**15.9381**	**0.0228**		**0.3027**	**0.3027**		**0.2799**	**0.2799**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		160.1586	160.1586	4.0400e-003		160.2595
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**160.1586**	**160.1586**	**4.0400e-003**		**160.2595**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	259.2300					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**259.4345**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3168	0.1978	2.7868	8.5700e-003	0.8942	6.3900e-003	0.9006	0.2372	5.8900e-003	0.2430		854.1791	854.1791	0.0215		854.7174
Total	**0.3168**	**0.1978**	**2.7868**	**8.5700e-003**	**0.8942**	**6.3900e-003**	**0.9006**	**0.2372**	**5.8900e-003**	**0.2430**		**854.1791**	**854.1791**	**0.0215**		**854.7174**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	259.2300					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**259.4345**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3168	0.1978	2.7868	8.5700e-003	0.8942	6.3900e-003	0.9006	0.2372	5.8900e-003	0.2430		854.1791	854.1791	0.0215		854.7174
Total	**0.3168**	**0.1978**	**2.7868**	**8.5700e-003**	**0.8942**	**6.3900e-003**	**0.9006**	**0.2372**	**5.8900e-003**	**0.2430**		**854.1791**	**854.1791**	**0.0215**		**854.7174**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.1450	39.8861	121.6955	0.4790	40.5953	0.3259	40.9212	10.8613	0.3031	11.1644		48,802.50 40	48,802.50 40	2.1382		48,855.95 79
Unmitigated	9.1450	39.8861	121.6955	0.4790	40.5953	0.3259	40.9212	10.8613	0.3031	11.1644		48,802.50 40	48,802.50 40	2.1382		48,855.95 79

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,879.18	2,766.61	2537.15	9,616,686	9,616,686
General Office Building	1,896.06	422.87	180.50	4,640,585	4,640,585
Health Club	411.63	260.88	334.13	810,632	810,632
Research & Development	670.21	157.02	91.73	1,737,494	1,737,494
Total	5,857.08	3,607.38	3,143.50	16,805,398	16,805,398

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
General Office Building	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Health Club	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Research & Development	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785
NaturalGas Unmitigated	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	17548.6	0.1893	1.6172	0.6882	0.0103		0.1308	0.1308		0.1308	0.1308		2,064.5431	2,064.5431	0.0396	0.0379	2,076.8116
General Office Building	1634.19	0.0176	0.1602	0.1346	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.2576	192.2576	3.6800e-003	3.5200e-003	193.4001
Health Club	1112.49	0.0120	0.1091	0.0916	6.5000e-004		8.2900e-003	8.2900e-003		8.2900e-003	8.2900e-003		130.8816	130.8816	2.5100e-003	2.4000e-003	131.6593
Research & Development	7356.45	0.0793	0.7212	0.6058	4.3300e-003		0.0548	0.0548		0.0548	0.0548		865.4645	865.4645	0.0166	0.0159	870.6075
Total		**0.2982**	**2.6077**	**1.5202**	**0.0163**		**0.2060**	**0.2060**		**0.2060**	**0.2060**		**3,253.1467**	**3,253.1467**	**0.0624**	**0.0596**	**3,272.4785**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	17.5486	0.1893	1.6172	0.6882	0.0103		0.1308	0.1308		0.1308	0.1308		2,064.5431	2,064.5431	0.0396	0.0379	2,076.8116
General Office Building	1.63419	0.0176	0.1602	0.1346	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.2576	192.2576	3.6800e-003	3.5200e-003	193.4001
Health Club	1.11249	0.0120	0.1091	0.0916	6.5000e-004		8.2900e-003	8.2900e-003		8.2900e-003	8.2900e-003		130.8816	130.8816	2.5100e-003	2.4000e-003	131.6593
Research & Development	7.35645	0.0793	0.7212	0.6058	4.3300e-003		0.0548	0.0548		0.0548	0.0548		865.4645	865.4645	0.0166	0.0159	870.6075
Total		**0.2982**	**2.6077**	**1.5202**	**0.0163**		**0.2060**	**0.2060**		**0.2060**	**0.2060**		**3,253.1467**	**3,253.1467**	**0.0624**	**0.0596**	**3,272.4785**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821
Unmitigated	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8600					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	113.4615	8.9835	220.2027	0.5618		33.0761	33.0761		33.0761	33.0761	4,055.8757	7,793.3647	11,849.2404	12.0954	0.2753	12,233.6564
Landscaping	1.0789	0.4121	35.7550	1.8900e-003		0.1979	0.1979		0.1979	0.1979		64.3756	64.3756	0.0620		65.9257
Total	**129.8209**	**9.3956**	**255.9577**	**0.5636**		**33.2740**	**33.2740**		**33.2740**	**33.2740**	**4,055.8757**	**7,857.7404**	**11,913.6160**	**12.1574**	**0.2753**	**12,299.5821**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8600					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	113.4615	8.9835	220.2027	0.5618		33.0761	33.0761		33.0761	33.0761	4,055.8757	7,793.3647	11,849.2404	12.0954	0.2753	12,233.6564
Landscaping	1.0789	0.4121	35.7550	1.8900e-003		0.1979	0.1979		0.1979	0.1979		64.3756	64.3756	0.0620		65.9257
Total	**129.8209**	**9.3956**	**255.9577**	**0.5636**		**33.2740**	**33.2740**		**33.2740**	**33.2740**	**4,055.8757**	**7,857.7404**	**11,913.6160**	**12.1574**	**0.2753**	**12,299.5821**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Construction 2022

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	171.90	1000sqft	3.95	171,896.00	0
Research & Development	82.64	1000sqft	1.90	82,644.00	0
Health Club	12.50	1000sqft	0.29	12,498.00	0
Apartments Mid Rise	432.96	Dwelling Unit	11.39	432,963.00	1238

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 700k SF in first year

Trips and VMT -

Demolition -

Grading -

Architectural Coating -

Woodstoves -

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - 75% of construction equipment would be Tier 4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	35.00
tblConstructionPhase	NumDays	300.00	155.00
tblGrading	MaterialExported	0.00	64,815.00
tblGrading	MaterialImported	0.00	64,815.00
tblLandUse	LandUseSquareFeet	171,900.00	171,896.00
tblLandUse	LandUseSquareFeet	82,640.00	82,644.00
tblLandUse	LandUseSquareFeet	12,500.00	12,498.00
tblLandUse	LandUseSquareFeet	432,960.00	432,963.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	259.7815	125.4164	50.4284	0.3359	18.2675	1.8873	19.8815	9.9840	1.7455	11.4689	0.0000	35,670.5631	35,670.5631	4.0207	0.0000	35,771.0802
Maximum	**259.7815**	**125.4164**	**50.4284**	**0.3359**	**18.2675**	**1.8873**	**19.8815**	**9.9840**	**1.7455**	**11.4689**	**0.0000**	**35,670.5631**	**35,670.5631**	**4.0207**	**0.0000**	**35,771.0802**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	259.7815	107.9793	51.9868	0.3359	10.5254	1.0916	11.6170	4.5222	1.0175	5.0689	0.0000	35,670.5631	35,670.5631	4.0207	0.0000	35,771.0802
Maximum	**259.7815**	**107.9793**	**51.9868**	**0.3359**	**10.5254**	**1.0916**	**11.6170**	**4.5222**	**1.0175**	**5.0689**	**0.0000**	**35,670.5631**	**35,670.5631**	**4.0207**	**0.0000**	**35,771.0802**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	13.90	-3.09	0.00	42.38	42.16	41.57	54.71	41.71	55.80	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821
Energy	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785
Mobile	8.6578	40.6482	113.5299	0.4534	40.5953	0.3275	40.9228	10.8613	0.3045	11.1658		46,232.4233	46,232.4233	2.1339		46,285.7712
Total	**138.7769**	**52.6516**	**371.0078**	**1.0333**	**40.5953**	**33.8075**	**74.4027**	**10.8613**	**33.7845**	**44.6458**	**4,055.8757**	**57,343.3103**	**61,399.1860**	**14.3537**	**0.3349**	**61,857.8318**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821
Energy	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785
Mobile	8.6578	40.6482	113.5299	0.4534	40.5953	0.3275	40.9228	10.8613	0.3045	11.1658		46,232.4233	46,232.4233	2.1339		46,285.7712
Total	**138.7769**	**52.6516**	**371.0078**	**1.0333**	**40.5953**	**33.8075**	**74.4027**	**10.8613**	**33.7845**	**44.6458**	**4,055.8757**	**57,343.3103**	**61,399.1860**	**14.3537**	**0.3349**	**61,857.8318**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	1/28/2022	5	20	
2	Site Preparation	Site Preparation	1/31/2022	2/11/2022	5	10	
3	Grading	Grading	2/14/2022	4/1/2022	5	35	
4	Building Construction	Building Construction	4/4/2022	11/4/2022	5	155	
5	Paving	Paving	11/7/2022	12/2/2022	5	20	
6	Architectural Coating	Architectural Coating	12/5/2022	12/30/2022	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 876,750; Residential Outdoor: 292,250; Non-Residential Indoor: 400,557; Non-Residential Outdoor: 133,519; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	515.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	12,817.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	398.00	90.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	80.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.5713	0.0000	5.5713	0.8435	0.0000	0.8435			0.0000			0.0000
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**	**5.5713**	**1.2427**	**6.8140**	**0.8435**	**1.1553**	**1.9988**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1825	6.0837	1.4599	0.0191	0.4500	0.0176	0.4676	0.1233	0.0169	0.1402		2,071.4929	2,071.4929	0.1457		2,075.1344
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.2476**	**6.1243**	**1.9286**	**0.0206**	**0.6176**	**0.0188**	**0.6364**	**0.1678**	**0.0180**	**0.1858**		**2,221.2734**	**2,221.2734**	**0.1494**		**2,225.0089**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5071	0.0000	2.5071	0.3796	0.0000	0.3796			0.0000			0.0000
Off-Road	1.4222	12.0068	22.1193	0.0388		0.5707	0.5707		0.5398	0.5398	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**1.4222**	**12.0068**	**22.1193**	**0.0388**	**2.5071**	**0.5707**	**3.0778**	**0.3796**	**0.5398**	**0.9194**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1825	6.0837	1.4599	0.0191	0.4500	0.0176	0.4676	0.1233	0.0169	0.1402		2,071.4929	2,071.4929	0.1457		2,075.1344
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.2476**	**6.1243**	**1.9286**	**0.0206**	**0.6176**	**0.0188**	**0.6364**	**0.1678**	**0.0180**	**0.1858**		**2,221.2734**	**2,221.2734**	**0.1494**		**2,225.0089**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		179.7366	179.7366	4.5100e-003		179.8494
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**179.7366**	**179.7366**	**4.5100e-003**		**179.8494**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.3851	12.5799	20.4708	0.0380		0.5893	0.5893		0.5454	0.5454	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**1.3851**	**12.5799**	**20.4708**	**0.0380**	**8.1298**	**0.5893**	**8.7191**	**4.4688**	**0.5454**	**5.0142**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		179.7366	179.7366	4.5100e-003		179.8494
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**179.7366**	**179.7366**	**4.5100e-003**		**179.8494**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5955	86.5188	20.7620	0.2718	6.3989	0.2508	6.6497	1.7536	0.2400	1.9936		29,459.4452	29,459.4452	2.0715		29,511.2317
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0868	0.0541	0.6250	2.0000e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		199.7073	199.7073	5.0100e-003		199.8326
Total	**2.6822**	**86.5729**	**21.3869**	**0.2738**	**6.6224**	**0.2524**	**6.8748**	**1.8129**	**0.2414**	**2.0543**		**29,659.1525**	**29,659.1525**	**2.0765**		**29,711.0643**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	2.1746	21.4064	30.5999	0.0621		0.8392	0.8392		0.7761	0.7761	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**2.1746**	**21.4064**	**30.5999**	**0.0621**	**3.9030**	**0.8392**	**4.7422**	**1.6184**	**0.7761**	**2.3945**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.5955	86.5188	20.7620	0.2718	6.3989	0.2508	6.6497	1.7536	0.2400	1.9936		29,459.4452	29,459.4452	2.0715		29,511.2317
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0868	0.0541	0.6250	2.0000e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		199.7073	199.7073	5.0100e-003		199.8326
Total	**2.6822**	**86.5729**	**21.3869**	**0.2738**	**6.6224**	**0.2524**	**6.8748**	**1.8129**	**0.2414**	**2.0543**		**29,659.1525**	**29,659.1525**	**2.0765**		**29,711.0643**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2473	8.1154	2.1554	0.0221	0.5760	0.0155	0.5915	0.1658	0.0148	0.1806		2,359.7480	2,359.7480	0.1533		2,363.5793
Worker	1.7262	1.0771	12.4365	0.0399	4.4487	0.0318	4.4805	1.1798	0.0293	1.2091		3,974.1754	3,974.1754	0.0998		3,976.6693
Total	**1.9736**	**9.1926**	**14.5919**	**0.0620**	**5.0247**	**0.0473**	**5.0720**	**1.3457**	**0.0441**	**1.3897**		**6,333.9234**	**6,333.9234**	**0.2530**		**6,340.2487**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2991	11.0706	16.5593	0.0269		0.5283	0.5283		0.5040	0.5040	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.2991**	**11.0706**	**16.5593**	**0.0269**		**0.5283**	**0.5283**		**0.5040**	**0.5040**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2473	8.1154	2.1554	0.0221	0.5760	0.0155	0.5915	0.1658	0.0148	0.1806		2,359.7480	2,359.7480	0.1533		2,363.5793
Worker	1.7262	1.0771	12.4365	0.0399	4.4487	0.0318	4.4805	1.1798	0.0293	1.2091		3,974.1754	3,974.1754	0.0998		3,976.6693
Total	**1.9736**	**9.1926**	**14.5919**	**0.0620**	**5.0247**	**0.0473**	**5.0720**	**1.3457**	**0.0441**	**1.3897**		**6,333.9234**	**6,333.9234**	**0.2530**		**6,340.2487**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.1028**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**149.7805**	**149.7805**	**3.7600e-003**		**149.8745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6916	6.1701	15.9381	0.0228		0.3027	0.3027		0.2799	0.2799	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6916**	**6.1701**	**15.9381**	**0.0228**		**0.3027**	**0.3027**		**0.2799**	**0.2799**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**149.7805**	**149.7805**	**3.7600e-003**		**149.8745**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	259.2300					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**259.4345**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3470	0.2165	2.4998	8.0100e-003	0.8942	6.3900e-003	0.9006	0.2372	5.8900e-003	0.2430		798.8292	798.8292	0.0201		799.3305
Total	**0.3470**	**0.2165**	**2.4998**	**8.0100e-003**	**0.8942**	**6.3900e-003**	**0.9006**	**0.2372**	**5.8900e-003**	**0.2430**		**798.8292**	**798.8292**	**0.0201**		**799.3305**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	259.2300					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**259.4345**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.3470	0.2165	2.4998	8.0100e-003	0.8942	6.3900e-003	0.9006	0.2372	5.8900e-003	0.2430		798.8292	798.8292	0.0201		799.3305
Total	**0.3470**	**0.2165**	**2.4998**	**8.0100e-003**	**0.8942**	**6.3900e-003**	**0.9006**	**0.2372**	**5.8900e-003**	**0.2430**		**798.8292**	**798.8292**	**0.0201**		**799.3305**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.6578	40.6482	113.5299	0.4534	40.5953	0.3275	40.9228	10.8613	0.3045	11.1658		46,232.4233	46,232.4233	2.1339		46,285.7712
Unmitigated	8.6578	40.6482	113.5299	0.4534	40.5953	0.3275	40.9228	10.8613	0.3045	11.1658		46,232.4233	46,232.4233	2.1339		46,285.7712

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,879.18	2,766.61	2537.15	9,616,686	9,616,686
General Office Building	1,896.06	422.87	180.50	4,640,585	4,640,585
Health Club	411.63	260.88	334.13	810,632	810,632
Research & Development	670.21	157.02	91.73	1,737,494	1,737,494
Total	5,857.08	3,607.38	3,143.50	16,805,398	16,805,398

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
General Office Building	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Health Club	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868
Research & Development	0.550151	0.042593	0.202457	0.116946	0.015037	0.005825	0.021699	0.034933	0.002123	0.001780	0.004876	0.000710	0.000868

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785
NaturalGas Unmitigated	0.2982	2.6077	1.5202	0.0163		0.2060	0.2060		0.2060	0.2060		3,253.1467	3,253.1467	0.0624	0.0596	3,272.4785

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	17548.6	0.1893	1.6172	0.6882	0.0103		0.1308	0.1308		0.1308	0.1308		2,064.5431	2,064.5431	0.0396	0.0379	2,076.8116
General Office Building	1634.19	0.0176	0.1602	0.1346	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.2576	192.2576	3.6800e-003	3.5200e-003	193.4001
Health Club	1112.49	0.0120	0.1091	0.0916	6.5000e-004		8.2900e-003	8.2900e-003		8.2900e-003	8.2900e-003		130.8816	130.8816	2.5100e-003	2.4000e-003	131.6593
Research & Development	7356.45	0.0793	0.7212	0.6058	4.3300e-003		0.0548	0.0548		0.0548	0.0548		865.4645	865.4645	0.0166	0.0159	870.6075
Total		**0.2982**	**2.6077**	**1.5202**	**0.0163**		**0.2060**	**0.2060**		**0.2060**	**0.2060**		**3,253.1467**	**3,253.1467**	**0.0624**	**0.0596**	**3,272.4785**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	17.5486	0.1893	1.6172	0.6882	0.0103		0.1308	0.1308		0.1308	0.1308		2,064.5431	2,064.5431	0.0396	0.0379	2,076.8116
General Office Building	1.63419	0.0176	0.1602	0.1346	9.6000e-004		0.0122	0.0122		0.0122	0.0122		192.2576	192.2576	3.6800e-003	3.5200e-003	193.4001
Health Club	1.11249	0.0120	0.1091	0.0916	6.5000e-004		8.2900e-003	8.2900e-003		8.2900e-003	8.2900e-003		130.8816	130.8816	2.5100e-003	2.4000e-003	131.6593
Research & Development	7.35645	0.0793	0.7212	0.6058	4.3300e-003		0.0548	0.0548		0.0548	0.0548		865.4645	865.4645	0.0166	0.0159	870.6075
Total		**0.2982**	**2.6077**	**1.5202**	**0.0163**		**0.2060**	**0.2060**		**0.2060**	**0.2060**		**3,253.1467**	**3,253.1467**	**0.0624**	**0.0596**	**3,272.4785**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821
Unmitigated	129.8209	9.3956	255.9577	0.5636		33.2740	33.2740		33.2740	33.2740	4,055.8757	7,857.7404	11,913.6160	12.1574	0.2753	12,299.5821

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8600					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	113.4615	8.9835	220.2027	0.5618		33.0761	33.0761		33.0761	33.0761	4,055.8757	7,793.3647	11,849.2404	12.0954	0.2753	12,233.6564
Landscaping	1.0789	0.4121	35.7550	1.8900e-003		0.1979	0.1979		0.1979	0.1979		64.3756	64.3756	0.0620		65.9257
Total	**129.8209**	**9.3956**	**255.9577**	**0.5636**		**33.2740**	**33.2740**		**33.2740**	**33.2740**	**4,055.8757**	**7,857.7404**	**11,913.6160**	**12.1574**	**0.2753**	**12,299.5821**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.4204					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	13.8600					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	113.4615	8.9835	220.2027	0.5618		33.0761	33.0761		33.0761	33.0761	4,055.8757	7,793.3647	11,849.2404	12.0954	0.2753	12,233.6564
Landscaping	1.0789	0.4121	35.7550	1.8900e-003		0.1979	0.1979		0.1979	0.1979		64.3756	64.3756	0.0620		65.9257
Total	**129.8209**	**9.3956**	**255.9577**	**0.5636**		**33.2740**	**33.2740**		**33.2740**	**33.2740**	**4,055.8757**	**7,857.7404**	**11,913.6160**	**12.1574**	**0.2753**	**12,299.5821**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Construction 2023-2035

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	90.19	1000sqft	2.07	90,188.00	0
Research & Development	43.36	1000sqft	1.00	43,361.00	0
Health Club	6.56	1000sqft	0.15	6,557.00	0
Apartments Mid Rise	192.00	Dwelling Unit	5.05	227,162.00	549

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2024
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Approx 7% development per year 2023-2035

Demolition -

Grading -

Trips and VMT -

Architectural Coating -

Woodstoves -

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - 75% Tier 4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	230.00	155.00
tblGrading	MaterialExported	0.00	34,006.00
tblGrading	MaterialImported	0.00	34,006.00
tblLandUse	LandUseSquareFeet	90,190.00	90,188.00
tblLandUse	LandUseSquareFeet	43,360.00	43,361.00
tblLandUse	LandUseSquareFeet	6,560.00	6,557.00
tblLandUse	LandUseSquareFeet	192,000.00	227,162.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	1.6678	2.9956	2.8976	8.8400e-003	0.5211	0.1037	0.6248	0.1844	0.0968	0.2811	0.0000	810.7723	810.7723	0.1188	0.0000	813.7417
Maximum	**1.6678**	**2.9956**	**2.8976**	**8.8400e-003**	**0.5211**	**0.1037**	**0.6248**	**0.1844**	**0.0968**	**0.2811**	**0.0000**	**810.7723**	**810.7723**	**0.1188**	**0.0000**	**813.7417**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	1.5963	2.1704	2.9958	8.8400e-003	0.3719	0.0621	0.4339	0.1200	0.0587	0.1787	0.0000	810.7719	810.7719	0.1188	0.0000	813.7413
Maximum	**1.5963**	**2.1704**	**2.9958**	**8.8400e-003**	**0.3719**	**0.0621**	**0.4339**	**0.1200**	**0.0587**	**0.1787**	**0.0000**	**810.7719**	**810.7719**	**0.1188**	**0.0000**	**813.7413**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**4.28**	**27.55**	**-3.39**	**0.00**	**28.64**	**40.16**	**30.55**	**34.91**	**39.38**	**36.45**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-2-2023**	**4-1-2023**	1.5135	1.0458
2	**4-2-2023**	**7-1-2023**	0.6455	0.5016
3	**7-2-2023**	**9-30-2023**	0.6526	0.5072
		Highest	1.5135	1.0458

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.1517	0.0726	3.2015	3.2200e-003		0.1943	0.1943		0.1943	0.1943	20.3941	42.4282	62.8223	0.0639	1.3800e-003	64.8330
Energy	0.0258	0.2257	0.1354	1.4000e-003		0.0178	0.0178		0.0178	0.0178	0.0000	1,603.1058	1,603.1058	0.0344	0.0108	1,607.1760
Mobile	0.6172	3.0873	8.3256	0.0344	3.0534	0.0246	3.0780	0.8181	0.0228	0.8410	0.0000	3,182.1057	3,182.1057	0.1406	0.0000	3,185.6218
Waste						0.0000	0.0000		0.0000	0.0000	43.2148	0.0000	43.2148	2.5539	0.0000	107.0627
Water						0.0000	0.0000		0.0000	0.0000	15.9411	513.3231	529.2642	1.6485	0.0410	582.6907
Total	**2.7947**	**3.3857**	**11.6624**	**0.0390**	**3.0534**	**0.2367**	**3.2901**	**0.8181**	**0.2349**	**1.0531**	**79.5499**	**5,340.9628**	**5,420.5127**	**4.4414**	**0.0531**	**5,547.3843**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.1517	0.0726	3.2015	3.2200e-003		0.1943	0.1943		0.1943	0.1943	20.3941	42.4282	62.8223	0.0639	1.3800e-003	64.8330
Energy	0.0258	0.2257	0.1354	1.4000e-003		0.0178	0.0178		0.0178	0.0178	0.0000	1,603.1058	1,603.1058	0.0344	0.0108	1,607.1760
Mobile	0.6172	3.0873	8.3256	0.0344	3.0534	0.0246	3.0780	0.8181	0.0228	0.8410	0.0000	3,182.1057	3,182.1057	0.1406	0.0000	3,185.6218
Waste						0.0000	0.0000		0.0000	0.0000	43.2148	0.0000	43.2148	2.5539	0.0000	107.0627
Water						0.0000	0.0000		0.0000	0.0000	15.9411	513.3231	529.2642	1.6485	0.0410	582.6907
Total	**2.7947**	**3.3857**	**11.6624**	**0.0390**	**3.0534**	**0.2367**	**3.2901**	**0.8181**	**0.2349**	**1.0531**	**79.5499**	**5,340.9628**	**5,420.5127**	**4.4414**	**0.0531**	**5,547.3843**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/30/2023	2/10/2023	5	10	
3	Grading	Grading	2/13/2023	3/31/2023	5	35	
4	Building Construction	Building Construction	4/3/2023	11/3/2023	5	155	
5	Paving	Paving	11/6/2023	12/1/2023	5	20	
6	Architectural Coating	Architectural Coating	12/4/2023	12/29/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 460,003; Residential Outdoor: 153,334; Non-Residential Indoor: 210,159; Non-Residential Outdoor: 70,053; Striped Parking Area: 0 (Architectural Coating – sqft)

<u>OffRoad Equipment</u>

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	270.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	6,725.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	184.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0292	0.0000	0.0292	4.4300e-003	0.0000	4.4300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0227	0.2148	0.1964	3.9000e-004		9.9800e-003	9.9800e-003		9.2800e-003	9.2800e-003	0.0000	33.9921	33.9921	9.5200e-003	0.0000	34.2301
Total	**0.0227**	**0.2148**	**0.1964**	**3.9000e-004**	**0.0292**	**9.9800e-003**	**0.0392**	**4.4300e-003**	**9.2800e-003**	**0.0137**	**0.0000**	**33.9921**	**33.9921**	**9.5200e-003**	**0.0000**	**34.2301**

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.2000e-004	0.0209	6.6600e-003	1.0000e-004	2.3200e-003	4.0000e-005	2.3600e-003	6.4000e-004	4.0000e-005	6.7000e-004	0.0000	9.5663	9.5663	6.2000e-004	0.0000	9.5818
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.4500e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	3.0000e-005	0.0000	1.3313
Total	**1.1700e-003**	**0.0213**	**0.0111**	**1.1000e-004**	**3.9700e-003**	**5.0000e-005**	**4.0200e-003**	**1.0800e-003**	**5.0000e-005**	**1.1200e-003**	**0.0000**	**10.8968**	**10.8968**	**6.5000e-004**	**0.0000**	**10.9132**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0132	0.0000	0.0132	1.9900e-003	0.0000	1.9900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0128	0.1038	0.2179	3.9000e-004		4.7100e-003	4.7100e-003		4.4600e-003	4.4600e-003	0.0000	33.9920	33.9920	9.5200e-003	0.0000	34.2300
Total	**0.0128**	**0.1038**	**0.2179**	**3.9000e-004**	**0.0132**	**4.7100e-003**	**0.0179**	**1.9900e-003**	**4.4600e-003**	**6.4500e-003**	**0.0000**	**33.9920**	**33.9920**	**9.5200e-003**	**0.0000**	**34.2300**

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.2000e-004	0.0209	6.6600e-003	1.0000e-004	2.3200e-003	4.0000e-005	2.3600e-003	6.4000e-004	4.0000e-005	6.7000e-004	0.0000	9.5663	9.5663	6.2000e-004	0.0000	9.5818
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.4500e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	3.0000e-005	0.0000	1.3313
Total	**1.1700e-003**	**0.0213**	**0.0111**	**1.1000e-004**	**3.9700e-003**	**5.0000e-005**	**4.0200e-003**	**1.0800e-003**	**5.0000e-005**	**1.1200e-003**	**0.0000**	**10.8968**	**10.8968**	**6.5000e-004**	**0.0000**	**10.9132**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0903	0.0000	0.0903	0.0497	0.0000	0.0497	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	**0.0133**	**0.1376**	**0.0912**	**1.9000e-004**	**0.0903**	**6.3300e-003**	**0.0967**	**0.0497**	**5.8200e-003**	**0.0555**	**0.0000**	**16.7254**	**16.7254**	**5.4100e-003**	**0.0000**	**16.8606**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.3000e-004	2.6700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7983	0.7983	2.0000e-005	0.0000	0.7988
Total	**3.3000e-004**	**2.3000e-004**	**2.6700e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7983**	**0.7983**	**2.0000e-005**	**0.0000**	**0.7988**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0407	0.0000	0.0407	0.0223	0.0000	0.0223	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.0600e-003	0.0535	0.0999	1.9000e-004		2.3600e-003	2.3600e-003		2.1800e-003	2.1800e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	**6.0600e-003**	**0.0535**	**0.0999**	**1.9000e-004**	**0.0407**	**2.3600e-003**	**0.0430**	**0.0223**	**2.1800e-003**	**0.0245**	**0.0000**	**16.7253**	**16.7253**	**5.4100e-003**	**0.0000**	**16.8606**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.3000e-004	2.3000e-004	2.6700e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.7983	0.7983	2.0000e-005	0.0000	0.7988
Total	**3.3000e-004**	**2.3000e-004**	**2.6700e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**9.9000e-004**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.7983**	**0.7983**	**2.0000e-005**	**0.0000**	**0.7988**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1518	0.0000	0.1518	0.0629	0.0000	0.0629	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0581	0.6040	0.4909	1.0900e-003		0.0249	0.0249		0.0229	0.0229	0.0000	95.4366	95.4366	0.0309	0.0000	96.2083
Total	**0.0581**	**0.6040**	**0.4909**	**1.0900e-003**	**0.1518**	**0.0249**	**0.1767**	**0.0629**	**0.0229**	**0.0859**	**0.0000**	**95.4366**	**95.4366**	**0.0309**	**0.0000**	**96.2083**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0155	0.5197	0.1660	2.4200e-003	0.0578	9.5000e-004	0.0588	0.0159	9.1000e-004	0.0168	0.0000	238.2714	238.2714	0.0155	0.0000	238.6585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2900e-003	8.8000e-004	0.0104	3.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0400e-003	0.0000	3.1046	3.1046	7.0000e-005	0.0000	3.1064
Total	**0.0168**	**0.5206**	**0.1763**	**2.4500e-003**	**0.0617**	**9.8000e-004**	**0.0626**	**0.0169**	**9.4000e-004**	**0.0178**	**0.0000**	**241.3760**	**241.3760**	**0.0156**	**0.0000**	**241.7650**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0683	0.0000	0.0683	0.0283	0.0000	0.0283	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0357	0.3377	0.5279	1.0900e-003		0.0131	0.0131		0.0121	0.0121	0.0000	95.4365	95.4365	0.0309	0.0000	96.2082
Total	**0.0357**	**0.3377**	**0.5279**	**1.0900e-003**	**0.0683**	**0.0131**	**0.0814**	**0.0283**	**0.0121**	**0.0404**	**0.0000**	**95.4365**	**95.4365**	**0.0309**	**0.0000**	**96.2082**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0155	0.5197	0.1660	2.4200e-003	0.0578	9.5000e-004	0.0588	0.0159	9.1000e-004	0.0168	0.0000	238.2714	238.2714	0.0155	0.0000	238.6585
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2900e-003	8.8000e-004	0.0104	3.0000e-005	3.8400e-003	3.0000e-005	3.8700e-003	1.0200e-003	3.0000e-005	1.0400e-003	0.0000	3.1046	3.1046	7.0000e-005	0.0000	3.1064
Total	**0.0168**	**0.5206**	**0.1763**	**2.4500e-003**	**0.0617**	**9.8000e-004**	**0.0626**	**0.0169**	**9.4000e-004**	**0.0178**	**0.0000**	**241.3760**	**241.3760**	**0.0156**	**0.0000**	**241.7650**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1219	1.1148	1.2589	2.0900e-003		0.0542	0.0542		0.0510	0.0510	0.0000	179.6487	179.6487	0.0427	0.0000	180.7171
Total	**0.1219**	**1.1148**	**1.2589**	**2.0900e-003**		**0.0542**	**0.0542**		**0.0510**	**0.0510**	**0.0000**	**179.6487**	**179.6487**	**0.0427**	**0.0000**	**180.7171**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6400e-003	0.2301	0.0676	8.1000e-004	0.0210	2.6000e-004	0.0213	6.0600e-003	2.5000e-004	6.3100e-003	0.0000	78.2146	78.2146	4.3000e-003	0.0000	78.3222
Worker	0.0526	0.0359	0.4231	1.4000e-003	0.1565	1.1100e-003	0.1576	0.0416	1.0200e-003	0.0426	0.0000	126.4911	126.4911	2.9700e-003	0.0000	126.5654
Total	**0.0592**	**0.2660**	**0.4906**	**2.2100e-003**	**0.1775**	**1.3700e-003**	**0.1788**	**0.0476**	**1.2700e-003**	**0.0489**	**0.0000**	**204.7057**	**204.7057**	**7.2700e-003**	**0.0000**	**204.8877**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0938	0.7960	1.2764	2.0900e-003		0.0360	0.0360		0.0344	0.0344	0.0000	179.6485	179.6485	0.0427	0.0000	180.7169
Total	**0.0938**	**0.7960**	**1.2764**	**2.0900e-003**		**0.0360**	**0.0360**		**0.0344**	**0.0344**	**0.0000**	**179.6485**	**179.6485**	**0.0427**	**0.0000**	**180.7169**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6400e-003	0.2301	0.0676	8.1000e-004	0.0210	2.6000e-004	0.0213	6.0600e-003	2.5000e-004	6.3100e-003	0.0000	78.2146	78.2146	4.3000e-003	0.0000	78.3222
Worker	0.0526	0.0359	0.4231	1.4000e-003	0.1565	1.1100e-003	0.1576	0.0416	1.0200e-003	0.0426	0.0000	126.4911	126.4911	2.9700e-003	0.0000	126.5654
Total	**0.0592**	**0.2660**	**0.4906**	**2.2100e-003**	**0.1775**	**1.3700e-003**	**0.1788**	**0.0476**	**1.2700e-003**	**0.0489**	**0.0000**	**204.7057**	**204.7057**	**7.2700e-003**	**0.0000**	**204.8877**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0103	0.1019	0.1458	2.3000e-004		5.1000e-003	5.1000e-003		4.6900e-003	4.6900e-003	0.0000	20.0269	20.0269	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0103**	**0.1019**	**0.1458**	**2.3000e-004**		**5.1000e-003**	**5.1000e-003**		**4.6900e-003**	**4.6900e-003**	**0.0000**	**20.0269**	**20.0269**	**6.4800e-003**	**0.0000**	**20.1888**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.4500e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	3.0000e-005	0.0000	1.3313
Total	**5.5000e-004**	**3.8000e-004**	**4.4500e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3306**	**1.3306**	**3.0000e-005**	**0.0000**	**1.3313**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.5700e-003	0.0570	0.1594	2.3000e-004		2.7400e-003	2.7400e-003		2.5300e-003	2.5300e-003	0.0000	20.0268	20.0268	6.4800e-003	0.0000	20.1888
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.5700e-003**	**0.0570**	**0.1594**	**2.3000e-004**		**2.7400e-003**	**2.7400e-003**		**2.5300e-003**	**2.5300e-003**	**0.0000**	**20.0268**	**20.0268**	**6.4800e-003**	**0.0000**	**20.1888**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.5000e-004	3.8000e-004	4.4500e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3306	1.3306	3.0000e-005	0.0000	1.3313
Total	**5.5000e-004**	**3.8000e-004**	**4.4500e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.3306**	**1.3306**	**3.0000e-005**	**0.0000**	**1.3313**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**1.3620**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.3000e-004	0.0110	4.0000e-005	4.0600e-003	3.0000e-005	4.0900e-003	1.0800e-003	3.0000e-005	1.1000e-003	0.0000	3.2820	3.2820	8.0000e-005	0.0000	3.2840
Total	**1.3600e-003**	**9.3000e-004**	**0.0110**	**4.0000e-005**	**4.0600e-003**	**3.0000e-005**	**4.0900e-003**	**1.0800e-003**	**3.0000e-005**	**1.1000e-003**	**0.0000**	**3.2820**	**3.2820**	**8.0000e-005**	**0.0000**	**3.2840**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3601					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.9200e-003	0.0130	0.0181	3.0000e-005		7.1000e-004	7.1000e-004		7.1000e-004	7.1000e-004	0.0000	2.5533	2.5533	1.5000e-004	0.0000	2.5571
Total	**1.3620**	**0.0130**	**0.0181**	**3.0000e-005**		**7.1000e-004**	**7.1000e-004**		**7.1000e-004**	**7.1000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.5000e-004**	**0.0000**	**2.5571**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3600e-003	9.3000e-004	0.0110	4.0000e-005	4.0600e-003	3.0000e-005	4.0900e-003	1.0800e-003	3.0000e-005	1.1000e-003	0.0000	3.2820	3.2820	8.0000e-005	0.0000	3.2840
Total	**1.3600e-003**	**9.3000e-004**	**0.0110**	**4.0000e-005**	**4.0600e-003**	**3.0000e-005**	**4.0900e-003**	**1.0800e-003**	**3.0000e-005**	**1.1000e-003**	**0.0000**	**3.2820**	**3.2820**	**8.0000e-005**	**0.0000**	**3.2840**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6172	3.0873	8.3256	0.0344	3.0534	0.0246	3.0780	0.8181	0.0228	0.8410	0.0000	3,182.1057	3,182.1057	0.1406	0.0000	3,185.6218
Unmitigated	0.6172	3.0873	8.3256	0.0344	3.0534	0.0246	3.0780	0.8181	0.0228	0.8410	0.0000	3,182.1057	3,182.1057	0.1406	0.0000	3,185.6218

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,276.80	1,226.88	1125.12	4,264,606	4,264,606
General Office Building	994.80	221.87	94.70	2,434,755	2,434,755
Health Club	216.02	136.91	175.35	425,420	425,420
Research & Development	351.65	82.38	48.13	911,638	911,638
Total	2,839.27	1,668.04	1,443.30	8,036,418	8,036,418

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
General Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Health Club	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Research & Development	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,348.2802	1,348.2802	0.0295	6.1000e-003	1,350.8361
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,348.2802	1,348.2802	0.0295	6.1000e-003	1,350.8361
NaturalGas Mitigated	0.0258	0.2257	0.1354	1.4000e-003		0.0178	0.0178		0.0178	0.0178	0.0000	254.8256	254.8256	4.8800e-003	4.6700e-003	256.3399
NaturalGas Unmitigated	0.0258	0.2257	0.1354	1.4000e-003		0.0178	0.0178		0.0178	0.0178	0.0000	254.8256	254.8256	4.8800e-003	4.6700e-003	256.3399

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.84046e+006	0.0153	0.1309	0.0557	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.5779	151.5779	2.9100e-003	2.7800e-003	152.4787
General Office Building	312952	1.6900e-003	0.0153	0.0129	9.0000e-005		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	16.7003	16.7003	3.2000e-004	3.1000e-004	16.7996
Health Club	213037	1.1500e-003	0.0104	8.7700e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	11.3685	11.3685	2.2000e-004	2.1000e-004	11.4360
Research & Development	1.4088e+006	7.6000e-003	0.0691	0.0580	4.1000e-004		5.2500e-003	5.2500e-003		5.2500e-003	5.2500e-003	0.0000	75.1789	75.1789	1.4400e-003	1.3800e-003	75.6256
Total		**0.0258**	**0.2257**	**0.1354**	**1.4000e-003**		**0.0178**	**0.0178**		**0.0178**	**0.0178**	**0.0000**	**254.8256**	**254.8256**	**4.8900e-003**	**4.6800e-003**	**256.3399**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	2.84046e+006	0.0153	0.1309	0.0557	8.4000e-004		0.0106	0.0106		0.0106	0.0106	0.0000	151.5779	151.5779	2.9100e-003	2.7800e-003	152.4787
General Office Building	312952	1.6900e-003	0.0153	0.0129	9.0000e-005		1.1700e-003	1.1700e-003		1.1700e-003	1.1700e-003	0.0000	16.7003	16.7003	3.2000e-004	3.1000e-004	16.7996
Health Club	213037	1.1500e-003	0.0104	8.7700e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004	0.0000	11.3685	11.3685	2.2000e-004	2.1000e-004	11.4360
Research & Development	1.4088e+006	7.6000e-003	0.0691	0.0580	4.1000e-004		5.2500e-003	5.2500e-003		5.2500e-003	5.2500e-003	0.0000	75.1789	75.1789	1.4400e-003	1.3800e-003	75.6256
Total		**0.0258**	**0.2257**	**0.1354**	**1.4000e-003**		**0.0178**	**0.0178**		**0.0178**	**0.0178**	**0.0000**	**254.8256**	**254.8256**	**4.8900e-003**	**4.6800e-003**	**256.3399**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	877000	527.3444	0.0115	2.3900e-003	528.3441
General Office Building	858590	516.2741	0.0113	2.3400e-003	517.2528
Health Club	66553.6	40.0190	8.8000e-004	1.8000e-004	40.0948
Research & Development	440114	264.6427	5.7900e-003	1.2000e-003	265.1444
Total		**1,348.2802**	**0.0295**	**6.1100e-003**	**1,350.8361**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	877000	527.3444	0.0115	2.3900e-003	528.3441
General Office Building	858590	516.2741	0.0113	2.3400e-003	517.2528
Health Club	66553.6	40.0190	8.8000e-004	1.8000e-004	40.0948
Research & Development	440114	264.6427	5.7900e-003	1.2000e-003	265.1444
Total		**1,348.2802**	**0.0295**	**6.1100e-003**	**1,350.8361**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.1517	0.0726	3.2015	3.2200e-003		0.1943	0.1943		0.1943	0.1943	20.3941	42.4282	62.8223	0.0639	1.3800e-003	64.8330
Unmitigated	2.1517	0.0726	3.2015	3.2200e-003		0.1943	0.1943		0.1943	0.1943	20.3941	42.4282	62.8223	0.0639	1.3800e-003	64.8330

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1360					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3271					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6289	0.0498	1.2205	3.1100e-003		0.1833	0.1833		0.1833	0.1833	20.3941	39.1904	59.5844	0.0608	1.3800e-003	61.5174
Landscaping	0.0597	0.0228	1.9810	1.0000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	3.2378	3.2378	3.1100e-003	0.0000	3.3156
Total	**2.1517**	**0.0726**	**3.2015**	**3.2100e-003**		**0.1943**	**0.1943**		**0.1943**	**0.1943**	**20.3941**	**42.4282**	**62.8223**	**0.0639**	**1.3800e-003**	**64.8330**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1360					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.3271					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.6289	0.0498	1.2205	3.1100e-003		0.1833	0.1833		0.1833	0.1833	20.3941	39.1904	59.5844	0.0608	1.3800e-003	61.5174
Landscaping	0.0597	0.0228	1.9810	1.0000e-004		0.0110	0.0110		0.0110	0.0110	0.0000	3.2378	3.2378	3.1100e-003	0.0000	3.3156
Total	**2.1517**	**0.0726**	**3.2015**	**3.2100e-003**		**0.1943**	**0.1943**		**0.1943**	**0.1943**	**20.3941**	**42.4282**	**62.8223**	**0.0639**	**1.3800e-003**	**64.8330**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	529.2642	1.6485	0.0410	582.6907
Unmitigated	529.2642	1.6485	0.0410	582.6907

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	12.5096 / 7.88647	154.5991	0.4109	0.0103	167.9434
General Office Building	16.0298 / 9.82472	196.2263	0.5265	0.0132	213.3223
Health Club	0.387979 / 0.237794	4.7494	0.0127	3.2000e-004	5.1632
Research & Development	21.3198 / 0	173.6895	0.6984	0.0172	196.2619
Total		**529.2642**	**1.6485**	**0.0410**	**582.6907**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	12.5096 / 7.88647	154.5991	0.4109	0.0103	167.9434
General Office Building	16.0298 / 9.82472	196.2263	0.5265	0.0132	213.3223
Health Club	0.387979 / 0.237794	4.7494	0.0127	3.2000e-004	5.1632
Research & Development	21.3198 / 0	173.6895	0.6984	0.0172	196.2619
Total		**529.2642**	**1.6485**	**0.0410**	**582.6907**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	43.2148	2.5539	0.0000	107.0627
Unmitigated	43.2148	2.5539	0.0000	107.0627

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	88.32	17.9282	1.0595	0.0000	44.4163
General Office Building	83.88	17.0269	1.0063	0.0000	42.1834
Health Club	37.39	7.5898	0.4486	0.0000	18.8035
Research & Development	3.3	0.6699	0.0396	0.0000	1.6596
Total		**43.2147**	**2.5539**	**0.0000**	**107.0627**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	88.32	17.9282	1.0595	0.0000	44.4163
General Office Building	83.88	17.0269	1.0063	0.0000	42.1834
Health Club	37.39	7.5898	0.4486	0.0000	18.8035
Research & Development	3.3	0.6699	0.0396	0.0000	1.6596
Total		**43.2147**	**2.5539**	**0.0000**	**107.0627**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Construction 2023-2035

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	90.19	1000sqft	2.07	90,188.00	0
Research & Development	43.36	1000sqft	1.00	43,361.00	0
Health Club	6.56	1000sqft	0.15	6,557.00	0
Apartments Mid Rise	192.00	Dwelling Unit	5.05	227,162.00	549

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2024
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Approx 7% development per year 2023-2035

Demolition -

Grading -

Trips and VMT -

Architectural Coating -

Woodstoves -

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - 75% Tier 4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	230.00	155.00
tblGrading	MaterialExported	0.00	34,006.00
tblGrading	MaterialImported	0.00	34,006.00
tblLandUse	LandUseSquareFeet	90,190.00	90,188.00
tblLandUse	LandUseSquareFeet	43,360.00	43,361.00
tblLandUse	LandUseSquareFeet	6,560.00	6,557.00
tblLandUse	LandUseSquareFeet	192,000.00	227,162.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	136.3390	63.6170	37.9622	0.2034	18.2675	1.4799	19.5349	9.9840	1.3635	11.1501	0.0000	21,343.2713	21,343.2713	2.9100	0.0000	21,416.0225
Maximum	**136.3390**	**63.6170**	**37.9622**	**0.2034**	**18.2675**	**1.4799**	**19.5349**	**9.9840**	**1.3635**	**11.1501**	**0.0000**	**21,343.2713**	**21,343.2713**	**2.9100**	**0.0000**	**21,416.0225**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	136.3390	48.3987	40.0789	0.2034	8.3310	0.8032	8.8038	4.5222	0.7450	4.9604	0.0000	21,343.2713	21,343.2713	2.9100	0.0000	21,416.0225
Maximum	**136.3390**	**48.3987**	**40.0789**	**0.2034**	**8.3310**	**0.8032**	**8.8038**	**4.5222**	**0.7450**	**4.9604**	**0.0000**	**21,343.2713**	**21,343.2713**	**2.9100**	**0.0000**	**21,416.0225**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**23.92**	**-5.58**	**0.00**	**54.39**	**45.73**	**54.93**	**54.71**	**45.36**	**55.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459
Energy	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089
Mobile	4.1993	18.8210	55.3386	0.2255	19.5989	0.1548	19.7537	5.2434	0.1439	5.3873		22,993.4916	22,993.4916	0.9842		23,018.0954
Total	**63.1459**	**24.2241**	**169.5701**	**0.4831**	**19.5989**	**15.0067**	**34.6056**	**5.2434**	**14.9957**	**20.2391**	**1,798.4483**	**28,017.2068**	**29,815.6551**	**6.4044**	**0.1503**	**30,020.5502**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459
Energy	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089
Mobile	4.1993	18.8210	55.3386	0.2255	19.5989	0.1548	19.7537	5.2434	0.1439	5.3873		22,993.4916	22,993.4916	0.9842		23,018.0954
Total	**63.1459**	**24.2241**	**169.5701**	**0.4831**	**19.5989**	**15.0067**	**34.6056**	**5.2434**	**14.9957**	**20.2391**	**1,798.4483**	**28,017.2068**	**29,815.6551**	**6.4044**	**0.1503**	**30,020.5502**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/30/2023	2/10/2023	5	10	
3	Grading	Grading	2/13/2023	3/31/2023	5	35	
4	Building Construction	Building Construction	4/3/2023	11/3/2023	5	155	
5	Paving	Paving	11/6/2023	12/1/2023	5	20	
6	Architectural Coating	Architectural Coating	12/4/2023	12/29/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 460,003; Residential Outdoor: 153,334; Non-Residential Indoor: 210,159; Non-Residential Outdoor: 70,053; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	270.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	6,725.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	184.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9230	0.0000	2.9230	0.4426	0.0000	0.4426			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**2.9230**	**0.9975**	**3.9206**	**0.4426**	**0.9280**	**1.3706**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0615	2.0415	0.6512	9.7900e-003	0.2359	3.7900e-003	0.2397	0.0647	3.6200e-003	0.0683		1,062.7707	1,062.7707	0.0675		1,064.4587
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0558	0.0336	0.4825	1.5500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		154.1895	154.1895	3.6400e-003		154.2806
Total	**0.1174**	**2.0751**	**1.1337**	**0.0113**	**0.4036**	**4.9600e-003**	**0.4085**	**0.1091**	**4.7000e-003**	**0.1138**		**1,216.9602**	**1,216.9602**	**0.0712**		**1,218.7392**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3154	0.0000	1.3154	0.1992	0.0000	0.1992			0.0000			0.0000
Off-Road	1.2781	10.3827	21.7918	0.0388		0.4711	0.4711		0.4464	0.4464	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**1.2781**	**10.3827**	**21.7918**	**0.0388**	**1.3154**	**0.4711**	**1.7865**	**0.1992**	**0.4464**	**0.6455**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0615	2.0415	0.6512	9.7900e-003	0.2359	3.7900e-003	0.2397	0.0647	3.6200e-003	0.0683		1,062.7707	1,062.7707	0.0675		1,064.4587
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0558	0.0336	0.4825	1.5500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		154.1895	154.1895	3.6400e-003		154.2806
Total	**0.1174**	**2.0751**	**1.1337**	**0.0113**	**0.4036**	**4.9600e-003**	**0.4085**	**0.1091**	**4.7000e-003**	**0.1138**		**1,216.9602**	**1,216.9602**	**0.0712**		**1,218.7392**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**18.0663**	**1.2660**	**19.3323**	**9.9307**	**1.1647**	**11.0954**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0403	0.5791	1.8600e-003	0.2012	1.4000e-003	0.2026	0.0534	1.2900e-003	0.0547		185.0274	185.0274	4.3700e-003		185.1367
Total	**0.0670**	**0.0403**	**0.5791**	**1.8600e-003**	**0.2012**	**1.4000e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**185.0274**	**185.0274**	**4.3700e-003**		**185.1367**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.2115	10.6898	19.9766	0.0381		0.4714	0.4714		0.4370	0.4370	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**1.2115**	**10.6898**	**19.9766**	**0.0381**	**8.1298**	**0.4714**	**8.6012**	**4.4688**	**0.4370**	**4.9058**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0670	0.0403	0.5791	1.8600e-003	0.2012	1.4000e-003	0.2026	0.0534	1.2900e-003	0.0547		185.0274	185.0274	4.3700e-003		185.1367
Total	**0.0670**	**0.0403**	**0.5791**	**1.8600e-003**	**0.2012**	**1.4000e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**185.0274**	**185.0274**	**4.3700e-003**		**185.1367**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8758	29.0567	9.2677	0.1393	3.3574	0.0539	3.4113	0.9201	0.0516	0.9716		15,126.2075	15,126.2075	0.9610		15,150.2315
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0745	0.0448	0.6434	2.0600e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		205.5860	205.5860	4.8500e-003		205.7074
Total	**0.9502**	**29.1014**	**9.9111**	**0.1413**	**3.5810**	**0.0554**	**3.6364**	**0.9794**	**0.0530**	**1.0324**		**15,331.7935**	**15,331.7935**	**0.9658**		**15,355.9389**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	2.0387	19.2973	30.1679	0.0621		0.7478	0.7478		0.6920	0.6920	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**2.0387**	**19.2973**	**30.1679**	**0.0621**	**3.9030**	**0.7478**	**4.6508**	**1.6184**	**0.6920**	**2.3104**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.8758	29.0567	9.2677	0.1393	3.3574	0.0539	3.4113	0.9201	0.0516	0.9716		15,126.2075	15,126.2075	0.9610		15,150.2315
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0745	0.0448	0.6434	2.0600e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		205.5860	205.5860	4.8500e-003		205.7074
Total	**0.9502**	**29.1014**	**9.9111**	**0.1413**	**3.5810**	**0.0554**	**3.6364**	**0.9794**	**0.0530**	**1.0324**		**15,331.7935**	**15,331.7935**	**0.9658**		**15,355.9389**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0837	2.9431	0.8287	0.0105	0.2752	3.3100e-003	0.2785	0.0792	3.1600e-003	0.0824		1,126.0312	1,126.0312	0.0595		1,127.5184
Worker	0.6850	0.4117	5.9192	0.0190	2.0567	0.0143	2.0710	0.5454	0.0132	0.5586		1,891.3915	1,891.3915	0.0447		1,892.5081
Total	**0.7687**	**3.3548**	**6.7479**	**0.0295**	**2.3319**	**0.0176**	**2.3495**	**0.6247**	**0.0164**	**0.6410**		**3,017.4227**	**3,017.4227**	**0.1042**		**3,020.0265**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2106	10.2709	16.4691	0.0269		0.4647	0.4647		0.4433	0.4433	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.2106**	**10.2709**	**16.4691**	**0.0269**		**0.4647**	**0.4647**		**0.4433**	**0.4433**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0837	2.9431	0.8287	0.0105	0.2752	3.3100e-003	0.2785	0.0792	3.1600e-003	0.0824		1,126.0312	1,126.0312	0.0595		1,127.5184
Worker	0.6850	0.4117	5.9192	0.0190	2.0567	0.0143	2.0710	0.5454	0.0132	0.5586		1,891.3915	1,891.3915	0.0447		1,892.5081
Total	**0.7687**	**3.3548**	**6.7479**	**0.0295**	**2.3319**	**0.0176**	**2.3495**	**0.6247**	**0.0164**	**0.6410**		**3,017.4227**	**3,017.4227**	**0.1042**		**3,020.0265**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0558	0.0336	0.4825	1.5500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		154.1895	154.1895	3.6400e-003		154.2806
Total	**0.0558**	**0.0336**	**0.4825**	**1.5500e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**154.1895**	**154.1895**	**3.6400e-003**		**154.2806**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6566	5.7035	15.9399	0.0228		0.2738	0.2738		0.2534	0.2534	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6566**	**5.7035**	**15.9399**	**0.0228**		**0.2738**	**0.2738**		**0.2534**	**0.2534**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0558	0.0336	0.4825	1.5500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		154.1895	154.1895	3.6400e-003		154.2806
Total	**0.0558**	**0.0336**	**0.4825**	**1.5500e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**154.1895**	**154.1895**	**3.6400e-003**		**154.2806**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	136.0096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**136.2012**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1378	0.0828	1.1903	3.8200e-003	0.4136	2.8800e-003	0.4165	0.1097	2.6500e-003	0.1123		380.3342	380.3342	8.9800e-003		380.5587
Total	**0.1378**	**0.0828**	**1.1903**	**3.8200e-003**	**0.4136**	**2.8800e-003**	**0.4165**	**0.1097**	**2.6500e-003**	**0.1123**		**380.3342**	**380.3342**	**8.9800e-003**		**380.5587**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	136.0096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**136.2012**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1378	0.0828	1.1903	3.8200e-003	0.4136	2.8800e-003	0.4165	0.1097	2.6500e-003	0.1123		380.3342	380.3342	8.9800e-003		380.5587
Total	**0.1378**	**0.0828**	**1.1903**	**3.8200e-003**	**0.4136**	**2.8800e-003**	**0.4165**	**0.1097**	**2.6500e-003**	**0.1123**		**380.3342**	**380.3342**	**8.9800e-003**		**380.5587**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1993	18.8210	55.3386	0.2255	19.5989	0.1548	19.7537	5.2434	0.1439	5.3873		22,993.4916	22,993.4916	0.9842		23,018.0954
Unmitigated	4.1993	18.8210	55.3386	0.2255	19.5989	0.1548	19.7537	5.2434	0.1439	5.3873		22,993.4916	22,993.4916	0.9842		23,018.0954

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,276.80	1,226.88	1125.12	4,264,606	4,264,606
General Office Building	994.80	221.87	94.70	2,434,755	2,434,755
Health Club	216.02	136.91	175.35	425,420	425,420
Research & Development	351.65	82.38	48.13	911,638	911,638
Total	2,839.27	1,668.04	1,443.30	8,036,418	8,036,418

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
General Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Health Club	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Research & Development	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089
NaturalGas Unmitigated	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7782.09	0.0839	0.7172	0.3052	4.5800e-003		0.0580	0.0580		0.0580	0.0580		915.5402	915.5402	0.0176	0.0168	920.9808
General Office Building	857.404	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003		100.8710	100.8710	1.9300e-003	1.8500e-003	101.4705
Health Club	583.663	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003		68.6662	68.6662	1.3200e-003	1.2600e-003	69.0743
Research & Development	3859.72	0.0416	0.3784	0.3179	2.2700e-003		0.0288	0.0288		0.0288	0.0288		454.0851	454.0851	8.7000e-003	8.3200e-003	456.7835
Total		**0.1411**	**1.2369**	**0.7417**	**7.6900e-003**		**0.0975**	**0.0975**		**0.0975**	**0.0975**		**1,539.1625**	**1,539.1625**	**0.0295**	**0.0282**	**1,548.3089**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7.78209	0.0839	0.7172	0.3052	4.5800e-003		0.0580	0.0580		0.0580	0.0580		915.5402	915.5402	0.0176	0.0168	920.9808
General Office Building	0.857404	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003		100.8710	100.8710	1.9300e-003	1.8500e-003	101.4705
Health Club	0.583663	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003		68.6662	68.6662	1.3200e-003	1.2600e-003	69.0743
Research & Development	3.85972	0.0416	0.3784	0.3179	2.2700e-003		0.0288	0.0288		0.0288	0.0288		454.0851	454.0851	8.7000e-003	8.3200e-003	456.7835
Total		**0.1411**	**1.2369**	**0.7417**	**7.6900e-003**		**0.0975**	**0.0975**		**0.0975**	**0.0975**		**1,539.1625**	**1,539.1625**	**0.0295**	**0.0282**	**1,548.3089**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459
Unmitigated	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2719					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	50.3109	3.9837	97.6420	0.2491		14.6666	14.6666		14.6666	14.6666	1,798.4483	3,456.0000	5,254.4483	5.3633	0.1221	5,424.9070
Landscaping	0.4774	0.1826	15.8479	8.4000e-004		0.0878	0.0878		0.0878	0.0878		28.5527	28.5527	0.0275		29.2389
Total	**58.8055**	**4.1662**	**113.4898**	**0.2499**		**14.7544**	**14.7544**		**14.7544**	**14.7544**	**1,798.4483**	**3,484.5527**	**5,283.0010**	**5.3908**	**0.1221**	**5,454.1459**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2719					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	50.3109	3.9837	97.6420	0.2491		14.6666	14.6666		14.6666	14.6666	1,798.4483	3,456.0000	5,254.4483	5.3633	0.1221	5,424.9070
Landscaping	0.4774	0.1826	15.8479	8.4000e-004		0.0878	0.0878		0.0878	0.0878		28.5527	28.5527	0.0275		29.2389
Total	**58.8055**	**4.1662**	**113.4898**	**0.2499**		**14.7544**	**14.7544**		**14.7544**	**14.7544**	**1,798.4483**	**3,484.5527**	**5,283.0010**	**5.3908**	**0.1221**	**5,454.1459**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Construction 2023-2035

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	90.19	1000sqft	2.07	90,188.00	0
Research & Development	43.36	1000sqft	1.00	43,361.00	0
Health Club	6.56	1000sqft	0.15	6,557.00	0
Apartments Mid Rise	192.00	Dwelling Unit	5.05	227,162.00	549

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2024
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Approx 7% development per year 2023-2035

Demolition -

Grading -

Trips and VMT -

Architectural Coating -

Woodstoves -

Area Coating -

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - 75% Tier 4

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	35.00
tblConstructionPhase	NumDays	230.00	155.00
tblGrading	MaterialExported	0.00	34,006.00
tblGrading	MaterialImported	0.00	34,006.00
tblLandUse	LandUseSquareFeet	90,190.00	90,188.00
tblLandUse	LandUseSquareFeet	43,360.00	43,361.00
tblLandUse	LandUseSquareFeet	6,560.00	6,557.00
tblLandUse	LandUseSquareFeet	192,000.00	227,162.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	136.3526	63.7575	38.3786	0.2007	18.2675	1.4814	19.5349	9.9840	1.3649	11.1501	0.0000	21,049.7578	21,049.7578	2.9427	0.0000	21,123.3264
Maximum	**136.3526**	**63.7575**	**38.3786**	**0.2007**	**18.2675**	**1.4814**	**19.5349**	**9.9840**	**1.3649**	**11.1501**	**0.0000**	**21,049.7578**	**21,049.7578**	**2.9427**	**0.0000**	**21,123.3264**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	136.3526	48.5392	40.4952	0.2007	8.3310	0.8046	8.8038	4.5222	0.7464	4.9604	0.0000	21,049.7578	21,049.7578	2.9427	0.0000	21,123.3264
Maximum	**136.3526**	**48.5392**	**40.4952**	**0.2007**	**8.3310**	**0.8046**	**8.8038**	**4.5222**	**0.7464**	**4.9604**	**0.0000**	**21,049.7578**	**21,049.7578**	**2.9427**	**0.0000**	**21,123.3264**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**23.87**	**-5.52**	**0.00**	**54.39**	**45.68**	**54.93**	**54.71**	**45.32**	**55.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459
Energy	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089
Mobile	3.9746	19.1510	51.5990	0.2135	19.5989	0.1555	19.7544	5.2434	0.1445	5.3879		21,787.4434	21,787.4434	0.9834		21,812.0278
Total	**62.9211**	**24.5541**	**165.8305**	**0.4711**	**19.5989**	**15.0073**	**34.6063**	**5.2434**	**14.9964**	**20.2398**	**1,798.4483**	**26,811.1586**	**28,609.6069**	**6.4036**	**0.1503**	**28,814.4826**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459
Energy	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089
Mobile	3.9746	19.1510	51.5990	0.2135	19.5989	0.1555	19.7544	5.2434	0.1445	5.3879		21,787.4434	21,787.4434	0.9834		21,812.0278
Total	**62.9211**	**24.5541**	**165.8305**	**0.4711**	**19.5989**	**15.0073**	**34.6063**	**5.2434**	**14.9964**	**20.2398**	**1,798.4483**	**26,811.1586**	**28,609.6069**	**6.4036**	**0.1503**	**28,814.4826**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2023	1/27/2023	5	20	
2	Site Preparation	Site Preparation	1/30/2023	2/10/2023	5	10	
3	Grading	Grading	2/13/2023	3/31/2023	5	35	
4	Building Construction	Building Construction	4/3/2023	11/3/2023	5	155	
5	Paving	Paving	11/6/2023	12/1/2023	5	20	
6	Architectural Coating	Architectural Coating	12/4/2023	12/29/2023	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 87.5

Acres of Paving: 0

Residential Indoor: 460,003; Residential Outdoor: 153,334; Non-Residential Indoor: 210,159; Non-Residential Outdoor: 70,053; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	270.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	6,725.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	184.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	37.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.9230	0.0000	2.9230	0.4426	0.0000	0.4426			0.0000			0.0000
Off-Road	2.2691	21.4844	19.6434	0.0388		0.9975	0.9975		0.9280	0.9280		3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**2.2691**	**21.4844**	**19.6434**	**0.0388**	**2.9230**	**0.9975**	**3.9206**	**0.4426**	**0.9280**	**1.3706**		**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0633	2.0511	0.6851	9.6000e-003	0.2359	3.8900e-003	0.2398	0.0647	3.7200e-003	0.0684		1,043.0847	1,043.0847	0.0698		1,044.8307
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0614	0.0367	0.4320	1.4500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		144.1945	144.1945	3.3900e-003		144.2792
Total	**0.1247**	**2.0878**	**1.1171**	**0.0111**	**0.4036**	**5.0600e-003**	**0.4086**	**0.1091**	**4.8000e-003**	**0.1139**		**1,187.2792**	**1,187.2792**	**0.0732**		**1,189.1098**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.3154	0.0000	1.3154	0.1992	0.0000	0.1992			0.0000			0.0000
Off-Road	1.2781	10.3827	21.7918	0.0388		0.4711	0.4711		0.4464	0.4464	0.0000	3,746.9840	3,746.9840	1.0494		3,773.2183
Total	**1.2781**	**10.3827**	**21.7918**	**0.0388**	**1.3154**	**0.4711**	**1.7865**	**0.1992**	**0.4464**	**0.6455**	**0.0000**	**3,746.9840**	**3,746.9840**	**1.0494**		**3,773.2183**

3.2 Demolition - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0633	2.0511	0.6851	9.6000e-003	0.2359	3.8900e-003	0.2398	0.0647	3.7200e-003	0.0684		1,043.0847	1,043.0847	0.0698		1,044.8307
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0614	0.0367	0.4320	1.4500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		144.1945	144.1945	3.3900e-003		144.2792
Total	**0.1247**	**2.0878**	**1.1171**	**0.0111**	**0.4036**	**5.0600e-003**	**0.4086**	**0.1091**	**4.8000e-003**	**0.1139**		**1,187.2792**	**1,187.2792**	**0.0732**		**1,189.1098**

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**2.6595**	**27.5242**	**18.2443**	**0.0381**	**18.0663**	**1.2660**	**19.3323**	**9.9307**	**1.1647**	**11.0954**		**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

3.3 Site Preparation - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0736	0.0441	0.5184	1.7400e-003	0.2012	1.4000e-003	0.2026	0.0534	1.2900e-003	0.0547		173.0334	173.0334	4.0600e-003		173.1350
Total	**0.0736**	**0.0441**	**0.5184**	**1.7400e-003**	**0.2012**	**1.4000e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**173.0334**	**173.0334**	**4.0600e-003**		**173.1350**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	1.2115	10.6898	19.9766	0.0381		0.4714	0.4714		0.4370	0.4370	0.0000	3,687.3081	3,687.3081	1.1926		3,717.1219
Total	**1.2115**	**10.6898**	**19.9766**	**0.0381**	**8.1298**	**0.4714**	**8.6012**	**4.4688**	**0.4370**	**4.9058**	**0.0000**	**3,687.3081**	**3,687.3081**	**1.1926**		**3,717.1219**

3.3 Site Preparation - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0736	0.0441	0.5184	1.7400e-003	0.2012	1.4000e-003	0.2026	0.0534	1.2900e-003	0.0547		173.0334	173.0334	4.0600e-003		173.1350
Total	**0.0736**	**0.0441**	**0.5184**	**1.7400e-003**	**0.2012**	**1.4000e-003**	**0.2026**	**0.0534**	**1.2900e-003**	**0.0547**		**173.0334**	**173.0334**	**4.0600e-003**		**173.1350**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9016	29.1930	9.7514	0.1367	3.3574	0.0553	3.4127	0.9201	0.0529	0.9730		14,846.0208	14,846.0208	0.9940		14,870.8706
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0818	0.0490	0.5760	1.9300e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		192.2593	192.2593	4.5200e-003		192.3722
Total	**0.9834**	**29.2419**	**10.3274**	**0.1386**	**3.5810**	**0.0569**	**3.6378**	**0.9794**	**0.0543**	**1.0337**		**15,038.2801**	**15,038.2801**	**0.9985**		**15,063.2428**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.9030	0.0000	3.9030	1.6184	0.0000	1.6184			0.0000			0.0000
Off-Road	2.0387	19.2973	30.1679	0.0621		0.7478	0.7478		0.6920	0.6920	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**2.0387**	**19.2973**	**30.1679**	**0.0621**	**3.9030**	**0.7478**	**4.6508**	**1.6184**	**0.6920**	**2.3104**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9016	29.1930	9.7514	0.1367	3.3574	0.0553	3.4127	0.9201	0.0529	0.9730		14,846.0208	14,846.0208	0.9940		14,870.8706
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0818	0.0490	0.5760	1.9300e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		192.2593	192.2593	4.5200e-003		192.3722
Total	**0.9834**	**29.2419**	**10.3274**	**0.1386**	**3.5810**	**0.0569**	**3.6378**	**0.9794**	**0.0543**	**1.0337**		**15,038.2801**	**15,038.2801**	**0.9985**		**15,063.2428**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0882	2.9242	0.9106	0.0102	0.2752	3.4700e-003	0.2787	0.0792	3.3200e-003	0.0826		1,093.7551	1,093.7551	0.0634		1,095.3400
Worker	0.7527	0.4504	5.2991	0.0177	2.0567	0.0143	2.0710	0.5454	0.0132	0.5586		1,768.7854	1,768.7854	0.0416		1,769.8242
Total	**0.8409**	**3.3746**	**6.2097**	**0.0280**	**2.3319**	**0.0178**	**2.3497**	**0.6247**	**0.0165**	**0.6412**		**2,862.5406**	**2,862.5406**	**0.1049**		**2,865.1642**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2106	10.2709	16.4691	0.0269		0.4647	0.4647		0.4433	0.4433	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.2106**	**10.2709**	**16.4691**	**0.0269**		**0.4647**	**0.4647**		**0.4433**	**0.4433**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0882	2.9242	0.9106	0.0102	0.2752	3.4700e-003	0.2787	0.0792	3.3200e-003	0.0826		1,093.7551	1,093.7551	0.0634		1,095.3400
Worker	0.7527	0.4504	5.2991	0.0177	2.0567	0.0143	2.0710	0.5454	0.0132	0.5586		1,768.7854	1,768.7854	0.0416		1,769.8242
Total	**0.8409**	**3.3746**	**6.2097**	**0.0280**	**2.3319**	**0.0178**	**2.3497**	**0.6247**	**0.0165**	**0.6412**		**2,862.5406**	**2,862.5406**	**0.1049**		**2,865.1642**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0614	0.0367	0.4320	1.4500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		144.1945	144.1945	3.3900e-003		144.2792
Total	**0.0614**	**0.0367**	**0.4320**	**1.4500e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**144.1945**	**144.1945**	**3.3900e-003**		**144.2792**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6566	5.7035	15.9399	0.0228		0.2738	0.2738		0.2534	0.2534	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6566**	**5.7035**	**15.9399**	**0.0228**		**0.2738**	**0.2738**		**0.2534**	**0.2534**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0614	0.0367	0.4320	1.4500e-003	0.1677	1.1700e-003	0.1688	0.0445	1.0800e-003	0.0455		144.1945	144.1945	3.3900e-003		144.2792
Total	**0.0614**	**0.0367**	**0.4320**	**1.4500e-003**	**0.1677**	**1.1700e-003**	**0.1688**	**0.0445**	**1.0800e-003**	**0.0455**		**144.1945**	**144.1945**	**3.3900e-003**		**144.2792**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	136.0096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**136.2012**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1514	0.0906	1.0656	3.5700e-003	0.4136	2.8800e-003	0.4165	0.1097	2.6500e-003	0.1123		355.6797	355.6797	8.3600e-003		355.8886
Total	**0.1514**	**0.0906**	**1.0656**	**3.5700e-003**	**0.4136**	**2.8800e-003**	**0.4165**	**0.1097**	**2.6500e-003**	**0.1123**		**355.6797**	**355.6797**	**8.3600e-003**		**355.8886**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	136.0096					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**136.2012**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1514	0.0906	1.0656	3.5700e-003	0.4136	2.8800e-003	0.4165	0.1097	2.6500e-003	0.1123		355.6797	355.6797	8.3600e-003		355.8886
Total	**0.1514**	**0.0906**	**1.0656**	**3.5700e-003**	**0.4136**	**2.8800e-003**	**0.4165**	**0.1097**	**2.6500e-003**	**0.1123**		**355.6797**	**355.6797**	**8.3600e-003**		**355.8886**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.9746	19.1510	51.5990	0.2135	19.5989	0.1555	19.7544	5.2434	0.1445	5.3879		21,787.4434	21,787.4434	0.9834		21,812.0278
Unmitigated	3.9746	19.1510	51.5990	0.2135	19.5989	0.1555	19.7544	5.2434	0.1445	5.3879		21,787.4434	21,787.4434	0.9834		21,812.0278

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,276.80	1,226.88	1125.12	4,264,606	4,264,606
General Office Building	994.80	221.87	94.70	2,434,755	2,434,755
Health Club	216.02	136.91	175.35	425,420	425,420
Research & Development	351.65	82.38	48.13	911,638	911,638
Total	2,839.27	1,668.04	1,443.30	8,036,418	8,036,418

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
General Office Building	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Health Club	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845
Research & Development	0.550809	0.042355	0.203399	0.115606	0.014562	0.005806	0.021810	0.035336	0.002134	0.001736	0.004891	0.000712	0.000845

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089
NaturalGas Unmitigated	0.1411	1.2369	0.7417	7.7000e-003		0.0975	0.0975		0.0975	0.0975		1,539.1625	1,539.1625	0.0295	0.0282	1,548.3089

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7782.09	0.0839	0.7172	0.3052	4.5800e-003		0.0580	0.0580		0.0580	0.0580		915.5402	915.5402	0.0176	0.0168	920.9808
General Office Building	857.404	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003		100.8710	100.8710	1.9300e-003	1.8500e-003	101.4705
Health Club	583.663	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003		68.6662	68.6662	1.3200e-003	1.2600e-003	69.0743
Research & Development	3859.72	0.0416	0.3784	0.3179	2.2700e-003		0.0288	0.0288		0.0288	0.0288		454.0851	454.0851	8.7000e-003	8.3200e-003	456.7835
Total		**0.1411**	**1.2369**	**0.7417**	**7.6900e-003**		**0.0975**	**0.0975**		**0.0975**	**0.0975**		**1,539.1625**	**1,539.1625**	**0.0295**	**0.0282**	**1,548.3089**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	7.78209	0.0839	0.7172	0.3052	4.5800e-003		0.0580	0.0580		0.0580	0.0580		915.5402	915.5402	0.0176	0.0168	920.9808
General Office Building	0.857404	9.2500e-003	0.0841	0.0706	5.0000e-004		6.3900e-003	6.3900e-003		6.3900e-003	6.3900e-003		100.8710	100.8710	1.9300e-003	1.8500e-003	101.4705
Health Club	0.583663	6.2900e-003	0.0572	0.0481	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003		68.6662	68.6662	1.3200e-003	1.2600e-003	69.0743
Research & Development	3.85972	0.0416	0.3784	0.3179	2.2700e-003		0.0288	0.0288		0.0288	0.0288		454.0851	454.0851	8.7000e-003	8.3200e-003	456.7835
Total		**0.1411**	**1.2369**	**0.7417**	**7.6900e-003**		**0.0975**	**0.0975**		**0.0975**	**0.0975**		**1,539.1625**	**1,539.1625**	**0.0295**	**0.0282**	**1,548.3089**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459
Unmitigated	58.8055	4.1662	113.4898	0.2499		14.7544	14.7544		14.7544	14.7544	1,798.4483	3,484.5527	5,283.0010	5.3908	0.1221	5,454.1459

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2719					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	50.3109	3.9837	97.6420	0.2491		14.6666	14.6666		14.6666	14.6666	1,798.4483	3,456.0000	5,254.4483	5.3633	0.1221	5,424.9070
Landscaping	0.4774	0.1826	15.8479	8.4000e-004		0.0878	0.0878		0.0878	0.0878		28.5527	28.5527	0.0275		29.2389
Total	**58.8055**	**4.1662**	**113.4898**	**0.2499**		**14.7544**	**14.7544**		**14.7544**	**14.7544**	**1,798.4483**	**3,484.5527**	**5,283.0010**	**5.3908**	**0.1221**	**5,454.1459**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7453					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	7.2719					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	50.3109	3.9837	97.6420	0.2491		14.6666	14.6666		14.6666	14.6666	1,798.4483	3,456.0000	5,254.4483	5.3633	0.1221	5,424.9070
Landscaping	0.4774	0.1826	15.8479	8.4000e-004		0.0878	0.0878		0.0878	0.0878		28.5527	28.5527	0.0275		29.2389
Total	**58.8055**	**4.1662**	**113.4898**	**0.2499**		**14.7544**	**14.7544**		**14.7544**	**14.7544**	**1,798.4483**	**3,484.5527**	**5,283.0010**	**5.3908**	**0.1221**	**5,454.1459**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Operation 2035

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,344.34	1000sqft	30.86	1,344,344.00	0
Research & Development	646.33	1000sqft	14.84	646,331.00	0
Health Club	97.74	1000sqft	2.24	97,740.00	0
Apartments Mid Rise	2,496.00	Dwelling Unit	65.68	3,386,071.00	7139

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2035
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - obtained from PD

Construction Phase - operation run only

Trips and VMT -

Demolition - operation only run

Grading - operation only run

Architectural Coating -

Vehicle Trips - trip rate adjusted based on project TIS VMT

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - assume no woodstoves or fireplaces

Area Coating -

Energy Use -

Water And Wastewater -

Solid Waste -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,044,208.00	720,979.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,132,623.00	2,162,937.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	2,285,598.00	1,523,732.00
tblArchitecturalCoating	ConstArea_Residential_Interior	6,856,794.00	4,571,197.00
tblConstructionPhase	NumDays	220.00	110.00

tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	100.00
tblConstructionPhase	NumDays	310.00	155.00
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	120.00	60.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	2,121.60	0.00
tblFireplaces	NumberNoFireplace	249.60	0.00
tblFireplaces	NumberWood	124.80	0.00
tblLandUse	LandUseSquareFeet	1,344,340.00	1,344,344.00
tblLandUse	LandUseSquareFeet	646,330.00	646,331.00
tblLandUse	LandUseSquareFeet	2,496,000.00	3,386,071.00
tblTripsAndVMT	VendorTripNumber	609.00	441.00
tblTripsAndVMT	WorkerTripNumber	2,475.00	1,845.00
tblTripsAndVMT	WorkerTripNumber	495.00	369.00
tblVehicleTrips	ST_TR	6.39	4.80
tblVehicleTrips	ST_TR	2.46	4.80
tblVehicleTrips	ST_TR	20.87	4.80
tblVehicleTrips	ST_TR	1.90	4.80
tblVehicleTrips	SU_TR	5.86	4.80
tblVehicleTrips	SU_TR	1.05	4.80
tblVehicleTrips	SU_TR	26.73	4.80
tblVehicleTrips	SU_TR	1.11	4.80
tblVehicleTrips	WD_TR	6.65	4.80
tblVehicleTrips	WD_TR	11.03	4.80

tblVehicleTrips	WD_TR	32.93	4.80
tblVehicleTrips	WD_TR	8.11	4.80
tblWoodstoves	NumberCatalytic	124.80	0.00
tblWoodstoves	NumberNoncatalytic	124.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4173	4.2270	3.1464	6.4200e-003	1.0737	0.1924	1.2661	0.4923	0.1776	0.6699	0.0000	564.0423	564.0423	0.1689	0.0000	568.2648
2023	1.0415	6.0216	8.9797	0.0340	2.7369	0.1292	2.8661	0.7481	0.1205	0.8686	0.0000	3,130.8569	3,130.8569	0.2030	0.0000	3,135.9312
2024	1.1493	6.2942	9.9432	0.0404	3.0159	0.1034	3.1193	0.8093	0.0970	0.9063	0.0000	3,728.1959	3,728.1959	0.1914	0.0000	3,732.9812
2025	1.0872	6.0606	9.3893	0.0392	3.0043	0.0914	3.0957	0.8062	0.0857	0.8919	0.0000	3,625.1398	3,625.1398	0.1850	0.0000	3,629.7645
2026	1.0492	5.9832	8.9614	0.0384	3.0043	0.0907	3.0950	0.8062	0.0850	0.8912	0.0000	3,547.5601	3,547.5601	0.1803	0.0000	3,552.0670
2027	1.0121	5.9111	8.5818	0.0376	3.0044	0.0897	3.0940	0.8062	0.0841	0.8903	0.0000	3,479.0797	3,479.0797	0.1759	0.0000	3,483.4780
2028	0.9704	5.8266	8.2196	0.0368	2.9928	0.0880	3.0809	0.8031	0.0826	0.8857	0.0000	3,405.8749	3,405.8749	0.1714	0.0000	3,410.1610
2029	14.0057	1.4542	2.5365	8.6800e-003	0.6922	0.0405	0.7326	0.1851	0.0377	0.2228	0.0000	793.3483	793.3483	0.0648	0.0000	794.9684
Maximum	**14.0057**	**6.2942**	**9.9432**	**0.0404**	**3.0159**	**0.1924**	**3.1193**	**0.8093**	**0.1776**	**0.9063**	**0.0000**	**3,728.1959**	**3,728.1959**	**0.2030**	**0.0000**	**3,732.9812**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.4173	4.2270	3.1464	6.4200e-003	1.0737	0.1924	1.2661	0.4923	0.1776	0.6699	0.0000	564.0417	564.0417	0.1689	0.0000	568.2642
2023	1.0415	6.0216	8.9797	0.0340	2.7369	0.1292	2.8661	0.7481	0.1205	0.8686	0.0000	3,130.8564	3,130.8564	0.2030	0.0000	3,135.9308
2024	1.1493	6.2942	9.9432	0.0404	3.0159	0.1034	3.1193	0.8093	0.0970	0.9063	0.0000	3,728.1955	3,728.1955	0.1914	0.0000	3,732.9808
2025	1.0872	6.0606	9.3893	0.0392	3.0043	0.0914	3.0957	0.8062	0.0857	0.8919	0.0000	3,625.1395	3,625.1395	0.1850	0.0000	3,629.7641
2026	1.0492	5.9832	8.9614	0.0384	3.0043	0.0907	3.0950	0.8062	0.0850	0.8912	0.0000	3,547.5598	3,547.5598	0.1803	0.0000	3,552.0666
2027	1.0121	5.9111	8.5818	0.0376	3.0044	0.0897	3.0940	0.8062	0.0841	0.8903	0.0000	3,479.0794	3,479.0794	0.1759	0.0000	3,483.4776
2028	0.9704	5.8266	8.2196	0.0368	2.9928	0.0880	3.0809	0.8031	0.0826	0.8857	0.0000	3,405.8746	3,405.8746	0.1714	0.0000	3,410.1606
2029	14.0057	1.4542	2.5365	8.6800e-003	0.6922	0.0405	0.7326	0.1851	0.0377	0.2228	0.0000	793.3481	793.3481	0.0648	0.0000	794.9682
Maximum	**14.0057**	**6.2942**	**9.9432**	**0.0404**	**3.0159**	**0.1924**	**3.1193**	**0.8093**	**0.1776**	**0.9063**	**0.0000**	**3,728.1955**	**3,728.1955**	**0.2030**	**0.0000**	**3,732.9808**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	**Start Date**	**End Date**	**Maximum Unmitigated ROG + NOX (tons/quarter)**	**Maximum Mitigated ROG + NOX (tons/quarter)**
1	**1-3-2022**	**4-2-2022**	0.9149	0.9149
2	**4-3-2022**	**7-2-2022**	1.0463	1.0463

3	**7-3-2022**	**10-2-2022**	1.3084	1.3084
4	**10-3-2022**	**1-2-2023**	1.3967	1.3967
5	**1-3-2023**	**4-2-2023**	1.3394	1.3394
6	**4-3-2023**	**7-2-2023**	1.8849	1.8849
7	**7-3-2023**	**10-2-2023**	1.9063	1.9063
8	**10-3-2023**	**1-2-2024**	1.9344	1.9344
9	**1-3-2024**	**4-2-2024**	1.8520	1.8520
10	**4-3-2024**	**7-2-2024**	1.8241	1.8241
11	**7-3-2024**	**10-2-2024**	1.8448	1.8448
12	**10-3-2024**	**1-2-2025**	1.8715	1.8715
13	**1-3-2025**	**4-2-2025**	1.7656	1.7656
14	**4-3-2025**	**7-2-2025**	1.7588	1.7588
15	**7-3-2025**	**10-2-2025**	1.7787	1.7787
16	**10-3-2025**	**1-2-2026**	1.8048	1.8048
17	**1-3-2026**	**4-2-2026**	1.7370	1.7370
18	**4-3-2026**	**7-2-2026**	1.7311	1.7311
19	**7-3-2026**	**10-2-2026**	1.7507	1.7507
20	**10-3-2026**	**1-2-2027**	1.7756	1.7756
21	**1-3-2027**	**4-2-2027**	1.7100	1.7100
22	**4-3-2027**	**7-2-2027**	1.7050	1.7050
23	**7-3-2027**	**10-2-2027**	1.7242	1.7242
24	**10-3-2027**	**1-2-2028**	1.7479	1.7479
25	**1-3-2028**	**4-2-2028**	1.7037	1.7037
26	**4-3-2028**	**7-2-2028**	1.6810	1.6810
27	**7-3-2028**	**10-2-2028**	1.6999	1.6999
28	**10-3-2028**	**1-2-2029**	1.7223	1.7223
29	**1-3-2029**	**4-2-2029**	1.0886	1.0886

30	**4-3-2029**	**7-2-2029**	0.3106	0.3106
31	**7-3-2029**	**9-30-2029**	5.9526	5.9526
		Highest	5.9526	5.9526

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	22.5788	0.2962	25.6764	1.3600e-003		0.1428	0.1428		0.1428	0.1428	0.0000	42.0983	42.0983	0.0402	0.0000	43.1023
Energy	0.3546	3.1152	1.9116	0.0193		0.2450	0.2450		0.2450	0.2450	0.0000	22,601.8264	22,601.8264	0.4849	0.1508	22,658.8745
Mobile	3.5611	22.9758	47.4867	0.2577	27.8134	0.1252	27.9386	7.4500	0.1164	7.5664	0.0000	24,026.0131	24,026.0131	0.9046	0.0000	24,048.6274
Waste						0.0000	0.0000		0.0000	0.0000	609.9148	0.0000	609.9148	36.0449	0.0000	1,511.0380
Water						0.0000	0.0000		0.0000	0.0000	230.0523	7,364.4163	7,594.4685	23.7897	0.5913	8,365.4042
Total	**26.4945**	**26.3871**	**75.0747**	**0.2784**	**27.8134**	**0.5131**	**28.3265**	**7.4500**	**0.5043**	**7.9543**	**839.9670**	**54,034.3541**	**54,874.3211**	**61.2643**	**0.7420**	**56,627.0464**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	22.5788	0.2962	25.6764	1.3600e-003		0.1428	0.1428		0.1428	0.1428	0.0000	42.0983	42.0983	0.0402	0.0000	43.1023
Energy	0.3546	3.1152	1.9116	0.0193		0.2450	0.2450		0.2450	0.2450	0.0000	22,601.8264	22,601.8264	0.4849	0.1508	22,658.8745
Mobile	3.5611	22.9758	47.4867	0.2577	27.8134	0.1252	27.9386	7.4500	0.1164	7.5664	0.0000	24,026.0131	24,026.0131	0.9046	0.0000	24,048.6274
Waste						0.0000	0.0000		0.0000	0.0000	609.9148	0.0000	609.9148	36.0449	0.0000	1,511.0380
Water						0.0000	0.0000		0.0000	0.0000	230.0523	7,364.4163	7,594.4685	23.7897	0.5913	8,365.4042
Total	**26.4945**	**26.3871**	**75.0747**	**0.2784**	**27.8134**	**0.5131**	**28.3265**	**7.4500**	**0.5043**	**7.9543**	**839.9670**	**54,034.3541**	**54,874.3211**	**61.2643**	**0.7420**	**56,627.0464**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	5/20/2022	5	100	
2	Site Preparation	Site Preparation	5/21/2022	8/12/2022	5	60	
3	Grading	Grading	8/13/2022	3/17/2023	5	155	
4	Building Construction	Building Construction	3/18/2023	2/23/2029	5	1550	
5	Paving	Paving	2/24/2029	7/27/2029	5	110	
6	Architectural Coating	Architectural Coating	7/28/2029	12/28/2029	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 387.5

Acres of Paving: 0

Residential Indoor: 4,571,197; Residential Outdoor: 1,523,732; Non-Residential Indoor: 2,162,937; Non-Residential Outdoor: 720,979; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,845.00	441.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	369.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1320	1.2860	1.0297	1.9400e-003		0.0621	0.0621		0.0578	0.0578	0.0000	169.9511	169.9511	0.0477	0.0000	171.1446
Total	**0.1320**	**1.2860**	**1.0297**	**1.9400e-003**		**0.0621**	**0.0621**		**0.0578**	**0.0578**	**0.0000**	**169.9511**	**169.9511**	**0.0477**	**0.0000**	**171.1446**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9400e-003	2.0900e-003	0.0241	8.0000e-005	8.2300e-003	6.0000e-005	8.2900e-003	2.1900e-003	6.0000e-005	2.2400e-003	0.0000	6.9105	6.9105	1.7000e-004	0.0000	6.9148
Total	**2.9400e-003**	**2.0900e-003**	**0.0241**	**8.0000e-005**	**8.2300e-003**	**6.0000e-005**	**8.2900e-003**	**2.1900e-003**	**6.0000e-005**	**2.2400e-003**	**0.0000**	**6.9105**	**6.9105**	**1.7000e-004**	**0.0000**	**6.9148**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1320	1.2860	1.0297	1.9400e-003		0.0621	0.0621		0.0578	0.0578	0.0000	169.9509	169.9509	0.0477	0.0000	171.1444
Total	**0.1320**	**1.2860**	**1.0297**	**1.9400e-003**		**0.0621**	**0.0621**		**0.0578**	**0.0578**	**0.0000**	**169.9509**	**169.9509**	**0.0477**	**0.0000**	**171.1444**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9400e-003	2.0900e-003	0.0241	8.0000e-005	8.2300e-003	6.0000e-005	8.2900e-003	2.1900e-003	6.0000e-005	2.2400e-003	0.0000	6.9105	6.9105	1.7000e-004	0.0000	6.9148
Total	**2.9400e-003**	**2.0900e-003**	**0.0241**	**8.0000e-005**	**8.2300e-003**	**6.0000e-005**	**8.2900e-003**	**2.1900e-003**	**6.0000e-005**	**2.2400e-003**	**0.0000**	**6.9105**	**6.9105**	**1.7000e-004**	**0.0000**	**6.9148**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3182	100.3182	0.0324	0.0000	101.1293
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5420**	**0.0484**	**0.5904**	**0.2979**	**0.0445**	**0.3424**	**0.0000**	**100.3182**	**100.3182**	**0.0324**	**0.0000**	**101.1293**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1100e-003	1.5000e-003	0.0174	6.0000e-005	5.9200e-003	4.0000e-005	5.9700e-003	1.5700e-003	4.0000e-005	1.6100e-003	0.0000	4.9755	4.9755	1.2000e-004	0.0000	4.9787
Total	**2.1100e-003**	**1.5000e-003**	**0.0174**	**6.0000e-005**	**5.9200e-003**	**4.0000e-005**	**5.9700e-003**	**1.5700e-003**	**4.0000e-005**	**1.6100e-003**	**0.0000**	**4.9755**	**4.9755**	**1.2000e-004**	**0.0000**	**4.9787**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5420	0.0000	0.5420	0.2979	0.0000	0.2979	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0951	0.9925	0.5909	1.1400e-003		0.0484	0.0484		0.0445	0.0445	0.0000	100.3181	100.3181	0.0324	0.0000	101.1292
Total	**0.0951**	**0.9925**	**0.5909**	**1.1400e-003**	**0.5420**	**0.0484**	**0.5904**	**0.2979**	**0.0445**	**0.3424**	**0.0000**	**100.3181**	**100.3181**	**0.0324**	**0.0000**	**101.1292**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1100e-003	1.5000e-003	0.0174	6.0000e-005	5.9200e-003	4.0000e-005	5.9700e-003	1.5700e-003	4.0000e-005	1.6100e-003	0.0000	4.9755	4.9755	1.2000e-004	0.0000	4.9787
Total	**2.1100e-003**	**1.5000e-003**	**0.0174**	**6.0000e-005**	**5.9200e-003**	**4.0000e-005**	**5.9700e-003**	**1.5700e-003**	**4.0000e-005**	**1.6100e-003**	**0.0000**	**4.9755**	**4.9755**	**1.2000e-004**	**0.0000**	**4.9787**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5066	0.0000	0.5066	0.1877	0.0000	0.1877	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1812	1.9422	1.4521	3.1000e-003		0.0817	0.0817		0.0752	0.0752	0.0000	272.6730	272.6730	0.0882	0.0000	274.8777
Total	**0.1812**	**1.9422**	**1.4521**	**3.1000e-003**	**0.5066**	**0.0817**	**0.5883**	**0.1877**	**0.0752**	**0.2629**	**0.0000**	**272.6730**	**272.6730**	**0.0882**	**0.0000**	**274.8777**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9100e-003	2.7800e-003	0.0322	1.0000e-004	0.0110	8.0000e-005	0.0111	2.9100e-003	7.0000e-005	2.9900e-003	0.0000	9.2140	9.2140	2.3000e-004	0.0000	9.2198
Total	**3.9100e-003**	**2.7800e-003**	**0.0322**	**1.0000e-004**	**0.0110**	**8.0000e-005**	**0.0111**	**2.9100e-003**	**7.0000e-005**	**2.9900e-003**	**0.0000**	**9.2140**	**9.2140**	**2.3000e-004**	**0.0000**	**9.2198**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.5066	0.0000	0.5066	0.1877	0.0000	0.1877	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1812	1.9422	1.4521	3.1000e-003		0.0817	0.0817		0.0752	0.0752	0.0000	272.6727	272.6727	0.0882	0.0000	274.8774
Total	**0.1812**	**1.9422**	**1.4521**	**3.1000e-003**	**0.5066**	**0.0817**	**0.5883**	**0.1877**	**0.0752**	**0.2629**	**0.0000**	**272.6727**	**272.6727**	**0.0882**	**0.0000**	**274.8774**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9100e-003	2.7800e-003	0.0322	1.0000e-004	0.0110	8.0000e-005	0.0111	2.9100e-003	7.0000e-005	2.9900e-003	0.0000	9.2140	9.2140	2.3000e-004	0.0000	9.2198
Total	**3.9100e-003**	**2.7800e-003**	**0.0322**	**1.0000e-004**	**0.0110**	**8.0000e-005**	**0.0111**	**2.9100e-003**	**7.0000e-005**	**2.9900e-003**	**0.0000**	**9.2140**	**9.2140**	**2.3000e-004**	**0.0000**	**9.2198**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3711	0.0000	0.3711	0.1132	0.0000	0.1132	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0914	0.9492	0.7714	1.7100e-003		0.0392	0.0392		0.0360	0.0360	0.0000	149.9718	149.9718	0.0485	0.0000	151.1844
Total	**0.0914**	**0.9492**	**0.7714**	**1.7100e-003**	**0.3711**	**0.0392**	**0.4103**	**0.1132**	**0.0360**	**0.1493**	**0.0000**	**149.9718**	**149.9718**	**0.0485**	**0.0000**	**151.1844**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0300e-003	1.3800e-003	0.0163	5.0000e-005	6.0300e-003	4.0000e-005	6.0800e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	4.8787	4.8787	1.1000e-004	0.0000	4.8816
Total	**2.0300e-003**	**1.3800e-003**	**0.0163**	**5.0000e-005**	**6.0300e-003**	**4.0000e-005**	**6.0800e-003**	**1.6000e-003**	**4.0000e-005**	**1.6400e-003**	**0.0000**	**4.8787**	**4.8787**	**1.1000e-004**	**0.0000**	**4.8816**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3711	0.0000	0.3711	0.1132	0.0000	0.1132	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0914	0.9492	0.7714	1.7100e-003		0.0392	0.0392		0.0360	0.0360	0.0000	149.9717	149.9717	0.0485	0.0000	151.1842
Total	**0.0914**	**0.9492**	**0.7714**	**1.7100e-003**	**0.3711**	**0.0392**	**0.4103**	**0.1132**	**0.0360**	**0.1493**	**0.0000**	**149.9717**	**149.9717**	**0.0485**	**0.0000**	**151.1842**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0300e-003	1.3800e-003	0.0163	5.0000e-005	6.0300e-003	4.0000e-005	6.0800e-003	1.6000e-003	4.0000e-005	1.6400e-003	0.0000	4.8787	4.8787	1.1000e-004	0.0000	4.8816
Total	**2.0300e-003**	**1.3800e-003**	**0.0163**	**5.0000e-005**	**6.0300e-003**	**4.0000e-005**	**6.0800e-003**	**1.6000e-003**	**4.0000e-005**	**1.6400e-003**	**0.0000**	**4.8787**	**4.8787**	**1.1000e-004**	**0.0000**	**4.8816**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1612	1.4745	1.6650	2.7600e-003		0.0717	0.0717		0.0675	0.0675	0.0000	237.5999	237.5999	0.0565	0.0000	239.0129
Total	**0.1612**	**1.4745**	**1.6650**	**2.7600e-003**		**0.0717**	**0.0717**		**0.0675**	**0.0675**	**0.0000**	**237.5999**	**237.5999**	**0.0565**	**0.0000**	**239.0129**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0900	3.1205	0.9163	0.0109	0.2849	3.5500e-003	0.2885	0.0822	3.3900e-003	0.0856	0.0000	1,060.9141	1,060.9141	0.0584	0.0000	1,062.3738
Worker	0.6969	0.4760	5.6107	0.0186	2.0748	0.0147	2.0895	0.5510	0.0136	0.5646	0.0000	1,677.4925	1,677.4925	0.0394	0.0000	1,678.4786
Total	**0.7869**	**3.5966**	**6.5270**	**0.0295**	**2.3597**	**0.0183**	**2.3780**	**0.6332**	**0.0169**	**0.6502**	**0.0000**	**2,738.4065**	**2,738.4065**	**0.0978**	**0.0000**	**2,740.8524**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1612	1.4745	1.6650	2.7600e-003		0.0717	0.0717		0.0675	0.0675	0.0000	237.5996	237.5996	0.0565	0.0000	239.0126
Total	**0.1612**	**1.4745**	**1.6650**	**2.7600e-003**		**0.0717**	**0.0717**		**0.0675**	**0.0675**	**0.0000**	**237.5996**	**237.5996**	**0.0565**	**0.0000**	**239.0126**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0900	3.1205	0.9163	0.0109	0.2849	3.5500e-003	0.2885	0.0822	3.3900e-003	0.0856	0.0000	1,060.9141	1,060.9141	0.0584	0.0000	1,062.3738
Worker	0.6969	0.4760	5.6107	0.0186	2.0748	0.0147	2.0895	0.5510	0.0136	0.5646	0.0000	1,677.4925	1,677.4925	0.0394	0.0000	1,678.4786
Total	**0.7869**	**3.5966**	**6.5270**	**0.0295**	**2.3597**	**0.0183**	**2.3780**	**0.6332**	**0.0169**	**0.6502**	**0.0000**	**2,738.4065**	**2,738.4065**	**0.0978**	**0.0000**	**2,740.8524**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7223	303.7223	0.0718	0.0000	305.5179
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7223**	**303.7223**	**0.0718**	**0.0000**	**305.5179**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1126	3.9788	1.1370	0.0139	0.3641	4.4800e-003	0.3686	0.1051	4.2800e-003	0.1094	0.0000	1,351.1096	1,351.1096	0.0734	0.0000	1,352.9452
Worker	0.8440	0.5543	6.6884	0.0229	2.6517	0.0186	2.6703	0.7042	0.0171	0.7213	0.0000	2,073.3640	2,073.3640	0.0462	0.0000	2,074.5181
Total	**0.9565**	**4.5331**	**7.8254**	**0.0368**	**3.0159**	**0.0231**	**3.0389**	**0.8093**	**0.0214**	**0.8307**	**0.0000**	**3,424.4736**	**3,424.4736**	**0.1196**	**0.0000**	**3,427.4633**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1928	1.7611	2.1179	3.5300e-003		0.0803	0.0803		0.0756	0.0756	0.0000	303.7220	303.7220	0.0718	0.0000	305.5175
Total	**0.1928**	**1.7611**	**2.1179**	**3.5300e-003**		**0.0803**	**0.0803**		**0.0756**	**0.0756**	**0.0000**	**303.7220**	**303.7220**	**0.0718**	**0.0000**	**305.5175**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1126	3.9788	1.1370	0.0139	0.3641	4.4800e-003	0.3686	0.1051	4.2800e-003	0.1094	0.0000	1,351.1096	1,351.1096	0.0734	0.0000	1,352.9452
Worker	0.8440	0.5543	6.6884	0.0229	2.6517	0.0186	2.6703	0.7042	0.0171	0.7213	0.0000	2,073.3640	2,073.3640	0.0462	0.0000	2,074.5181
Total	**0.9565**	**4.5331**	**7.8254**	**0.0368**	**3.0159**	**0.0231**	**3.0389**	**0.8093**	**0.0214**	**0.8307**	**0.0000**	**3,424.4736**	**3,424.4736**	**0.1196**	**0.0000**	**3,427.4633**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1093	3.9284	1.1026	0.0138	0.3628	4.3900e-003	0.3671	0.1047	4.2000e-003	0.1089	0.0000	1,338.3959	1,338.3959	0.0719	0.0000	1,340.1945
Worker	0.7995	0.5049	6.1877	0.0219	2.6416	0.0181	2.6597	0.7015	0.0167	0.7182	0.0000	1,984.0891	1,984.0891	0.0419	0.0000	1,985.1364
Total	**0.9088**	**4.4333**	**7.2903**	**0.0357**	**3.0043**	**0.0225**	**3.0269**	**0.8062**	**0.0209**	**0.8271**	**0.0000**	**3,322.4850**	**3,322.4850**	**0.1138**	**0.0000**	**3,325.3310**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1093	3.9284	1.1026	0.0138	0.3628	4.3900e-003	0.3671	0.1047	4.2000e-003	0.1089	0.0000	1,338.3959	1,338.3959	0.0719	0.0000	1,340.1945
Worker	0.7995	0.5049	6.1877	0.0219	2.6416	0.0181	2.6597	0.7015	0.0167	0.7182	0.0000	1,984.0891	1,984.0891	0.0419	0.0000	1,985.1364
Total	**0.9088**	**4.4333**	**7.2903**	**0.0357**	**3.0043**	**0.0225**	**3.0269**	**0.8062**	**0.0209**	**0.8271**	**0.0000**	**3,322.4850**	**3,322.4850**	**0.1138**	**0.0000**	**3,325.3310**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1068	3.8911	1.0795	0.0137	0.3628	4.3100e-003	0.3671	0.1047	4.1200e-003	0.1088	0.0000	1,331.1586	1,331.1586	0.0708	0.0000	1,332.9276
Worker	0.7639	0.4648	5.7828	0.0212	2.6416	0.0175	2.6591	0.7015	0.0161	0.7177	0.0000	1,913.7466	1,913.7466	0.0384	0.0000	1,914.7059
Total	**0.8707**	**4.3559**	**6.8624**	**0.0348**	**3.0043**	**0.0219**	**3.0262**	**0.8062**	**0.0203**	**0.8265**	**0.0000**	**3,244.9052**	**3,244.9052**	**0.1091**	**0.0000**	**3,247.6334**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1068	3.8911	1.0795	0.0137	0.3628	4.3100e-003	0.3671	0.1047	4.1200e-003	0.1088	0.0000	1,331.1586	1,331.1586	0.0708	0.0000	1,332.9276
Worker	0.7639	0.4648	5.7828	0.0212	2.6416	0.0175	2.6591	0.7015	0.0161	0.7177	0.0000	1,913.7466	1,913.7466	0.0384	0.0000	1,914.7059
Total	**0.8707**	**4.3559**	**6.8624**	**0.0348**	**3.0043**	**0.0219**	**3.0262**	**0.8062**	**0.0203**	**0.8265**	**0.0000**	**3,244.9052**	**3,244.9052**	**0.1091**	**0.0000**	**3,247.6334**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6549	302.6549	0.0711	0.0000	304.4335
Total	**0.1785**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6549**	**302.6549**	**0.0711**	**0.0000**	**304.4335**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1047	3.8551	1.0609	0.0136	0.3628	4.2300e-003	0.3670	0.1047	4.0400e-003	0.1087	0.0000	1,324.7028	1,324.7028	0.0696	0.0000	1,326.4426
Worker	0.7290	0.4287	5.4219	0.0205	2.6416	0.0166	2.6582	0.7015	0.0153	0.7168	0.0000	1,851.7220	1,851.7220	0.0352	0.0000	1,852.6019
Total	**0.8337**	**4.2838**	**6.4828**	**0.0341**	**3.0044**	**0.0208**	**3.0252**	**0.8062**	**0.0193**	**0.8255**	**0.0000**	**3,176.4248**	**3,176.4248**	**0.1048**	**0.0000**	**3,179.0445**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648	0.0000	302.6545	302.6545	0.0711	0.0000	304.4331
Total	**0.1784**	**1.6273**	**2.0991**	**3.5200e-003**		**0.0689**	**0.0689**		**0.0648**	**0.0648**	**0.0000**	**302.6545**	**302.6545**	**0.0711**	**0.0000**	**304.4331**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr							MT/yr			
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1047	3.8551	1.0609	0.0136	0.3628	4.2300e-003	0.3670	0.1047	4.0400e-003	0.1087	0.0000	1,324.7028	1,324.7028	0.0696	0.0000	1,326.4426
Worker	0.7290	0.4287	5.4219	0.0205	2.6416	0.0166	2.6582	0.7015	0.0153	0.7168	0.0000	1,851.7220	1,851.7220	0.0352	0.0000	1,852.6019
Total	**0.8337**	**4.2838**	**6.4828**	**0.0341**	**3.0044**	**0.0208**	**3.0252**	**0.8062**	**0.0193**	**0.8255**	**0.0000**	**3,176.4248**	**3,176.4248**	**0.1048**	**0.0000**	**3,179.0445**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category						tons/yr							MT/yr			
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4953	301.4953	0.0709	0.0000	303.2671
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4953**	**301.4953**	**0.0709**	**0.0000**	**303.2671**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1025	3.8107	1.0426	0.0135	0.3614	4.1500e-003	0.3655	0.1043	3.9600e-003	0.1082	0.0000	1,314.1608	1,314.1608	0.0682	0.0000	1,315.8667
Worker	0.6901	0.3948	5.0860	0.0198	2.6315	0.0153	2.6468	0.6989	0.0141	0.7129	0.0000	1,790.2188	1,790.2188	0.0323	0.0000	1,791.0272
Total	**0.7926**	**4.2056**	**6.1286**	**0.0333**	**2.9928**	**0.0195**	**3.0123**	**0.8031**	**0.0180**	**0.8212**	**0.0000**	**3,104.3796**	**3,104.3796**	**0.1006**	**0.0000**	**3,106.8939**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645	0.0000	301.4949	301.4949	0.0709	0.0000	303.2667
Total	**0.1778**	**1.6211**	**2.0910**	**3.5000e-003**		**0.0686**	**0.0686**		**0.0645**	**0.0645**	**0.0000**	**301.4949**	**301.4949**	**0.0709**	**0.0000**	**303.2667**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1025	3.8107	1.0426	0.0135	0.3614	4.1500e-003	0.3655	0.1043	3.9600e-003	0.1082	0.0000	1,314.1608	1,314.1608	0.0682	0.0000	1,315.8667
Worker	0.6901	0.3948	5.0860	0.0198	2.6315	0.0153	2.6468	0.6989	0.0141	0.7129	0.0000	1,790.2188	1,790.2188	0.0323	0.0000	1,791.0272
Total	**0.7926**	**4.2056**	**6.1286**	**0.0333**	**2.9928**	**0.0195**	**3.0123**	**0.8031**	**0.0180**	**0.8212**	**0.0000**	**3,104.3796**	**3,104.3796**	**0.1006**	**0.0000**	**3,106.8939**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0274	0.2494	0.3217	5.4000e-004		0.0106	0.0106		9.9300e-003	9.9300e-003	0.0000	46.3839	46.3839	0.0109	0.0000	46.6565
Total	**0.0274**	**0.2494**	**0.3217**	**5.4000e-004**		**0.0106**	**0.0106**		**9.9300e-003**	**9.9300e-003**	**0.0000**	**46.3839**	**46.3839**	**0.0109**	**0.0000**	**46.6565**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0155	0.5818	0.1583	2.0700e-003	0.0556	6.3000e-004	0.0562	0.0160	6.0000e-004	0.0166	0.0000	201.4298	201.4298	0.0104	0.0000	201.6885
Worker	0.0999	0.0560	0.7347	2.9600e-003	0.4048	2.1900e-003	0.4070	0.1075	2.0100e-003	0.1095	0.0000	267.9962	267.9962	4.5600e-003	0.0000	268.1103
Total	**0.1155**	**0.6378**	**0.8930**	**5.0300e-003**	**0.4604**	**2.8200e-003**	**0.4633**	**0.1236**	**2.6100e-003**	**0.1262**	**0.0000**	**469.4259**	**469.4259**	**0.0149**	**0.0000**	**469.7988**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0274	0.2494	0.3217	5.4000e-004		0.0106	0.0106		9.9300e-003	9.9300e-003	0.0000	46.3838	46.3838	0.0109	0.0000	46.6564
Total	**0.0274**	**0.2494**	**0.3217**	**5.4000e-004**		**0.0106**	**0.0106**		**9.9300e-003**	**9.9300e-003**	**0.0000**	**46.3838**	**46.3838**	**0.0109**	**0.0000**	**46.6564**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0155	0.5818	0.1583	2.0700e-003	0.0556	6.3000e-004	0.0562	0.0160	6.0000e-004	0.0166	0.0000	201.4298	201.4298	0.0104	0.0000	201.6885
Worker	0.0999	0.0560	0.7347	2.9600e-003	0.4048	2.1900e-003	0.4070	0.1075	2.0100e-003	0.1095	0.0000	267.9962	267.9962	4.5600e-003	0.0000	268.1103
Total	**0.1155**	**0.6378**	**0.8930**	**5.0300e-003**	**0.4604**	**2.8200e-003**	**0.4633**	**0.1236**	**2.6100e-003**	**0.1262**	**0.0000**	**469.4259**	**469.4259**	**0.0149**	**0.0000**	**469.7988**

3.6 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0503	0.4720	0.8018	1.2500e-003		0.0230	0.0230		0.0212	0.0212	0.0000	110.1059	110.1059	0.0356	0.0000	110.9962
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0503**	**0.4720**	**0.8018**	**1.2500e-003**		**0.0230**	**0.0230**		**0.0212**	**0.0212**	**0.0000**	**110.1059**	**110.1059**	**0.0356**	**0.0000**	**110.9962**

3.6 Paving - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2300e-003	1.2500e-003	0.0164	7.0000e-005	9.0500e-003	5.0000e-005	9.1000e-003	2.4000e-003	4.0000e-005	2.4500e-003	0.0000	5.9918	5.9918	1.0000e-004	0.0000	5.9943
Total	**2.2300e-003**	**1.2500e-003**	**0.0164**	**7.0000e-005**	**9.0500e-003**	**5.0000e-005**	**9.1000e-003**	**2.4000e-003**	**4.0000e-005**	**2.4500e-003**	**0.0000**	**5.9918**	**5.9918**	**1.0000e-004**	**0.0000**	**5.9943**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0503	0.4720	0.8018	1.2500e-003		0.0230	0.0230		0.0212	0.0212	0.0000	110.1058	110.1058	0.0356	0.0000	110.9960
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0503**	**0.4720**	**0.8018**	**1.2500e-003**		**0.0230**	**0.0230**		**0.0212**	**0.0212**	**0.0000**	**110.1058**	**110.1058**	**0.0356**	**0.0000**	**110.9960**

3.6 Paving - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2300e-003	1.2500e-003	0.0164	7.0000e-005	9.0500e-003	5.0000e-005	9.1000e-003	2.4000e-003	4.0000e-005	2.4500e-003	0.0000	5.9918	5.9918	1.0000e-004	0.0000	5.9943
Total	**2.2300e-003**	**1.2500e-003**	**0.0164**	**7.0000e-005**	**9.0500e-003**	**5.0000e-005**	**9.1000e-003**	**2.4000e-003**	**4.0000e-005**	**2.4500e-003**	**0.0000**	**5.9918**	**5.9918**	**1.0000e-004**	**0.0000**	**5.9943**

3.7 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	13.7460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4000e-003	0.0630	0.0995	1.6000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	14.0429	14.0429	7.7000e-004	0.0000	14.0621
Total	**13.7554**	**0.0630**	**0.0995**	**1.6000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**14.0429**	**14.0429**	**7.7000e-004**	**0.0000**	**14.0621**

3.7 Architectural Coating - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0550	0.0308	0.4041	1.6300e-003	0.2227	1.2000e-003	0.2239	0.0591	1.1100e-003	0.0602	0.0000	147.3979	147.3979	2.5100e-003	0.0000	147.4607
Total	**0.0550**	**0.0308**	**0.4041**	**1.6300e-003**	**0.2227**	**1.2000e-003**	**0.2239**	**0.0591**	**1.1100e-003**	**0.0602**	**0.0000**	**147.3979**	**147.3979**	**2.5100e-003**	**0.0000**	**147.4607**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	13.7460					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4000e-003	0.0630	0.0995	1.6000e-004		2.8300e-003	2.8300e-003		2.8300e-003	2.8300e-003	0.0000	14.0429	14.0429	7.7000e-004	0.0000	14.0620
Total	**13.7554**	**0.0630**	**0.0995**	**1.6000e-004**		**2.8300e-003**	**2.8300e-003**		**2.8300e-003**	**2.8300e-003**	**0.0000**	**14.0429**	**14.0429**	**7.7000e-004**	**0.0000**	**14.0620**

3.7 Architectural Coating - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0550	0.0308	0.4041	1.6300e-003	0.2227	1.2000e-003	0.2239	0.0591	1.1100e-003	0.0602	0.0000	147.3979	147.3979	2.5100e-003	0.0000	147.4607
Total	**0.0550**	**0.0308**	**0.4041**	**1.6300e-003**	**0.2227**	**1.2000e-003**	**0.2239**	**0.0591**	**1.1100e-003**	**0.0602**	**0.0000**	**147.3979**	**147.3979**	**2.5100e-003**	**0.0000**	**147.4607**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.5611	22.9758	47.4867	0.2577	27.8134	0.1252	27.9386	7.4500	0.1164	7.5664	0.0000	24,026.0131	24,026.0131	0.9046	0.0000	24,048.6274
Unmitigated	3.5611	22.9758	47.4867	0.2577	27.8134	0.1252	27.9386	7.4500	0.1164	7.5664	0.0000	24,026.0131	24,026.0131	0.9046	0.0000	24,048.6274

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	11,980.80	11,980.80	11980.80	40,940,214	40,940,214
General Office Building	6,452.83	6,452.83	6452.83	20,787,546	20,787,546
Health Club	469.15	469.15	469.15	1,003,409	1,003,409
Research & Development	3,102.38	3,102.38	3102.38	10,481,872	10,481,872
Total	22,005.17	22,005.17	22,005.17	73,213,041	73,213,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
General Office Building	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
Health Club	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
Research & Development	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19,092.3148	19,092.3148	0.4177	0.0864	19,128.5076
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	19,092.3148	19,092.3148	0.4177	0.0864	19,128.5076
NaturalGas Mitigated	0.3546	3.1152	1.9116	0.0193		0.2450	0.2450		0.2450	0.2450	0.0000	3,509.5116	3,509.5116	0.0673	0.0643	3,530.3669
NaturalGas Unmitigated	0.3546	3.1152	1.9116	0.0193		0.2450	0.2450		0.2450	0.2450	0.0000	3,509.5116	3,509.5116	0.0673	0.0643	3,530.3669

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.6926e+007	0.1991	1.7015	0.7240	0.0109		0.1376	0.1376		0.1376	0.1376	0.0000	1,970.5133	1,970.5133	0.0378	0.0361	1,982.2230
General Office Building	4.66487e+006	0.0252	0.2287	0.1921	1.3700e-003		0.0174	0.0174		0.0174	0.0174	0.0000	248.9354	248.9354	4.7700e-003	4.5600e-003	250.4147
Health Club	3.17557e+006	0.0171	0.1557	0.1308	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	169.4607	169.4607	3.2500e-003	3.1100e-003	170.4677
Research & Development	2.09993e+007	0.1132	1.0294	0.8647	6.1800e-003		0.0782	0.0782		0.0782	0.0782	0.0000	1,120.6023	1,120.6023	0.0215	0.0205	1,127.2615
Total		**0.3546**	**3.1152**	**1.9116**	**0.0193**		**0.2450**	**0.2450**		**0.2450**	**0.2450**	**0.0000**	**3,509.5116**	**3,509.5116**	**0.0673**	**0.0643**	**3,530.3669**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.6926e+007	0.1991	1.7015	0.7240	0.0109		0.1376	0.1376		0.1376	0.1376	0.0000	1,970.5133	1,970.5133	0.0378	0.0361	1,982.2230
General Office Building	4.66487e+006	0.0252	0.2287	0.1921	1.3700e-003		0.0174	0.0174		0.0174	0.0174	0.0000	248.9354	248.9354	4.7700e-003	4.5600e-003	250.4147
Health Club	3.17557e+006	0.0171	0.1557	0.1308	9.3000e-004		0.0118	0.0118		0.0118	0.0118	0.0000	169.4607	169.4607	3.2500e-003	3.1100e-003	170.4677
Research & Development	2.09993e+007	0.1132	1.0294	0.8647	6.1800e-003		0.0782	0.0782		0.0782	0.0782	0.0000	1,120.6023	1,120.6023	0.0215	0.0205	1,127.2615
Total		**0.3546**	**3.1152**	**1.9116**	**0.0193**		**0.2450**	**0.2450**		**0.2450**	**0.2450**	**0.0000**	**3,509.5116**	**3,509.5116**	**0.0673**	**0.0643**	**3,530.3669**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.1401e+007	6,855.4777	0.1500	0.0310	6,868.4734
General Office Building	1.27982e+007	7,695.5910	0.1684	0.0348	7,710.1793
Health Club	992061	596.5310	0.0131	2.7000e-003	597.6618
Research & Development	6.56026e+006	3,944.7151	0.0863	0.0179	3,952.1930
Total		**19,092.3148**	**0.4177**	**0.0864**	**19,128.5076**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.1401e +007	6,855.4777	0.1500	0.0310	6,868.4734
General Office Building	1.27982e +007	7,695.5910	0.1684	0.0348	7,710.1793
Health Club	992061	596.5310	0.0131	2.7000e-003	597.6618
Research & Development	6.56026e +006	3,944.7151	0.0863	0.0179	3,952.1930
Total		**19,092.3148**	**0.4177**	**0.0864**	**19,128.5076**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	22.5788	0.2962	25.6764	1.3600e-003		0.1428	0.1428		0.1428	0.1428	0.0000	42.0983	42.0983	0.0402	0.0000	43.1023
Unmitigated	22.5788	0.2962	25.6764	1.3600e-003		0.1428	0.1428		0.1428	0.1428	0.0000	42.0983	42.0983	0.0402	0.0000	43.1023

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0274					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.7821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.7694	0.2962	25.6764	1.3600e-003		0.1428	0.1428		0.1428	0.1428	0.0000	42.0983	42.0983	0.0402	0.0000	43.1023
Total	**22.5788**	**0.2962**	**25.6764**	**1.3600e-003**		**0.1428**	**0.1428**		**0.1428**	**0.1428**	**0.0000**	**42.0983**	**42.0983**	**0.0402**	**0.0000**	**43.1023**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0274					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	19.7821					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.7694	0.2962	25.6764	1.3600e-003		0.1428	0.1428		0.1428	0.1428	0.0000	42.0983	42.0983	0.0402	0.0000	43.1023
Total	**22.5788**	**0.2962**	**25.6764**	**1.3600e-003**		**0.1428**	**0.1428**		**0.1428**	**0.1428**	**0.0000**	**42.0983**	**42.0983**	**0.0402**	**0.0000**	**43.1023**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	7,594.4685	23.7897	0.5913	8,365.4042
Unmitigated	7,594.4685	23.7897	0.5913	8,365.4042

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	162.624 / 102.524	2,009.7876	5.3420	0.1340	2,183.2646
General Office Building	238.935 / 146.444	2,924.8795	7.8480	0.1967	3,179.7060
Health Club	5.78065 / 3.54298	70.7629	0.1899	4.7600e-003	76.9280
Research & Development	317.797 / 0	2,589.0385	10.4098	0.2558	2,925.5055
Total		**7,594.4685**	**23.7897**	**0.5913**	**8,365.4041**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	162.624 / 102.524	2,009.7876	5.3420	0.1340	2,183.2646
General Office Building	238.935 / 146.444	2,924.8795	7.8480	0.1967	3,179.7060
Health Club	5.78065 / 3.54298	70.7629	0.1899	4.7600e-003	76.9280
Research & Development	317.797 / 0	2,589.0385	10.4098	0.2558	2,925.5055
Total		**7,594.4685**	**23.7897**	**0.5913**	**8,365.4041**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	609.9148	36.0449	0.0000	1,511.0380
Unmitigated	609.9148	36.0449	0.0000	1,511.0380

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1148.16	233.0661	13.7738	0.0000	577.4114
General Office Building	1250.24	253.7874	14.9984	0.0000	628.7476
Health Club	557.12	113.0903	6.6835	0.0000	280.1765
Research & Development	49.12	9.9709	0.5893	0.0000	24.7025
Total		**609.9148**	**36.0449**	**0.0000**	**1,511.0380**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	1148.16	233.0661	13.7738	0.0000	577.4114
General Office Building	1250.24	253.7874	14.9984	0.0000	628.7476
Health Club	557.12	113.0903	6.6835	0.0000	280.1765
Research & Development	49.12	9.9709	0.5893	0.0000	24.7025
Total		**609.9148**	**36.0449**	**0.0000**	**1,511.0380**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Operation 2035

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,344.34	1000sqft	30.86	1,344,344.00	0
Research & Development	646.33	1000sqft	14.84	646,331.00	0
Health Club	97.74	1000sqft	2.24	97,740.00	0
Apartments Mid Rise	2,496.00	Dwelling Unit	65.68	3,386,071.00	7139

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2035
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - obtained from PD

Construction Phase - operation run only

Trips and VMT -

Demolition - operation only run

Grading - operation only run

Architectural Coating -

Vehicle Trips - trip rate adjusted based on project TIS VMT

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - assume no woodstoves or fireplaces

Area Coating -

Energy Use -

Water And Wastewater -

Solid Waste -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,044,208.00	720,979.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,132,623.00	2,162,937.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	2,285,598.00	1,523,732.00
tblArchitecturalCoating	ConstArea_Residential_Interior	6,856,794.00	4,571,197.00
tblConstructionPhase	NumDays	220.00	110.00

tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	100.00
tblConstructionPhase	NumDays	310.00	155.00
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	120.00	60.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	2,121.60	0.00
tblFireplaces	NumberNoFireplace	249.60	0.00
tblFireplaces	NumberWood	124.80	0.00
tblLandUse	LandUseSquareFeet	1,344,340.00	1,344,344.00
tblLandUse	LandUseSquareFeet	646,330.00	646,331.00
tblLandUse	LandUseSquareFeet	2,496,000.00	3,386,071.00
tblTripsAndVMT	VendorTripNumber	609.00	441.00
tblTripsAndVMT	WorkerTripNumber	2,475.00	1,845.00
tblTripsAndVMT	WorkerTripNumber	495.00	369.00
tblVehicleTrips	ST_TR	6.39	4.80
tblVehicleTrips	ST_TR	2.46	4.80
tblVehicleTrips	ST_TR	20.87	4.80
tblVehicleTrips	ST_TR	1.90	4.80
tblVehicleTrips	SU_TR	5.86	4.80
tblVehicleTrips	SU_TR	1.05	4.80
tblVehicleTrips	SU_TR	26.73	4.80
tblVehicleTrips	SU_TR	1.11	4.80
tblVehicleTrips	WD_TR	6.65	4.80
tblVehicleTrips	WD_TR	11.03	4.80

tblVehicleTrips	WD_TR	32.93	4.80
tblVehicleTrips	WD_TR	8.11	4.80
tblWoodstoves	NumberCatalytic	124.80	0.00
tblWoodstoves	NumberNoncatalytic	124.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.7040	38.8929	29.7382	0.0642	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	6,224.9553	6,224.9553	1.9496	0.0000	6,273.6952
2023	9.3000	48.6970	84.0958	0.3251	23.4452	1.4261	24.3225	6.2818	1.3120	7.1049	0.0000	33,068.8879	33,068.8879	1.9491	0.0000	33,110.5324
2024	8.8127	47.3147	79.8641	0.3184	23.4452	0.7886	24.2338	6.2818	0.7395	7.0213	0.0000	32,405.3499	32,405.3499	1.6155	0.0000	32,445.7376
2025	8.3606	45.7565	75.6544	0.3105	23.4452	0.6997	24.1448	6.2818	0.6558	6.9376	0.0000	31,618.6122	31,618.6122	1.5662	0.0000	31,657.7680
2026	8.0593	45.2060	72.1573	0.3035	23.4452	0.6945	24.1397	6.2818	0.6510	6.9328	0.0000	30,931.9924	30,931.9924	1.5255	0.0000	30,970.1293
2027	7.7674	44.6932	69.0547	0.2974	23.4452	0.6866	24.1318	6.2818	0.6437	6.9255	0.0000	30,326.5504	30,326.5504	1.4880	0.0000	30,363.7492
2028	7.4704	44.2512	66.3489	0.2921	23.4452	0.6768	24.1220	6.2818	0.6347	6.9165	0.0000	29,795.3403	29,795.3403	1.4549	0.0000	29,831.7126
2029	251.1006	43.8220	63.6937	0.2873	23.4452	0.6679	24.1132	6.2818	0.6265	6.9083	0.0000	29,324.6491	29,324.6491	1.4234	0.0000	29,360.2335
Maximum	**251.1006**	**48.6970**	**84.0958**	**0.3251**	**23.4452**	**1.6365**	**24.3225**	**9.9840**	**1.5056**	**11.4689**	**0.0000**	**33,068.8879**	**33,068.8879**	**1.9496**	**0.0000**	**33,110.5324**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.7040	38.8929	29.7382	0.0642	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	6,224.9553	6,224.9553	1.9496	0.0000	6,273.6952
2023	9.3000	48.6970	84.0958	0.3251	23.4452	1.4261	24.3225	6.2818	1.3120	7.1049	0.0000	33,068.8879	33,068.8879	1.9491	0.0000	33,110.5324
2024	8.8127	47.3147	79.8641	0.3184	23.4452	0.7886	24.2338	6.2818	0.7395	7.0213	0.0000	32,405.3499	32,405.3499	1.6155	0.0000	32,445.7376
2025	8.3606	45.7565	75.6544	0.3105	23.4452	0.6997	24.1448	6.2818	0.6558	6.9376	0.0000	31,618.6122	31,618.6122	1.5662	0.0000	31,657.7680
2026	8.0593	45.2060	72.1573	0.3035	23.4452	0.6945	24.1397	6.2818	0.6510	6.9328	0.0000	30,931.9924	30,931.9924	1.5255	0.0000	30,970.1293
2027	7.7674	44.6932	69.0547	0.2974	23.4452	0.6866	24.1318	6.2818	0.6437	6.9255	0.0000	30,326.5504	30,326.5504	1.4880	0.0000	30,363.7492
2028	7.4704	44.2512	66.3489	0.2921	23.4452	0.6768	24.1220	6.2818	0.6347	6.9165	0.0000	29,795.3403	29,795.3403	1.4549	0.0000	29,831.7126
2029	251.1006	43.8220	63.6937	0.2873	23.4452	0.6679	24.1132	6.2818	0.6265	6.9083	0.0000	29,324.6491	29,324.6491	1.4234	0.0000	29,360.2335
Maximum	**251.1006**	**48.6970**	**84.0958**	**0.3251**	**23.4452**	**1.6365**	**24.3225**	**9.9840**	**1.5056**	**11.4689**	**0.0000**	**33,068.8879**	**33,068.8879**	**1.9496**	**0.0000**	**33,110.5324**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972
Energy	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349
Mobile	21.0402	123.5327	275.1737	1.4705	155.6441	0.6881	156.3322	41.6271	0.6396	42.2668		151,036.2955	151,036.2955	5.4785		151,173.2574
Total	**148.6417**	**142.9716**	**491.0593**	**1.5874**	**155.6441**	**3.1733**	**158.8174**	**41.6271**	**3.1249**	**44.7520**	**0.0000**	**172,605.2069**	**172,605.2069**	**6.2389**	**0.3886**	**172,876.9895**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972
Energy	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349
Mobile	21.0402	123.5327	275.1737	1.4705	155.6441	0.6881	156.3322	41.6271	0.6396	42.2668		151,036.2955	151,036.2955	5.4785		151,173.2574
Total	**148.6417**	**142.9716**	**491.0593**	**1.5874**	**155.6441**	**3.1733**	**158.8174**	**41.6271**	**3.1249**	**44.7520**	**0.0000**	**172,605.2069**	**172,605.2069**	**6.2389**	**0.3886**	**172,876.9895**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	5/20/2022	5	100	
2	Site Preparation	Site Preparation	5/21/2022	8/12/2022	5	60	
3	Grading	Grading	8/13/2022	3/17/2023	5	155	
4	Building Construction	Building Construction	3/18/2023	2/23/2029	5	1550	
5	Paving	Paving	2/24/2029	7/27/2029	5	110	
6	Architectural Coating	Architectural Coating	7/28/2029	12/28/2029	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 387.5

Acres of Paving: 0

Residential Indoor: 4,571,197; Residential Outdoor: 1,523,732; Non-Residential Indoor: 2,162,937; Non-Residential Outdoor: 720,979; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,845.00	441.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	369.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		160.1586	160.1586	4.0400e-003		160.2595
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**160.1586**	**160.1586**	**4.0400e-003**		**160.2595**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0594	0.0371	0.5225	1.6100e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		160.1586	160.1586	4.0400e-003		160.2595
Total	**0.0594**	**0.0371**	**0.5225**	**1.6100e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**160.1586**	**160.1586**	**4.0400e-003**		**160.2595**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		192.1903	192.1903	4.8400e-003		192.3114
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**192.1903**	**192.1903**	**4.8400e-003**		**192.3114**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0713	0.0445	0.6270	1.9300e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		192.1903	192.1903	4.8400e-003		192.3114
Total	**0.0713**	**0.0445**	**0.6270**	**1.9300e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**192.1903**	**192.1903**	**4.8400e-003**		**192.3114**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0495	0.6967	2.1400e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		213.5448	213.5448	5.3800e-003		213.6794
Total	**0.0792**	**0.0495**	**0.6967**	**2.1400e-003**	**0.2236**	**1.6000e-003**	**0.2252**	**0.0593**	**1.4700e-003**	**0.0608**		**213.5448**	**213.5448**	**5.3800e-003**		**213.6794**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0792	0.0495	0.6967	2.1400e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		213.5448	213.5448	5.3800e-003		213.6794
Total	**0.0792**	**0.0495**	**0.6967**	**2.1400e-003**	**0.2236**	**1.6000e-003**	**0.2252**	**0.0593**	**1.4700e-003**	**0.0608**		**213.5448**	**213.5448**	**5.3800e-003**		**213.6794**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0745	0.0448	0.6434	2.0600e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		205.5860	205.5860	4.8500e-003		205.7074
Total	**0.0745**	**0.0448**	**0.6434**	**2.0600e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4300e-003**	**0.0607**		**205.5860**	**205.5860**	**4.8500e-003**		**205.7074**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0745	0.0448	0.6434	2.0600e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		205.5860	205.5860	4.8500e-003		205.7074
Total	**0.0745**	**0.0448**	**0.6434**	**2.0600e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4300e-003**	**0.0607**		**205.5860**	**205.5860**	**4.8500e-003**		**205.7074**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8585	30.1836	8.4988	0.1079	2.8224	0.0339	2.8564	0.8126	0.0324	0.8450		11,548.3663	11,548.3663	0.6101		11,563.6187
Worker	6.8687	4.1285	59.3529	0.1903	20.6228	0.1436	20.7664	5.4693	0.1322	5.6015		18,965.3116	18,965.3116	0.4478		18,976.5077
Total	**7.7272**	**34.3121**	**67.8518**	**0.2982**	**23.4452**	**0.1776**	**23.6227**	**6.2818**	**0.1647**	**6.4465**		**30,513.6779**	**30,513.6779**	**1.0579**		**30,540.1264**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8585	30.1836	8.4988	0.1079	2.8224	0.0339	2.8564	0.8126	0.0324	0.8450		11,548.3663	11,548.3663	0.6101		11,563.6187
Worker	6.8687	4.1285	59.3529	0.1903	20.6228	0.1436	20.7664	5.4693	0.1322	5.6015		18,965.3116	18,965.3116	0.4478		18,976.5077
Total	**7.7272**	**34.3121**	**67.8518**	**0.2982**	**23.4452**	**0.1776**	**23.6227**	**6.2818**	**0.1647**	**6.4465**		**30,513.6779**	**30,513.6779**	**1.0579**		**30,540.1264**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8405	30.1087	8.2542	0.1075	2.8224	0.0336	2.8560	0.8126	0.0321	0.8447		11,506.4961	11,506.4961	0.6006		11,521.5112
Worker	6.5006	3.7623	55.4430	0.1840	20.6228	0.1417	20.7645	5.4693	0.1305	5.5997		18,343.1549	18,343.1549	0.4106		18,353.4187
Total	**7.3411**	**33.8710**	**63.6973**	**0.2915**	**23.4452**	**0.1753**	**23.6205**	**6.2818**	**0.1626**	**6.4444**		**29,849.6510**	**29,849.6510**	**1.0112**		**29,874.9299**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8405	30.1087	8.2542	0.1075	2.8224	0.0336	2.8560	0.8126	0.0321	0.8447		11,506.4961	11,506.4961	0.6006		11,521.5112
Worker	6.5006	3.7623	55.4430	0.1840	20.6228	0.1417	20.7645	5.4693	0.1305	5.5997		18,343.1549	18,343.1549	0.4106		18,353.4187
Total	**7.3411**	**33.8710**	**63.6973**	**0.2915**	**23.4452**	**0.1753**	**23.6205**	**6.2818**	**0.1626**	**6.4444**		**29,849.6510**	**29,849.6510**	**1.0112**		**29,874.9299**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8192	29.8462	8.0362	0.1068	2.8224	0.0331	2.8555	0.8125	0.0316	0.8442		11,441.0895	11,441.0895	0.5911		11,455.8660
Worker	6.1741	3.4407	51.5335	0.1767	20.6228	0.1390	20.7618	5.4693	0.1279	5.5972		17,621.0483	17,621.0483	0.3742		17,630.4040
Total	**6.9932**	**33.2869**	**59.5697**	**0.2835**	**23.4452**	**0.1721**	**23.6173**	**6.2818**	**0.1596**	**6.4414**		**29,062.1378**	**29,062.1378**	**0.9653**		**29,086.2699**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8192	29.8462	8.0362	0.1068	2.8224	0.0331	2.8555	0.8125	0.0316	0.8442		11,441.0895	11,441.0895	0.5911		11,455.8660
Worker	6.1741	3.4407	51.5335	0.1767	20.6228	0.1390	20.7618	5.4693	0.1279	5.5972		17,621.0483	17,621.0483	0.3742		17,630.4040
Total	**6.9932**	**33.2869**	**59.5697**	**0.2835**	**23.4452**	**0.1721**	**23.6173**	**6.2818**	**0.1596**	**6.4414**		**29,062.1378**	**29,062.1378**	**0.9653**		**29,086.2699**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8005	29.5685	7.8691	0.1062	2.8224	0.0325	2.8550	0.8126	0.0311	0.8436		11,378.4240	11,378.4240	0.5816		11,392.9640
Worker	5.8914	3.1678	48.2036	0.1704	20.6228	0.1344	20.7572	5.4693	0.1237	5.5930		16,997.0941	16,997.0941	0.3429		17,005.6672
Total	**6.6919**	**32.7363**	**56.0727**	**0.2766**	**23.4452**	**0.1669**	**23.6121**	**6.2818**	**0.1548**	**6.4366**		**28,375.5181**	**28,375.5181**	**0.9245**		**28,398.6312**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8005	29.5685	7.8691	0.1062	2.8224	0.0325	2.8550	0.8126	0.0311	0.8436		11,378.4240	11,378.4240	0.5816		11,392.9640
Worker	5.8914	3.1678	48.2036	0.1704	20.6228	0.1344	20.7572	5.4693	0.1237	5.5930		16,997.0941	16,997.0941	0.3429		17,005.6672
Total	**6.6919**	**32.7363**	**56.0727**	**0.2766**	**23.4452**	**0.1669**	**23.6121**	**6.2818**	**0.1548**	**6.4366**		**28,375.5181**	**28,375.5181**	**0.9245**		**28,398.6312**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7849	29.3012	7.7341	0.1056	2.8224	0.0320	2.8544	0.8126	0.0305	0.8431		11,322.6564	11,322.6564	0.5723		11,336.9629
Worker	5.6151	2.9223	45.2359	0.1649	20.6228	0.1271	20.7498	5.4693	0.1169	5.5862		16,447.4196	16,447.4196	0.3148		16,455.2883
Total	**6.4000**	**32.2235**	**52.9700**	**0.2705**	**23.4452**	**0.1590**	**23.6042**	**6.2818**	**0.1475**	**6.4293**		**27,770.0760**	**27,770.0760**	**0.8870**		**27,792.2511**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7849	29.3012	7.7341	0.1056	2.8224	0.0320	2.8544	0.8126	0.0305	0.8431		11,322.6564	11,322.6564	0.5723		11,336.9629
Worker	5.6151	2.9223	45.2359	0.1649	20.6228	0.1271	20.7498	5.4693	0.1169	5.5862		16,447.4196	16,447.4196	0.3148		16,455.2883
Total	**6.4000**	**32.2235**	**52.9700**	**0.2705**	**23.4452**	**0.1590**	**23.6042**	**6.2818**	**0.1475**	**6.4293**		**27,770.0760**	**27,770.0760**	**0.8870**		**27,792.2511**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7715	29.0795	7.6306	0.1051	2.8225	0.0315	2.8540	0.8126	0.0301	0.8427		11,275.1269	11,275.1269	0.5635		11,289.2146
Worker	5.3315	2.7020	42.6337	0.1600	20.6228	0.1177	20.7405	5.4693	0.1083	5.5776		15,963.7390	15,963.7390	0.2904		15,970.9999
Total	**6.1030**	**31.7816**	**50.2642**	**0.2651**	**23.4452**	**0.1492**	**23.5945**	**6.2818**	**0.1384**	**6.4202**		**27,238.8659**	**27,238.8659**	**0.8540**		**27,260.2145**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7715	29.0795	7.6306	0.1051	2.8225	0.0315	2.8540	0.8126	0.0301	0.8427		11,275.1269	11,275.1269	0.5635		11,289.2146
Worker	5.3315	2.7020	42.6337	0.1600	20.6228	0.1177	20.7405	5.4693	0.1083	5.5776		15,963.7390	15,963.7390	0.2904		15,970.9999
Total	**6.1030**	**31.7816**	**50.2642**	**0.2651**	**23.4452**	**0.1492**	**23.5945**	**6.2818**	**0.1384**	**6.4202**		**27,238.8659**	**27,238.8659**	**0.8540**		**27,260.2145**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7594	28.8628	7.5338	0.1047	2.8225	0.0310	2.8535	0.8126	0.0296	0.8422		11,232.8855	11,232.8855	0.5558		11,246.7800
Worker	5.0145	2.4895	40.0752	0.1557	20.6228	0.1094	20.7321	5.4693	0.1006	5.5699		15,535.2892	15,535.2892	0.2666		15,541.9554
Total	**5.7739**	**31.3523**	**47.6090**	**0.2604**	**23.4452**	**0.1404**	**23.5856**	**6.2818**	**0.1302**	**6.4121**		**26,768.1747**	**26,768.1747**	**0.8224**		**26,788.7354**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7594	28.8628	7.5338	0.1047	2.8225	0.0310	2.8535	0.8126	0.0296	0.8422		11,232.8855	11,232.8855	0.5558		11,246.7800
Worker	5.0145	2.4895	40.0752	0.1557	20.6228	0.1094	20.7321	5.4693	0.1006	5.5699		15,535.2892	15,535.2892	0.2666		15,541.9554
Total	**5.7739**	**31.3523**	**47.6090**	**0.2604**	**23.4452**	**0.1404**	**23.5856**	**6.2818**	**0.1302**	**6.4121**		**26,768.1747**	**26,768.1747**	**0.8224**		**26,788.7354**

3.6 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0408	0.0202	0.3258	1.2700e-003	0.1677	8.9000e-004	0.1686	0.0445	8.2000e-004	0.0453		126.3032	126.3032	2.1700e-003		126.3574
Total	**0.0408**	**0.0202**	**0.3258**	**1.2700e-003**	**0.1677**	**8.9000e-004**	**0.1686**	**0.0445**	**8.2000e-004**	**0.0453**		**126.3032**	**126.3032**	**2.1700e-003**		**126.3574**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0408	0.0202	0.3258	1.2700e-003	0.1677	8.9000e-004	0.1686	0.0445	8.2000e-004	0.0453		126.3032	126.3032	2.1700e-003		126.3574
Total	**0.0408**	**0.0202**	**0.3258**	**1.2700e-003**	**0.1677**	**8.9000e-004**	**0.1686**	**0.0445**	**8.2000e-004**	**0.0453**		**126.3032**	**126.3032**	**2.1700e-003**		**126.3574**

3.7 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	249.9268					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**250.0977**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.7 Architectural Coating - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0029	0.4979	8.0151	0.0311	4.1246	0.0219	4.1464	1.0939	0.0201	1.1140		3,107.0579	3,107.0579	0.0533		3,108.3911
Total	**1.0029**	**0.4979**	**8.0151**	**0.0311**	**4.1246**	**0.0219**	**4.1464**	**1.0939**	**0.0201**	**1.1140**		**3,107.0579**	**3,107.0579**	**0.0533**		**3,108.3911**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	249.9268					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**250.0977**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.7 Architectural Coating - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.0029	0.4979	8.0151	0.0311	4.1246	0.0219	4.1464	1.0939	0.0201	1.1140		3,107.0579	3,107.0579	0.0533		3,108.3911
Total	**1.0029**	**0.4979**	**8.0151**	**0.0311**	**4.1246**	**0.0219**	**4.1464**	**1.0939**	**0.0201**	**1.1140**		**3,107.0579**	**3,107.0579**	**0.0533**		**3,108.3911**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	21.0402	123.5327	275.1737	1.4705	155.6441	0.6881	156.3322	41.6271	0.6396	42.2668		151,036.2955	151,036.2955	5.4785		151,173.2574
Unmitigated	21.0402	123.5327	275.1737	1.4705	155.6441	0.6881	156.3322	41.6271	0.6396	42.2668		151,036.2955	151,036.2955	5.4785		151,173.2574

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	11,980.80	11,980.80	11980.80	40,940,214	40,940,214
General Office Building	6,452.83	6,452.83	6452.83	20,787,546	20,787,546
Health Club	469.15	469.15	469.15	1,003,409	1,003,409
Research & Development	3,102.38	3,102.38	3102.38	10,481,872	10,481,872
Total	22,005.17	22,005.17	22,005.17	73,213,041	73,213,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
General Office Building	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
Health Club	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
Research & Development	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349
NaturalGas Unmitigated	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	101167	1.0910	9.3233	3.9673	0.0595		0.7538	0.7538		0.7538	0.7538		11,902.0221	11,902.0221	0.2281	0.2182	11,972.7499
General Office Building	12780.5	0.1378	1.2530	1.0525	7.5200e-003		0.0952	0.0952		0.0952	0.0952		1,503.5854	1,503.5854	0.0288	0.0276	1,512.5205
Health Club	8700.2	0.0938	0.8530	0.7165	5.1200e-003		0.0648	0.0648		0.0648	0.0648		1,023.5528	1,023.5528	0.0196	0.0188	1,029.6353
Research & Development	57532.3	0.6205	5.6404	4.7380	0.0338		0.4287	0.4287		0.4287	0.4287		6,768.5074	6,768.5074	0.1297	0.1241	6,808.7293
Total		**1.9431**	**17.0696**	**10.4743**	**0.1060**		**1.3425**	**1.3425**		**1.3425**	**1.3425**		**21,197.6677**	**21,197.6677**	**0.4063**	**0.3886**	**21,323.6349**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	101.167	1.0910	9.3233	3.9673	0.0595		0.7538	0.7538		0.7538	0.7538		11,902.0221	11,902.0221	0.2281	0.2182	11,972.7499
General Office Building	12.7805	0.1378	1.2530	1.0525	7.5200e-003		0.0952	0.0952		0.0952	0.0952		1,503.5854	1,503.5854	0.0288	0.0276	1,512.5205
Health Club	8.7002	0.0938	0.8530	0.7165	5.1200e-003		0.0648	0.0648		0.0648	0.0648		1,023.5528	1,023.5528	0.0196	0.0188	1,029.6353
Research & Development	57.5323	0.6205	5.6404	4.7380	0.0338		0.4287	0.4287		0.4287	0.4287		6,768.5074	6,768.5074	0.1297	0.1241	6,808.7293
Total		**1.9431**	**17.0696**	**10.4743**	**0.1060**		**1.3425**	**1.3425**		**1.3425**	**1.3425**		**21,197.6677**	**21,197.6677**	**0.4063**	**0.3886**	**21,323.6349**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972
Unmitigated	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.1088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	108.3948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.1548	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427		371.2436	371.2436	0.3541		380.0972
Total	**125.6584**	**2.3693**	**205.4114**	**0.0109**		**1.1427**	**1.1427**		**1.1427**	**1.1427**	**0.0000**	**371.2436**	**371.2436**	**0.3541**	**0.0000**	**380.0972**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.1088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	108.3948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.1548	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427		371.2436	371.2436	0.3541		380.0972
Total	**125.6584**	**2.3693**	**205.4114**	**0.0109**		**1.1427**	**1.1427**		**1.1427**	**1.1427**	**0.0000**	**371.2436**	**371.2436**	**0.3541**	**0.0000**	**380.0972**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

19-07846 Long Range Development Plan EIR - Operation 2035

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1,344.34	1000sqft	30.86	1,344,344.00	0
Research & Development	646.33	1000sqft	14.84	646,331.00	0
Health Club	97.74	1000sqft	2.24	97,740.00	0
Apartments Mid Rise	2,496.00	Dwelling Unit	65.68	3,386,071.00	7139

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	15			**Operational Year**	2035
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - obtained from PD

Construction Phase - operation run only

Trips and VMT -

Demolition - operation only run

Grading - operation only run

Architectural Coating -

Vehicle Trips - trip rate adjusted based on project TIS VMT

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Woodstoves - assume no woodstoves or fireplaces

Area Coating -

Energy Use -

Water And Wastewater -

Solid Waste -

Energy Mitigation -

Water Mitigation -

Waste Mitigation -

Fleet Mix -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	1,044,208.00	720,979.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	3,132,623.00	2,162,937.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	2,285,598.00	1,523,732.00
tblArchitecturalCoating	ConstArea_Residential_Interior	6,856,794.00	4,571,197.00
tblConstructionPhase	NumDays	220.00	110.00

tblConstructionPhase	NumDays	3,100.00	1,550.00
tblConstructionPhase	NumDays	200.00	100.00
tblConstructionPhase	NumDays	310.00	155.00
tblConstructionPhase	NumDays	220.00	110.00
tblConstructionPhase	NumDays	120.00	60.00
tblFireplaces	FireplaceDayYear	25.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	2,121.60	0.00
tblFireplaces	NumberNoFireplace	249.60	0.00
tblFireplaces	NumberWood	124.80	0.00
tblLandUse	LandUseSquareFeet	1,344,340.00	1,344,344.00
tblLandUse	LandUseSquareFeet	646,330.00	646,331.00
tblLandUse	LandUseSquareFeet	2,496,000.00	3,386,071.00
tblTripsAndVMT	VendorTripNumber	609.00	441.00
tblTripsAndVMT	WorkerTripNumber	2,475.00	1,845.00
tblTripsAndVMT	WorkerTripNumber	495.00	369.00
tblVehicleTrips	ST_TR	6.39	4.80
tblVehicleTrips	ST_TR	2.46	4.80
tblVehicleTrips	ST_TR	20.87	4.80
tblVehicleTrips	ST_TR	1.90	4.80
tblVehicleTrips	SU_TR	5.86	4.80
tblVehicleTrips	SU_TR	1.05	4.80
tblVehicleTrips	SU_TR	26.73	4.80
tblVehicleTrips	SU_TR	1.11	4.80
tblVehicleTrips	WD_TR	6.65	4.80
tblVehicleTrips	WD_TR	11.03	4.80

tblVehicleTrips	WD_TR	32.93	4.80
tblVehicleTrips	WD_TR	8.11	4.80
tblWoodstoves	NumberCatalytic	124.80	0.00
tblWoodstoves	NumberNoncatalytic	124.80	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.7116	38.8976	29.6665	0.0641	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	6,211.1178	6,211.1178	1.9492	0.0000	6,259.8485
2023	10.0244	48.8913	78.7180	0.3097	23.4452	1.4261	24.3241	6.2818	1.3120	7.1065	0.0000	31,508.4782	31,508.4782	1.9488	0.0000	31,550.3442
2024	9.5203	47.4825	74.7783	0.3034	23.4452	0.7901	24.2353	6.2818	0.7409	7.0227	0.0000	30,886.4315	30,886.4315	1.6252	0.0000	30,927.0626
2025	9.0537	45.8939	70.9153	0.2960	23.4452	0.7010	24.1462	6.2818	0.6571	6.9389	0.0000	30,149.9308	30,149.9308	1.5770	0.0000	30,189.3569
2026	8.7416	45.3173	67.7124	0.2895	23.4452	0.6957	24.1409	6.2818	0.6522	6.9340	0.0000	29,506.6735	29,506.6735	1.5371	0.0000	29,545.1010
2027	8.4358	44.7795	64.8720	0.2838	23.4452	0.6876	24.1328	6.2818	0.6447	6.9265	0.0000	28,938.5420	28,938.5420	1.5002	0.0000	28,976.0473
2028	8.1188	44.3169	62.3978	0.2787	23.4452	0.6777	24.1230	6.2818	0.6356	6.9174	0.0000	28,439.9460	28,439.9460	1.4676	0.0000	28,476.6370
2029	251.2171	43.8668	59.9643	0.2743	23.4452	0.6688	24.1140	6.2818	0.6273	6.9091	0.0000	27,997.4474	27,997.4474	1.4367	0.0000	28,033.3644
Maximum	**251.2171**	**48.8913**	**78.7180**	**0.3097**	**23.4452**	**1.6365**	**24.3241**	**9.9840**	**1.5056**	**11.4689**	**0.0000**	**31,508.4782**	**31,508.4782**	**1.9492**	**0.0000**	**31,550.3442**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	3.7116	38.8976	29.6665	0.0641	18.2675	1.6365	19.8815	9.9840	1.5056	11.4689	0.0000	6,211.1178	6,211.1178	1.9492	0.0000	6,259.8485
2023	10.0244	48.8913	78.7180	0.3097	23.4452	1.4261	24.3241	6.2818	1.3120	7.1065	0.0000	31,508.4782	31,508.4782	1.9488	0.0000	31,550.3442
2024	9.5203	47.4825	74.7783	0.3034	23.4452	0.7901	24.2353	6.2818	0.7409	7.0227	0.0000	30,886.4315	30,886.4315	1.6252	0.0000	30,927.0626
2025	9.0537	45.8939	70.9153	0.2960	23.4452	0.7010	24.1462	6.2818	0.6571	6.9389	0.0000	30,149.9308	30,149.9308	1.5770	0.0000	30,189.3569
2026	8.7416	45.3173	67.7124	0.2895	23.4452	0.6957	24.1409	6.2818	0.6522	6.9340	0.0000	29,506.6735	29,506.6735	1.5371	0.0000	29,545.1010
2027	8.4358	44.7795	64.8720	0.2838	23.4452	0.6876	24.1328	6.2818	0.6447	6.9265	0.0000	28,938.5420	28,938.5420	1.5002	0.0000	28,976.0473
2028	8.1188	44.3169	62.3978	0.2787	23.4452	0.6777	24.1230	6.2818	0.6356	6.9174	0.0000	28,439.9460	28,439.9460	1.4676	0.0000	28,476.6370
2029	251.2171	43.8668	59.9643	0.2743	23.4452	0.6688	24.1140	6.2818	0.6273	6.9091	0.0000	27,997.4474	27,997.4474	1.4367	0.0000	28,033.3644
Maximum	**251.2171**	**48.8913**	**78.7180**	**0.3097**	**23.4452**	**1.6365**	**24.3241**	**9.9840**	**1.5056**	**11.4689**	**0.0000**	**31,508.4782**	**31,508.4782**	**1.9492**	**0.0000**	**31,550.3442**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972
Energy	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349
Mobile	19.9421	124.3378	257.0241	1.3951	155.6441	0.6898	156.3339	41.6271	0.6413	42.2684		143,414.1006	143,414.1006	5.5321		143,552.4022
Total	**147.5436**	**143.7768**	**472.9098**	**1.5120**	**155.6441**	**3.1751**	**158.8191**	**41.6271**	**3.1265**	**44.7537**	**0.0000**	**164,983.0119**	**164,983.0119**	**6.2925**	**0.3886**	**165,256.1343**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972
Energy	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349
Mobile	19.9421	124.3378	257.0241	1.3951	155.6441	0.6898	156.3339	41.6271	0.6413	42.2684		143,414.1006	143,414.1006	5.5321		143,552.4022
Total	**147.5436**	**143.7768**	**472.9098**	**1.5120**	**155.6441**	**3.1751**	**158.8191**	**41.6271**	**3.1265**	**44.7537**	**0.0000**	**164,983.0119**	**164,983.0119**	**6.2925**	**0.3886**	**165,256.1343**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/3/2022	5/20/2022	5	100	
2	Site Preparation	Site Preparation	5/21/2022	8/12/2022	5	60	
3	Grading	Grading	8/13/2022	3/17/2023	5	155	
4	Building Construction	Building Construction	3/18/2023	2/23/2029	5	1550	
5	Paving	Paving	2/24/2029	7/27/2029	5	110	
6	Architectural Coating	Architectural Coating	7/28/2029	12/28/2029	5	110	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 387.5

Acres of Paving: 0

Residential Indoor: 4,571,197; Residential Outdoor: 1,523,732; Non-Residential Indoor: 2,162,937; Non-Residential Outdoor: 720,979; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,845.00	441.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	369.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553		3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**		**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**149.7805**	**149.7805**	**3.7600e-003**		**149.8745**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6392	25.7194	20.5941	0.0388		1.2427	1.2427		1.1553	1.1553	0.0000	3,746.7812	3,746.7812	1.0524		3,773.0920
Total	**2.6392**	**25.7194**	**20.5941**	**0.0388**		**1.2427**	**1.2427**		**1.1553**	**1.1553**	**0.0000**	**3,746.7812**	**3,746.7812**	**1.0524**		**3,773.0920**

3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0651	0.0406	0.4687	1.5000e-003	0.1677	1.2000e-003	0.1689	0.0445	1.1000e-003	0.0456		149.7805	149.7805	3.7600e-003		149.8745
Total	**0.0651**	**0.0406**	**0.4687**	**1.5000e-003**	**0.1677**	**1.2000e-003**	**0.1689**	**0.0445**	**1.1000e-003**	**0.0456**		**149.7805**	**149.7805**	**3.7600e-003**		**149.8745**

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836		3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**		**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		179.7366	179.7366	4.5100e-003		179.8494
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**179.7366**	**179.7366**	**4.5100e-003**		**179.8494**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.1701	33.0835	19.6978	0.0380		1.6126	1.6126		1.4836	1.4836	0.0000	3,686.0619	3,686.0619	1.1922		3,715.8655
Total	**3.1701**	**33.0835**	**19.6978**	**0.0380**	**18.0663**	**1.6126**	**19.6788**	**9.9307**	**1.4836**	**11.4143**	**0.0000**	**3,686.0619**	**3,686.0619**	**1.1922**		**3,715.8655**

3.3 Site Preparation - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0781	0.0487	0.5625	1.8000e-003	0.2012	1.4400e-003	0.2026	0.0534	1.3200e-003	0.0547		179.7366	179.7366	4.5100e-003		179.8494
Total	**0.0781**	**0.0487**	**0.5625**	**1.8000e-003**	**0.2012**	**1.4400e-003**	**0.2026**	**0.0534**	**1.3200e-003**	**0.0547**		**179.7366**	**179.7366**	**4.5100e-003**		**179.8494**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0868	0.0541	0.6250	2.0000e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		199.7073	199.7073	5.0100e-003		199.8326
Total	**0.0868**	**0.0541**	**0.6250**	**2.0000e-003**	**0.2236**	**1.6000e-003**	**0.2252**	**0.0593**	**1.4700e-003**	**0.0608**		**199.7073**	**199.7073**	**5.0100e-003**		**199.8326**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0868	0.0541	0.6250	2.0000e-003	0.2236	1.6000e-003	0.2252	0.0593	1.4700e-003	0.0608		199.7073	199.7073	5.0100e-003		199.8326
Total	**0.0868**	**0.0541**	**0.6250**	**2.0000e-003**	**0.2236**	**1.6000e-003**	**0.2252**	**0.0593**	**1.4700e-003**	**0.0608**		**199.7073**	**199.7073**	**5.0100e-003**		**199.8326**

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**		**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0818	0.0490	0.5760	1.9300e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		192.2593	192.2593	4.5200e-003		192.3722
Total	**0.0818**	**0.0490**	**0.5760**	**1.9300e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4300e-003**	**0.0607**		**192.2593**	**192.2593**	**4.5200e-003**		**192.3722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	**3.3217**	**34.5156**	**28.0512**	**0.0621**	**8.6733**	**1.4245**	**10.0978**	**3.5965**	**1.3105**	**4.9070**	**0.0000**	**6,011.4777**	**6,011.4777**	**1.9442**		**6,060.0836**

3.4 Grading - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0818	0.0490	0.5760	1.9300e-003	0.2236	1.5600e-003	0.2251	0.0593	1.4300e-003	0.0607		192.2593	192.2593	4.5200e-003		192.3722
Total	**0.0818**	**0.0490**	**0.5760**	**1.9300e-003**	**0.2236**	**1.5600e-003**	**0.2251**	**0.0593**	**1.4300e-003**	**0.0607**		**192.2593**	**192.2593**	**4.5200e-003**		**192.3722**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9045	29.9901	9.3390	0.1049	2.8224	0.0356	2.8580	0.8126	0.0340	0.8466		11,217.3491	11,217.3491	0.6502		11,233.6027
Worker	7.5472	4.5163	53.1350	0.1779	20.6228	0.1436	20.7664	5.4693	0.1322	5.6015		17,735.9192	17,735.9192	0.4167		17,746.3355
Total	**8.4516**	**34.5064**	**62.4740**	**0.2828**	**23.4452**	**0.1792**	**23.6244**	**6.2818**	**0.1663**	**6.4481**		**28,953.2682**	**28,953.2682**	**1.0668**		**28,979.9382**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.9045	29.9901	9.3390	0.1049	2.8224	0.0356	2.8580	0.8126	0.0340	0.8466		11,217.3491	11,217.3491	0.6502		11,233.6027
Worker	7.5472	4.5163	53.1350	0.1779	20.6228	0.1436	20.7664	5.4693	0.1322	5.6015		17,735.9192	17,735.9192	0.4167		17,746.3355
Total	**8.4516**	**34.5064**	**62.4740**	**0.2828**	**23.4452**	**0.1792**	**23.6244**	**6.2818**	**0.1663**	**6.4481**		**28,953.2682**	**28,953.2682**	**1.0668**		**28,979.9382**

3.5 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8849	29.9245	9.0712	0.1045	2.8224	0.0351	2.8575	0.8126	0.0335	0.8461		11,179.1971	11,179.1971	0.6394		11,195.1827
Worker	7.1639	4.1142	49.5403	0.1720	20.6228	0.1417	20.7645	5.4693	0.1305	5.5997		17,151.5355	17,151.5355	0.3815		17,161.0723
Total	**8.0487**	**34.0387**	**58.6115**	**0.2765**	**23.4452**	**0.1768**	**23.6220**	**6.2818**	**0.1640**	**6.4458**		**28,330.7326**	**28,330.7326**	**1.0209**		**28,356.2550**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

3.5 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8849	29.9245	9.0712	0.1045	2.8224	0.0351	2.8575	0.8126	0.0335	0.8461		11,179.1971	11,179.1971	0.6394		11,195.1827
Worker	7.1639	4.1142	49.5403	0.1720	20.6228	0.1417	20.7645	5.4693	0.1305	5.5997		17,151.5355	17,151.5355	0.3815		17,161.0723
Total	**8.0487**	**34.0387**	**58.6115**	**0.2765**	**23.4452**	**0.1768**	**23.6220**	**6.2818**	**0.1640**	**6.4458**		**28,330.7326**	**28,330.7326**	**1.0209**		**28,356.2550**

3.5 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8622	29.6629	8.8342	0.1038	2.8224	0.0344	2.8568	0.8125	0.0329	0.8455		11,117.5421	11,117.5421	0.6286		11,133.2574
Worker	6.8241	3.7614	45.9965	0.1652	20.6228	0.1390	20.7618	5.4693	0.1279	5.5972		16,475.9143	16,475.9143	0.3475		16,484.6014
Total	**7.6863**	**33.4243**	**54.8307**	**0.2690**	**23.4452**	**0.1734**	**23.6186**	**6.2818**	**0.1608**	**6.4426**		**27,593.4564**	**27,593.4564**	**0.9761**		**27,617.8588**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8622	29.6629	8.8342	0.1038	2.8224	0.0344	2.8568	0.8125	0.0329	0.8455		11,117.5421	11,117.5421	0.6286		11,133.2574
Worker	6.8241	3.7614	45.9965	0.1652	20.6228	0.1390	20.7618	5.4693	0.1279	5.5972		16,475.9143	16,475.9143	0.3475		16,484.6014
Total	**7.6863**	**33.4243**	**54.8307**	**0.2690**	**23.4452**	**0.1734**	**23.6186**	**6.2818**	**0.1608**	**6.4426**		**27,593.4564**	**27,593.4564**	**0.9761**		**27,617.8588**

3.5 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8424	29.3854	8.6509	0.1032	2.8224	0.0337	2.8561	0.8126	0.0322	0.8448		11,058.5271	11,058.5271	0.6179		11,073.9756
Worker	6.5318	3.4623	42.9769	0.1593	20.6228	0.1344	20.7572	5.4693	0.1237	5.5930		15,891.6721	15,891.6721	0.3182		15,899.6273
Total	**7.3742**	**32.8476**	**51.6278**	**0.2625**	**23.4452**	**0.1681**	**23.6133**	**6.2818**	**0.1559**	**6.4377**		**26,950.1992**	**26,950.1992**	**0.9362**		**26,973.6029**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8424	29.3854	8.6509	0.1032	2.8224	0.0337	2.8561	0.8126	0.0322	0.8448		11,058.5271	11,058.5271	0.6179		11,073.9756
Worker	6.5318	3.4623	42.9769	0.1593	20.6228	0.1344	20.7572	5.4693	0.1237	5.5930		15,891.6721	15,891.6721	0.3182		15,899.6273
Total	**7.3742**	**32.8476**	**51.6278**	**0.2625**	**23.4452**	**0.1681**	**23.6133**	**6.2818**	**0.1559**	**6.4377**		**26,950.1992**	**26,950.1992**	**0.9362**		**26,973.6029**

3.5 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8258	29.1167	8.5031	0.1027	2.8224	0.0330	2.8555	0.8126	0.0316	0.8441		11,005.7048	11,005.7048	0.6074		11,020.8898
Worker	6.2426	3.1931	40.2842	0.1541	20.6228	0.1271	20.7498	5.4693	0.1169	5.5862		15,376.3629	15,376.3629	0.2919		15,383.6594
Total	**7.0684**	**32.3098**	**48.7873**	**0.2568**	**23.4452**	**0.1601**	**23.6053**	**6.2818**	**0.1485**	**6.4303**		**26,382.0677**	**26,382.0677**	**0.8993**		**26,404.5492**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8258	29.1167	8.5031	0.1027	2.8224	0.0330	2.8555	0.8126	0.0316	0.8441		11,005.7048	11,005.7048	0.6074		11,020.8898
Worker	6.2426	3.1931	40.2842	0.1541	20.6228	0.1271	20.7498	5.4693	0.1169	5.5862		15,376.3629	15,376.3629	0.2919		15,383.6594
Total	**7.0684**	**32.3098**	**48.7873**	**0.2568**	**23.4452**	**0.1601**	**23.6053**	**6.2818**	**0.1485**	**6.4303**		**26,382.0677**	**26,382.0677**	**0.8993**		**26,404.5492**

3.5 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8117	28.8958	8.3891	0.1022	2.8225	0.0325	2.8549	0.8126	0.0310	0.8436		10,960.9783	10,960.9783	0.5975		10,975.9168
Worker	5.9397	2.9515	37.9240	0.1495	20.6228	0.1177	20.7405	5.4693	0.1083	5.5776		14,922.4933	14,922.4933	0.2692		14,929.2221
Total	**6.7514**	**31.8473**	**46.3132**	**0.2518**	**23.4452**	**0.1502**	**23.5954**	**6.2818**	**0.1393**	**6.4211**		**25,883.4716**	**25,883.4716**	**0.8667**		**25,905.1389**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8117	28.8958	8.3891	0.1022	2.8225	0.0325	2.8549	0.8126	0.0310	0.8436		10,960.9783	10,960.9783	0.5975		10,975.9168
Worker	5.9397	2.9515	37.9240	0.1495	20.6228	0.1177	20.7405	5.4693	0.1083	5.5776		14,922.4933	14,922.4933	0.2692		14,929.2221
Total	**6.7514**	**31.8473**	**46.3132**	**0.2518**	**23.4452**	**0.1502**	**23.5954**	**6.2818**	**0.1393**	**6.4211**		**25,883.4716**	**25,883.4716**	**0.8667**		**25,905.1389**

3.5 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7987	28.6792	8.2828	0.1018	2.8225	0.0318	2.8543	0.8126	0.0304	0.8430		10,921.0450	10,921.0450	0.5888		10,935.7658
Worker	5.5970	2.7180	35.5968	0.1455	20.6228	0.1094	20.7321	5.4693	0.1006	5.5699		14,519.9281	14,519.9281	0.2469		14,526.1005
Total	**6.3957**	**31.3971**	**43.8797**	**0.2473**	**23.4452**	**0.1412**	**23.5864**	**6.2818**	**0.1310**	**6.4129**		**25,440.9731**	**25,440.9731**	**0.8357**		**25,461.8663**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

3.5 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7987	28.6792	8.2828	0.1018	2.8225	0.0318	2.8543	0.8126	0.0304	0.8430		10,921.0450	10,921.0450	0.5888		10,935.7658
Worker	5.5970	2.7180	35.5968	0.1455	20.6228	0.1094	20.7321	5.4693	0.1006	5.5699		14,519.9281	14,519.9281	0.2469		14,526.1005
Total	**6.3957**	**31.3971**	**43.8797**	**0.2473**	**23.4452**	**0.1412**	**23.5864**	**6.2818**	**0.1310**	**6.4129**		**25,440.9731**	**25,440.9731**	**0.8357**		**25,461.8663**

3.6 Paving - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0455	0.0221	0.2894	1.1800e-003	0.1677	8.9000e-004	0.1686	0.0445	8.2000e-004	0.0453		118.0482	118.0482	2.0100e-003		118.0984
Total	**0.0455**	**0.0221**	**0.2894**	**1.1800e-003**	**0.1677**	**8.9000e-004**	**0.1686**	**0.0445**	**8.2000e-004**	**0.0453**		**118.0482**	**118.0482**	**2.0100e-003**		**118.0984**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9152**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

3.6 Paving - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0455	0.0221	0.2894	1.1800e-003	0.1677	8.9000e-004	0.1686	0.0445	8.2000e-004	0.0453		118.0482	118.0482	2.0100e-003		118.0984
Total	**0.0455**	**0.0221**	**0.2894**	**1.1800e-003**	**0.1677**	**8.9000e-004**	**0.1686**	**0.0445**	**8.2000e-004**	**0.0453**		**118.0482**	**118.0482**	**2.0100e-003**		**118.0984**

3.7 Architectural Coating - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	249.9268					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**250.0977**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.7 Architectural Coating - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1194	0.5436	7.1194	0.0291	4.1246	0.0219	4.1464	1.0939	0.0201	1.1140		2,903.9856	2,903.9856	0.0494		2,905.2201
Total	**1.1194**	**0.5436**	**7.1194**	**0.0291**	**4.1246**	**0.0219**	**4.1464**	**1.0939**	**0.0201**	**1.1140**		**2,903.9856**	**2,903.9856**	**0.0494**		**2,905.2201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	249.9268					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**250.0977**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

3.7 Architectural Coating - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	1.1194	0.5436	7.1194	0.0291	4.1246	0.0219	4.1464	1.0939	0.0201	1.1140		2,903.9856	2,903.9856	0.0494		2,905.2201
Total	**1.1194**	**0.5436**	**7.1194**	**0.0291**	**4.1246**	**0.0219**	**4.1464**	**1.0939**	**0.0201**	**1.1140**		**2,903.9856**	**2,903.9856**	**0.0494**		**2,905.2201**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.9421	124.3378	257.0241	1.3951	155.6441	0.6898	156.3339	41.6271	0.6413	42.2684		143,414.1006	143,414.1006	5.5321		143,552.4022
Unmitigated	19.9421	124.3378	257.0241	1.3951	155.6441	0.6898	156.3339	41.6271	0.6413	42.2684		143,414.1006	143,414.1006	5.5321		143,552.4022

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	11,980.80	11,980.80	11980.80	40,940,214	40,940,214
General Office Building	6,452.83	6,452.83	6452.83	20,787,546	20,787,546
Health Club	469.15	469.15	469.15	1,003,409	1,003,409
Research & Development	3,102.38	3,102.38	3102.38	10,481,872	10,481,872
Total	22,005.17	22,005.17	22,005.17	73,213,041	73,213,041

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Health Club	16.60	8.40	6.90	16.90	64.10	19.00	52	39	9
Research & Development	16.60	8.40	6.90	33.00	48.00	19.00	82	15	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
General Office Building	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
Health Club	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730
Research & Development	0.551603	0.041085	0.206475	0.110641	0.012172	0.005739	0.022664	0.039599	0.002222	0.001434	0.004920	0.000715	0.000730

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349
NaturalGas Unmitigated	1.9431	17.0696	10.4743	0.1060		1.3425	1.3425		1.3425	1.3425		21,197.6677	21,197.6677	0.4063	0.3886	21,323.6349

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	101167	1.0910	9.3233	3.9673	0.0595		0.7538	0.7538		0.7538	0.7538		11,902.0221	11,902.0221	0.2281	0.2182	11,972.7499
General Office Building	12780.5	0.1378	1.2530	1.0525	7.5200e-003		0.0952	0.0952		0.0952	0.0952		1,503.5854	1,503.5854	0.0288	0.0276	1,512.5205
Health Club	8700.2	0.0938	0.8530	0.7165	5.1200e-003		0.0648	0.0648		0.0648	0.0648		1,023.5528	1,023.5528	0.0196	0.0188	1,029.6353
Research & Development	57532.3	0.6205	5.6404	4.7380	0.0338		0.4287	0.4287		0.4287	0.4287		6,768.5074	6,768.5074	0.1297	0.1241	6,808.7293
Total		**1.9431**	**17.0696**	**10.4743**	**0.1060**		**1.3425**	**1.3425**		**1.3425**	**1.3425**		**21,197.6677**	**21,197.6677**	**0.4063**	**0.3886**	**21,323.6349**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	101.167	1.0910	9.3233	3.9673	0.0595		0.7538	0.7538		0.7538	0.7538		11,902.0221	11,902.0221	0.2281	0.2182	11,972.7499
General Office Building	12.7805	0.1378	1.2530	1.0525	7.5200e-003		0.0952	0.0952		0.0952	0.0952		1,503.5854	1,503.5854	0.0288	0.0276	1,512.5205
Health Club	8.7002	0.0938	0.8530	0.7165	5.1200e-003		0.0648	0.0648		0.0648	0.0648		1,023.5528	1,023.5528	0.0196	0.0188	1,029.6353
Research & Development	57.5323	0.6205	5.6404	4.7380	0.0338		0.4287	0.4287		0.4287	0.4287		6,768.5074	6,768.5074	0.1297	0.1241	6,808.7293
Total		**1.9431**	**17.0696**	**10.4743**	**0.1060**		**1.3425**	**1.3425**		**1.3425**	**1.3425**		**21,197.6677**	**21,197.6677**	**0.4063**	**0.3886**	**21,323.6349**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972
Unmitigated	125.6584	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427	0.0000	371.2436	371.2436	0.3541	0.0000	380.0972

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.1088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	108.3948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.1548	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427		371.2436	371.2436	0.3541		380.0972
Total	**125.6584**	**2.3693**	**205.4114**	**0.0109**		**1.1427**	**1.1427**		**1.1427**	**1.1427**	**0.0000**	**371.2436**	**371.2436**	**0.3541**	**0.0000**	**380.0972**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	11.1088					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	108.3948					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	6.1548	2.3693	205.4114	0.0109		1.1427	1.1427		1.1427	1.1427		371.2436	371.2436	0.3541		380.0972
Total	**125.6584**	**2.3693**	**205.4114**	**0.0109**		**1.1427**	**1.1427**		**1.1427**	**1.1427**	**0.0000**	**371.2436**	**371.2436**	**0.3541**	**0.0000**	**380.0972**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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Appendix C3

2021 LRDP Programmatic Health Risk Assessment

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2021 Long Range Development Plan

Programmatic Health Risk Assessment

prepared by

University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, California 92507

prepared with the assistance of

Rincon Consultants, Inc.
1980 Orange Tree Lane, Suite 105
Redlands, California 92374

March 2021

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
rinconconsultants.com

2021 Long Range Development Plan

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1 Introduction and Executive Summary

1.1 Purpose of Assessment

University of California, Riverside (UCR or University) is one of 10 campuses in the University of California (UC) system. The UCR campus is located in the eastern portion of the city of Riverside in southern California. UC policy requires all campuses to maintain a Long Range Development Plan (LRDP), defined as a “physical development and land use plan to meet the academic and institutional objectives for a particular campus or medical center of public higher education” (Public Resources Code of the State of California Section 21080.09). In addition to incorporating program objectives to achieve a campus’s academic goals, the LRDP is a comprehensive document that guides a campus’s physical development and addresses land use, the location of new facilities, distribution of open space, and circulation strategies.

This Programmatic Health Risk Assessment (HRA) has been completed in support of California Environmental Quality Act (CEQA) documentation being prepared for UCR’s proposed 2021 LRDP. With directives from the UC system-wide initiatives and UCR Strategic Plan, the proposed 2021 LRDP contains an updated campus land use plan; new student enrollment and campus population projections; updated academic, research, support and ancillary space needs; and planning principles for guiding future campus development under the plan. Specifically, the analysis contained herein quantifies potential health risk impacts associated with changes in toxic air contaminant (TAC) emissions resulting from implementation of the proposed UCR 2021 LRDP.

1.2 Executive Summary

The Programmatic HRA analyzes both carcinogenic and non-carcinogenic (chronic and acute) health risks associated with campus buildout under the proposed 2021 LRDP. First, the emissions of TACs were characterized (i.e., quantified, speciated, and sited) under both baseline and future buildout conditions. Next, emissions under each scenario were modeled using air dispersion modeling software to obtain ground-level concentrations of each TAC under each scenario. These ground-level concentrations were then used to determine the health risk values at both on-campus and off-campus receptor locations. Potential increases in health risk under the 2021 LRDP are compared to applicable South Coast Air Quality Management District (SCAQMD) health risk criteria to determine whether the 2021 LRDP would result in a potentially significant health risk impact.

The proposed 2021 LRDP establishes a land use framework and identifies physical development necessary to support projected enrollment growth to 35,000 students by 2035, based on current student enrollment, regional growth trends, and agreements between the UC and the State regarding resident student and transfer student enrollment objectives. To accommodate planned growth in enrollment, the proposed 2021 LRDP would involve expansion of academic and research, academic support, and student life facilities across the approximately 1,108-acre campus.

This analysis estimates operational health risks associated with implementation of the proposed 2021 LRDP. Specifically, this analysis considers potential changes in emissions of TACs under baseline (2018/2019 academic year) and future (2035) scenarios. TAC emissions sources considered in this analysis include: Natural-gas fired kitchen equipment, diesel- and natural gas-fired emergency generators, natural gas-fired boilers and water heaters, gasoline dispensing facilities, laboratory fume hoods, and diesel delivery truck routes on and adjacent to campus.

For this Programmatic HRA, site-specific air dispersion modeling was conducted to determine whether health risks presented to sensitive receptors on- and off-campus from implementation of the proposed 2021 LRDP would exceed SCAQMD health risk criteria. Off-site sensitive receptors in the vicinity of the project site include residential neighborhoods to the north, south, east, and west, as well as Highland Elementary School and University Middle School to the north. On-campus sensitive receptors include existing and proposed student housing and residence halls and the UCR Child Development Center daycare.

Cancer risk is expressed as the incremental excess cancer risk, or the maximum number of new cancer cases projected to occur in a population of one million people due to exposure to a cancer-causing substance. Additionally, TAC emissions can present non-carcinogenic acute and chronic health hazards. Potential acute health risks include severe symptoms that develop rapidly and lead to a health crisis due to exposure to a harmful substance, whereas chronic health risks include health crises, such as lung inflammation, immune suppression, and immune sensitization, which develop due to exposure to low levels of a harmful substance over a long period of time. Non-cancer chronic and acute health risk is typically expressed as a unitless hazard index.

Typically, cancer risk is analyzed over a specific exposure duration, such as the average residency (50-percentile) of nine years or high-end residency (95-percentile) of 30 years (SCAQMD 2017). For example, a cancer risk of one in one million means that in a population of one million people, not more than one additional person would be expected to develop cancer as the result of the exposure to the substance causing that risk. The exposure durations used for this analysis include 30 years for off-campus residents, 6 years for on-campus residents and daycare students, and 25 years for on- and off-campus workers.

An analysis using the United States Environmental Protection Agency's (U.S. EPA) AERMOD dispersion model and Office of Environmental Health Hazard Assessment (OEHHA) and SCAQMD guidance for health risk analysis determined that the net increase in health risk between the baseline and future scenarios for the on- and off-campus Maximally Exposed Individual Resident (MEIR), on- and off-campus Maximally Exposed Individual Worker (MEIW), and the UCR Child Development Center student would remain below SCAQMD recommended health risk criteria. The greatest increase in cancer risk resulting from implementation of the proposed 2021 LRDP would occur at off-site residences, which would experience an increase in cancer risk of approximately 4.9 in 1 million. This does not exceed SCAQMD's recommended cancer risk criteria of 10 excess cases of cancer in 1 million (1×10^{-5}). The greatest increase in non-cancer chronic health risk would occur at off-site residences, on-campus residences, and on-campus worker locations, which would each experience an increase in non-cancer chronic hazard index of approximately 0.02. This remains below SCAQMD's recommended chronic health risk threshold of a hazard index of 1.0. Finally, on-campus residents, off-campus workers, and the UCR Child Development Center would each experience an increase in acute hazard index of approximately 0.04 under the proposed 2021 LRDP, which does not exceed the SCAQMD recommended threshold of 1.0.

2 Project Description

This section provides an overview of the existing UCR campus setting, proposed 2021 LRDP objectives, current and projected land use, development, and growth under the proposed 2021 LRDP, and the 2021 LRDP implementation process.

2.1 Existing Campus Setting

Site Location

The UCR campus is located at 900 University Avenue in the city of Riverside, Riverside County, California. The approximately 1,108-acre campus[1] is in the eastern portion of Riverside, immediately west of the Box Springs Mountains, approximately 3 miles east of downtown Riverside, and approximately 2 miles northeast of Moreno Valley. Riverside, including UCR, is located within a larger geographic area known as Inland Southern California, which includes western Riverside and southwestern San Bernardino counties, and portions of the Pomona Valley in easternmost Los Angeles County. The campus is diagonally bisected by Interstate 215/State Route 60 (I-215/SR 60), resulting in two areas of campus: East Campus and West Campus. The campus is generally bounded by Blaine Street to the north, Le Conte Drive to the south, Watkins Drive to the east, and Chicago Avenue to the west.

East Campus

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are in the Academic Center circumscribed by Campus Drive. The northern half of East Campus is devoted to student housing and recreation. The bell tower marks the heart of the campus, at the center of the Carillon Mall. The UCR Botanic Gardens is in the southeastern area of East Campus. The terrain steepens to the south and east of East Campus surrounding the Botanic Gardens and as a result, these areas remain largely undeveloped.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations unit of UCR's College of Natural and Agricultural Sciences. Other UCR facilities located on West Campus include Parking Lot 30; University Extension; and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR, is at the northern edge of Parking Lot 30. A California Department of Transportation (Caltrans) service yard is situated on an approximately 4.4-acre triangular parcel directly west of the I-215/SR 60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses West Campus, mostly underground, from north to south.

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[1] The UC Riverside Palm Desert Center, UCR Natural Reserves, all other Regents-owned properties, and all off-campus leased spaces are excluded.

Surrounding Land Uses

Land uses surrounding the campus are primarily residential, with some commercial uses along the arterial streets. Residential uses, commercial uses, and the I-215/SR 60 freeway are located north of the campus. Residential uses and open space, including the Box Springs Mountain Reserve, are located east of the campus. Residential uses, open space, and the I-215/SR 60 freeway are located south of the campus. Residential uses and commercial uses are located west of the campus. The California Air Resources Board (CARB) Southern California headquarters facility is located adjacent to the West Campus, between Chicago Avenue, Iowa Avenue, University Avenue and Martin Luther King Boulevard.

Figure 1 shows the regional location of the UCR campus. Figure 2 displays East Campus and West Campus within the Riverside city limits.

2.2 2021 LRDP Overview

The proposed 2021 LRDP establishes a land use framework and identifies physical development necessary to support projected enrollment growth to 35,000 students by 2035, based on current student enrollment, regional growth trends, and agreements between the UC and the State regarding resident student and transfer student enrollment objectives.

The proposed 2021 LRDP would direct the renovation and expansion of existing academic, research, academic support, student life, and other support functions that complement appropriate growth in operational funding. The 2021 LRDP proposes to accommodate a total campus population of approximately 42,545, including enrollment of approximately 35,000 students (three-quarter average headcount) by the academic year 2035/2036. It is anticipated that approximately 7,600 faculty and staff would be needed to support the projected academic year 2035/2036 student enrollment. Table 1 provides a net increase comparison of the projected campus population between the 2018/2019 academic year (baseline) and the 2035/2036 academic year (2021 LRDP).

Table 1 Baseline and 2021 LRDP (2035/2036) Campus Population

Campus Population[1]	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Undergraduate Student Population	20,581	28,000	7,419
Graduate Student Population	3,341	7,000	3,659
Total Student Population	**23,922**	**35,000**	**11,078**
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	**4,739**	**7,545**	**2,806**
Total Campus Population	**28,661**	**42,545**	**13,884**

[1] Fall 2018 headcount

Figure 1 Regional Location

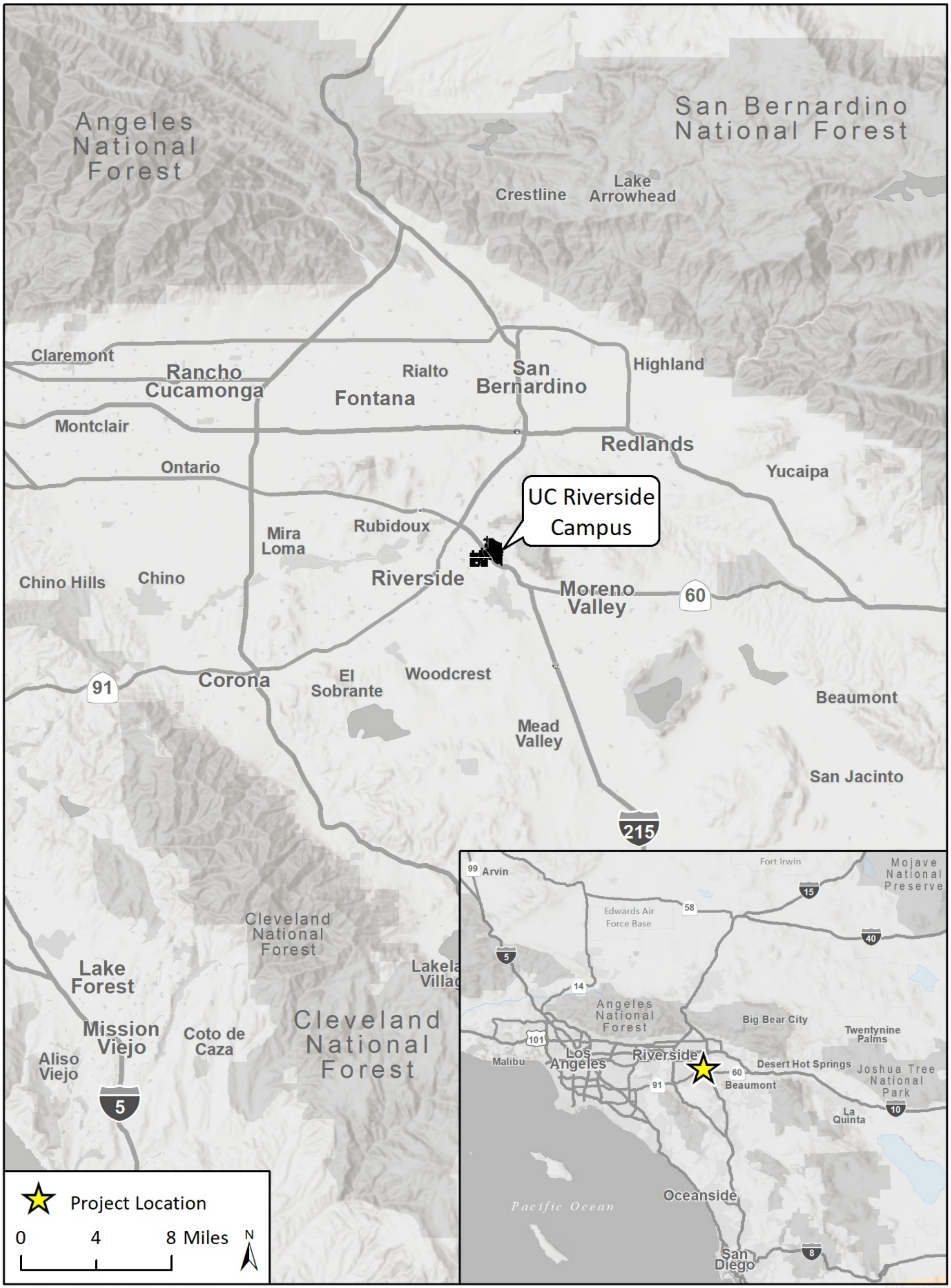

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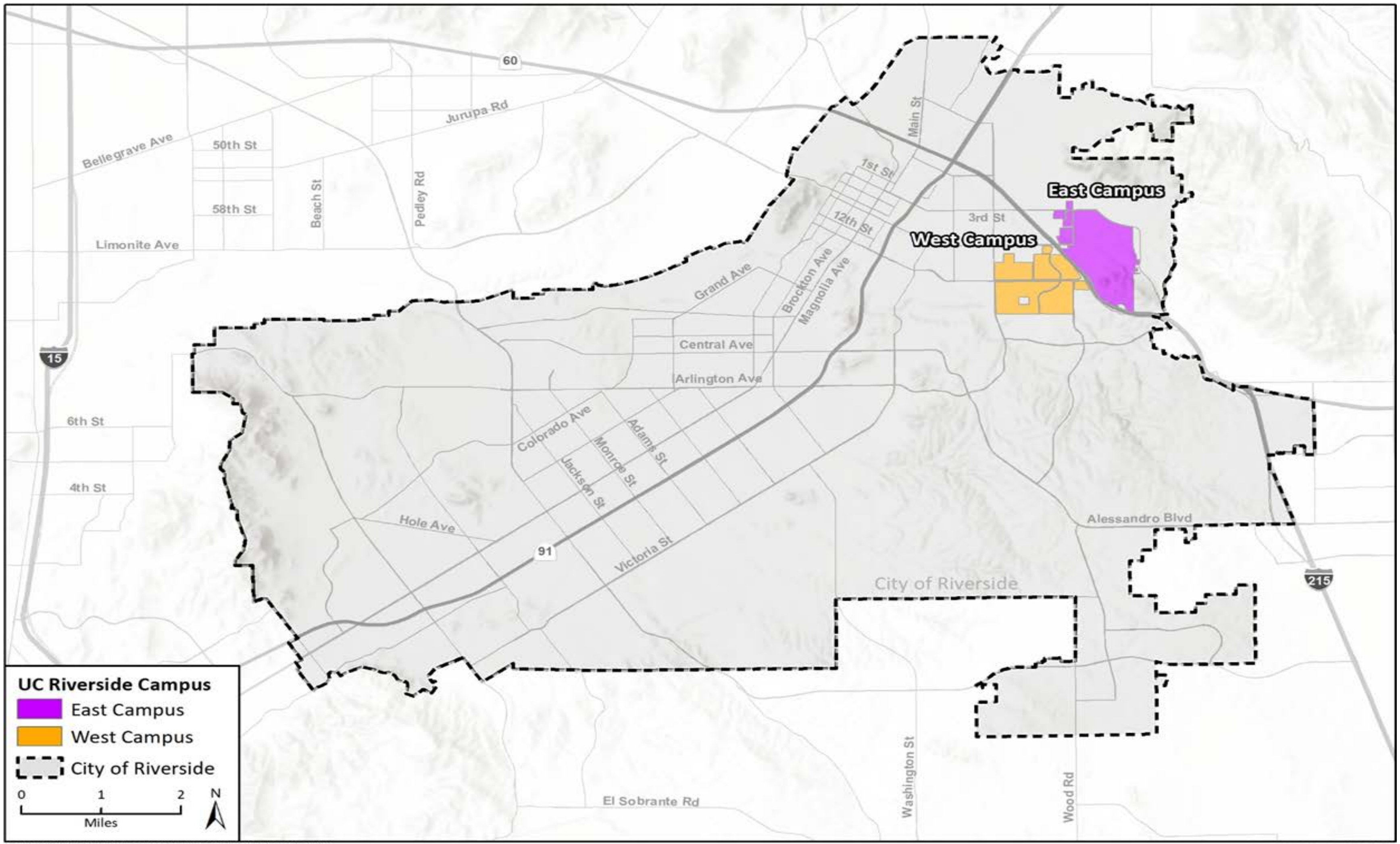
Figure 2 Project Site



Data provided by UC Riverside and County of Riverside, 2020.

Fig 2 Local Setting-VTA-AFS01

2.3 Proposed Land Use

The 2021 LRDP proposes a net increase in development of approximately 3.7 million asf (approximately 6 million gsf) of additional academic buildings and support facilities. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf) of total academic, research, and support space development by the year 2035/2036 to accommodate the enrollment growth and meet program needs. The proposed 2021 LRDP includes a framework of land uses categories that designate the general allowable uses in a certain area. Predominant land uses are the primary facilities, programs, and/or activities within a given land use category to achieve specific planning objectives. Figure 3 shows the general location of the proposed land uses on campus.

Facilities Development

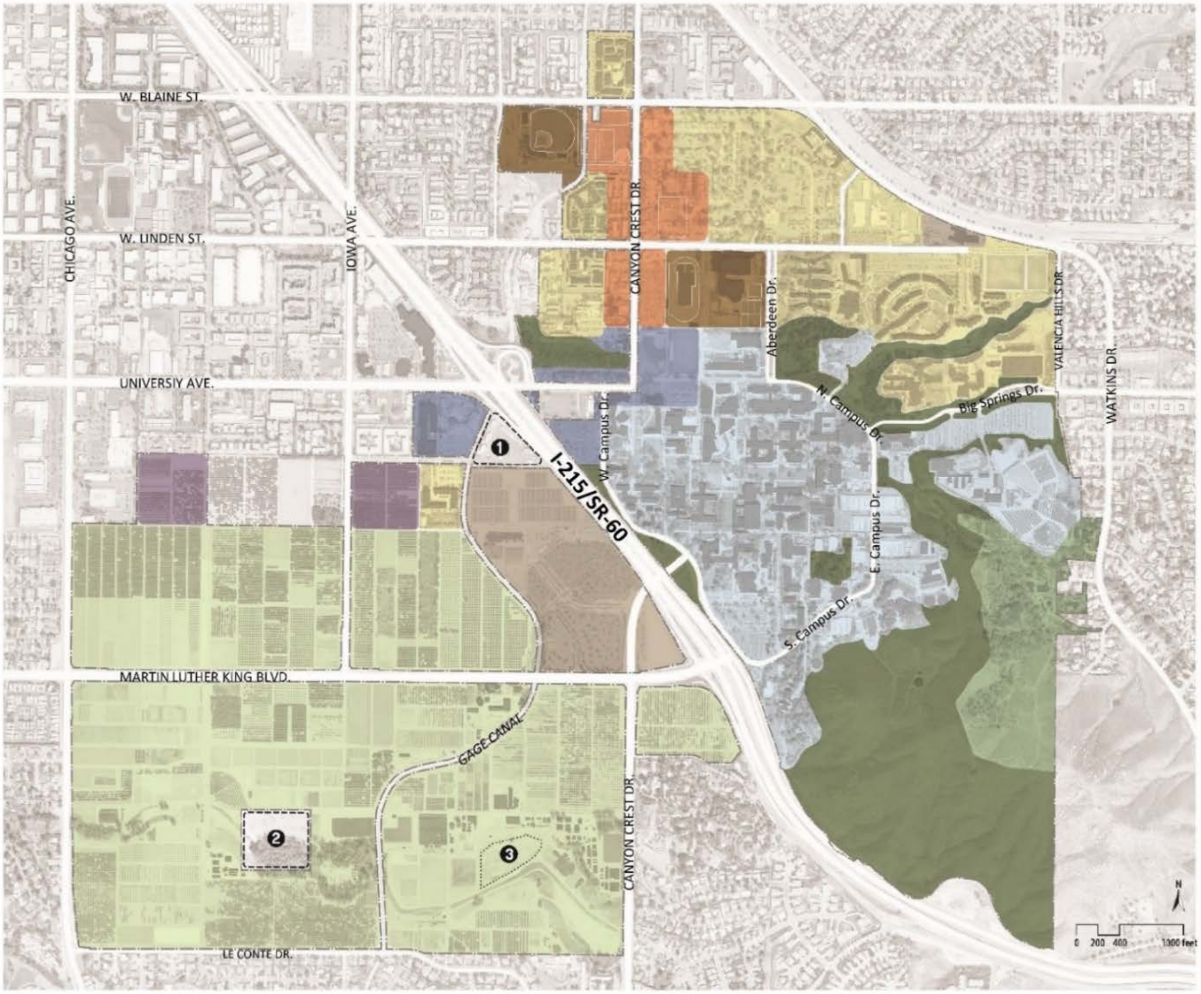
The proposed 2021 LRDP is a strategy for accommodating growth and change through academic year 2035/2036. It presents a guideline for future campus development, including new construction, facility renovations, and site development projects. These activities would be carried out throughout the life of the proposed 2021 LRDP.

To accommodate presumed enrollment growth, new construction and the renovation and expansion of existing UCR facilities would be undertaken. Facilities proposed under the 2021 LRDP broadly include:

- **Academics and Research.** These facilities are primarily dedicated to undergraduate and graduate learning, research environments, and daytime student life activities.
- **Academic Support.** These facilities are targeted at supporting academic and research activities on campus and include administrative offices, libraries, and other academic department space.
- **Student Life.** These facilities support core campus life activities and include residential and dining hall space, recreation and athletics land uses, and student health facilities.
- **Other Facilities.** This category of facilities includes the campus Corporation Yard, which houses multiple units supporting campus-wide operations, including Facilities Services and Environment, Health and Safety.

The proposed 2021 LRDP assumes that renovations, development, and expansions would generally occur within the existing campus footprint, on acquisitions of interest, and through University partnerships in City-owned districts by means of increased development density. Table 2 shows the existing and proposed building space for each of the above facilities categories.

Figure 3 2021 Land Use Map



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

- 🟦 ACADEMICS & RESEARCH
- 🟪 AGRICULTURAL/CAMPUS RESEARCH
- 🟩 LAND-BASED RESEARCH
- 🟫 CAMPUS SUPPORT
- 🟩 OPEN SPACE RESERVE
- 🟩 UCR BOTANIC GARDENS
- 🟫 RECREATION & ATHLETICS
- 🟨 STUDENT NEIGHBORHOOD
- 🟧 CANYON CREST GATEWAY
- 🟦 UNIVERSITY AVENUE GATEWAY
- ⬚ NON-UCR LAND OF INTEREST

Table 2 Existing and Proposed Campus Building Space

Facilities	2018 Existing Space (asf)	2035 Proposed Space (asf)	Difference (asf)
Academics & Research			
Classroom & Services[1]	113,282	290,252	176,970
Classroom & Services (seats)[2]	6,947	12,978	6,031
Teaching Lab & Services[3]	102,729	165,800	63,071
Open Lab & Service[4]	116,743	129,500	12,757
Research Lab & Service[5]	887,529	1,115,300	178,090
Total Academics & Research	**1,220,283**	**1,700,852**	**480,569**
Academic Support			
Offices and Services[6]	996,834	1,583,415	586,581
Library & Collaborative Learning Space[7]	337,551	514,789	177,238
Assembly & Exhibit[8]	54,988	117,000	62,012
Other Department Space[9]	69,602	140,000	70,398
Total Academic Support	**1,458,97**	**2,355,204**	**896,229**
Student Life			
Residential[10]	1,525,647	3,643,620	2,117,973
Residential Dining (seats)[11]	1,172	1,929	757
Residential Dining[12]	55,802	94,527	38,725
Student Health[13]	14,117	24,500	10,383
Student Union[14]	97,122	187,422	90,300
Recreation (Indoor)	140,707	205,867	65,160
Recreation (Outdoor)[15]	7	11	4
Athletics[16]	42,568	42,568	0
Total Student Life	**1,875,963**	**4,198,504**	**2,322,541**
Other Facilities			
Corporation Yard[17]	248,279	248,279	0
Total Other Facilities	**248,279**	**248,279**	**0**
Total Campus Space	**4,803,500**	**8,500,000**	**3,700,000**

asf = assignable square feet, defined as the area measured within the interior walls of a room that can be assigned to a program. asf does not include circulation, mechanical, restrooms, or building service spaces.

Note: All baseline asf is Fall 2018 data unless otherwise stated.

[1] Renovations of existing classrooms will not reduce their capacity.

[2] Future student seats are assumed to be 21 asf/station. UCR's existing classrooms (excluding the movie theaters) have an average 15.5 asf/station, which is typical for lecture-style classrooms. Active learning can require up to 25 asf/station. The assumed 21 asf/station in the model represents the average of the 15 - 25 asf range for active learning classrooms. The asf calculations add 4% for classroom service space for new classrooms, plus existing classroom and service asf.

[3] Teaching labs are defined as rooms used for regularly or formally scheduled classes which require special equipment or configuration (ex: art studios, chemistry labs, engineering computer labs).

[4] An open laboratory is designed for or furnished with equipment that serves the needs of a particular discipline or discipline group for individual or group instruction where 1) use of the space is not formally or regularly scheduled, or 2) access is limited to specific groups of students. Included in this category are spaces generally called music practice rooms, language laboratories used for individual instruction, studios for individualized instruction, special laboratories or learning laboratories (e.g., speech, hearing, law, psychology, and health-related professions) if discipline restricted, individual laboratories, and computer laboratories involving specialized restrictive software or where access is limited to specific categories of students. General purpose computer labs are not open labs, but rather classified as study rooms (Library & Collaborative Space).

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[5] Base year 2018/2019. Space needs analysis was limited to direct expenditures (67% of total research expenditures), and do not include facilities and administrative expenditures (indirect costs) or land-based research expenditures.

[6] Allocation per person by employment type plus 40% factor for conference, service, and internal office suite circulation. The Faculty, Staff, and Student Appointment office sizes are UCR guidelines. UCR has no formal telecommuting policy - all employees are assumed to require office space.

[7] UCR Librarian prepared a UCR-specific needs calculation for a library to serve a 35,000-student enrollment (expansion by 128,875 asf). There is no standard guideline for collaborative learning space distributed across campus outside of the library, but through benchmarking and discussion with various universities, an asf allocation of 15% to 25% of the classroom and teaching lab asf was found appropriate.

[8] Guidelines from Association for Learning Environments were used to determine asf.

[9] Uses included in this category are those that do not fit in any other category. At UCR this includes space categorized by UCR as 510 (Armory), 530/535 (Media Production), 555 (Demonstration), 560 (Field Buildings), 570/575 (Animal Quarters), and 650 (Lounge). The 4.0 asf/student benchmark is achievable.

[10] New beds are designed to average 250 gsf/Freshmen bed, average 500 gsf/Upperclassmen-Family bed, 70% asf/gsf efficiency. In Freshmen tripled rooms, three residents in a room sized for two residents. Falkirk Apartments will be converted from upperclassmen to family within the next ten years, reducing the upperclassmen student beds by 345 beds.

[11] The Residential Dining Base Year is Fall 2020, when Glasgow dining (830 seats) is open and Aberdeen-Inverness dining (500 seats) is closed. The completion of the North District will result in 5,470 freshmen beds and 1,772 dining seats (3.1 freshmen residents/seat). The Program Model maintains the 3.1 freshmen residents/seat ratio for 40% on-campus residency.

[12] Lothian Dining Hall is 15,002 asf and has 342 seats (44 asf/seat). The Glasgow Dining Hall is planned to be 50,600 gsf/40,800 asf and have 830 seats (49 asf/seat).

[13] New Student Health and Counseling Center (anticipated completion Summer 2021)

[14] Expansion assumptions from Student Union Expansion Analysis (2015)

[15] In addition to the 3 fields at Glen Mor, UCR Recreation presently has shared use of the 3 fields of the Sportsplex with the City of Riverside and has access to the fields during the typical times for intramural and club sport competition. UCR Recreation also has shared use of the 1 athletics soccer competitive field.

[16] Indoor athletic facilities are shared with recreation. No plans for growth in the Athletics program that would result in a need for additional space or outdoor facilities was expressed. However, quality of existing space is a concern.

[17] Guidelines recommend 5% of all non-residential, non-facilities asf. It is anticipated that UCR residence halls will have their own maintenance staff and workspace, which is incorporated to the Residential Beds Program Model. Based on that assumption, current interior space for campus related needs is in line with the projected need in 2035.

In addition to the project facilities development described above, UCR has identified several recently completed or presently underway interim projects. Interim projects are those that have recently been constructed since academic year 2018/2019 or will be completed in the near future, as shown in Table 3. The environmental impacts of these projects were analyzed under a stand-alone Environmental Impact Report (EIR) or an addendum to the 2005 LRDP EIR or assessed through a CEQA categorical exemption.

Table 3 Interim Projects

Project	Estimated Completion Date
Dundee Glasgow	Completed
The Barn	Completed
Pierce Hall Renovation	Winter 2020
Plant Growth Environments Facility	Winter 2020
Parking Structure 1	Spring 2021
Student Health & Counseling Center	Summer 2021
North District Phase 1	Summer 2021
Student Success Center	Summer/Fall 2021
School of Medicine Building 2	Winter 2021
Batchelor Hall Renovation	Fall 2023
North District Phase 2	To be determined
North District Future Phases 3-5	To be determined

Implementation

The proposed 2021 LRDP is a plan to guide development, but it is not an implementation plan. Adoption of the proposed 2021 LRDP does not constitute a commitment to any specific project. Rather, development under the LRDP would occur over time, based on campus needs and funding availability. As individual 2021 LRDP projects are proposed for implementation (i.e., when UCR is ready to move forward with individual project planning and construction), additional CEQA compliance review, including site- and condition-specific analysis and specific permits and/or approvals may be necessary, depending on the circumstances of the particular project. Accordingly, each project would be evaluated at the time it is proposed for implementation to determine the need for additional environmental review.

The UC Regents and/or its delegated authorities must approve each development proposal, as appropriate. At the campus level, the review of campus development proposals is informed by a process that involves input from staff, faculty, and students (and the local community, as appropriate). The design and construction of future projects at UCR would be subject to the campus development review process. In addition to compliance with CEQA, the development review process requires review by campus committees and administrative staff, evaluation of the proposed design and construction documents, and construction inspection and site monitoring during construction. Committees and administrative offices involved in project implementation may include project sponsors, Office of the Vice Chancellor for Planning, Budget, & Administration, and campus stakeholders, among others.

Although the LRDP is the primary governing planning document for the campus, several other supplemental guidance documents are in place to inform development at UCR (e.g., Physical Design Framework, Campus Design Guidelines). In general, facilities on the UCR campus comply with the design guidelines set forth in these documents.

3 Background

The following section provides a general overview of local air quality conditions, federal and State regulation of air pollution, the nature of specific TACs of concern, and a description of health risks evaluated in this Programmatic HRA.

3.1 Local Climate and Meteorology

The UCR campus is in the South Coast Air Basin (SCAB), which is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the Pacific Ocean to the west. The SCAB includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the San Gorgonio Pass area in Riverside County. The regional climate in the SCAB is semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality in the SCAB is primarily influenced by meteorology and a wide range of emission sources, such as dense population centers, substantial vehicular traffic, and industry.

Air pollutant emissions in the SCAB are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples include boilers or combustion equipment that produce electricity or generate heat. Area sources are widely distributed and include such sources as residential and commercial water heaters, painting operations, lawn mowers, agricultural fields, landfills, and some consumer products. Mobile sources refer to emissions from motor vehicles, including tailpipe and evaporative emissions, and are classified as either on-road or off-road. On-road sources may be legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

3.2 Air Quality Regulation

Federal and State governments have established ambient air quality standards for the protection of public health. The U.S. EPA is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the State equivalent in the California Environmental Protection Agency (CalEPA). County-level or regional Air Quality Management Districts (AQMDs) provide local management of air quality. CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local AQMDs are responsible for enforcing standards and regulating stationary sources. The South Coast Air Quality Management District (SCAQMD) is the designated air quality control agency in the SCAB, which is currently designated in non-attainment for the federal ozone and $PM_{2.5}$ (particulate matter up to 2.5 microns[2] in size) standards, and the State standards for ozone, PM_{10}, and $PM_{2.5}$. The Los Angeles County portion of the SCAB is also designated non-attainment for federal lead standards, and a portion of the SR 60 corridor in Los Angeles and San Bernardino counties is designated non-

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[2] One micron equals one-millionth of a meter; i.e., 10^{-6}

attainment for State nitrogen dioxide standards (SCAQMD 2017; CARB 2019). The SCAB is designated unclassifiable or in attainment for all other federal and State standards.

3.3 Toxic Air Contaminants

A TAC is a substance CARB has determined to have the potential to cause serious health effects. TACs tend to be localized and are found in relatively low concentrations in ambient air; however, exposure to low concentrations over long periods can result in increased risk of cancer and/or adverse health effects.

The State of California has taken regulatory action to identify, evaluate, and control the harmful effects of TACs through the California Air Toxics Program, which establishes the process for the identification and control of TACs and includes provisions to make the public aware of significant toxic exposures and for reducing risk. The California Air Toxics Program is implemented by CARB and shaped by multiple key pieces of legislation originating in the 1980s.

In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health (Assembly Bill [AB] 1807: Health and Safety Code Sections 39650–39674). The Legislature established a two-step process to address the potential health effects from TACs. The first step is the risk assessment (or identification) phase. The second step is the risk management (or control) phase of the process.

Additionally, the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, Connelly Bill) was enacted in 1987 and requires stationary sources to report the types and quantities of certain substances routinely released into the air. The goals of the Air Toxics "Hot Spots" Act are to collect emission data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels. The Children's Environmental Health Protection Act, California Senate Bill 25 (Chapter 731, Escutia, Statutes of 1999), focuses on children's exposure to air pollutants. The act requires CARB to review its air quality standards from a children's health perspective, evaluate the statewide air quality monitoring network, and develop any additional air toxic control measures needed to protect children's health.

TACs include both organic and inorganic chemical substances, and emissions are highly dependent on the nature of the pollution source or activity. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter (DPM); however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. Given the diversity of land uses and activities that occur on the UCR campus, this analysis quantifies and analyzes health risk associated with emissions of approximately 84 TACs. A brief description of the primary TACs (i.e., those with the greatest bulk emissions) considered in this Programmatic HRA is included below.

Diesel Particulate Matter

Fine particulates are generally associated with combustion processes and form in the atmosphere as a secondary pollutant through chemical reactions. PM_{10} (particulate matter measuring no more than 10 microns in diameter) is a by-product of fuel combustion and wind erosion of soil and unpaved roads (dust), and it is directly emitted into the atmosphere through these processes. Chemical reactions in the atmosphere also create PM_{10}. Very fine particulate matter, or $PM_{2.5}$ (particulate matter measuring no more than 2.5 microns in diameter), is a class of suspended particulates that can be generated by dust, but is more commonly associated with combustion processes. Fine and very fine particulate matter poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an adsorbed toxic substance.

Diesel engine fuel combustion forms an important fraction of the particulate matter emission inventory statewide, as particulates in diesel emissions are very small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. Therefore, these particulate emissions have been determined by CARB to be a TAC.

DPM emissions are estimated to be responsible for about 70 percent of the total ambient air toxics risk in California and contributes to approximately 1,400 premature deaths from cardiovascular disease statewide each year (CARB 2021). In addition to these general risks, DPM can also be responsible for elevated localized or near-source exposures ("hot-spots").

Acetaldehyde

Sometimes known as ethanol, acetaldehyde is an organic chemical compound used as an intermediate in the production of acetic acid, certain esters, and a number of other chemicals. It is a flammable liquid with a fruity smell. Acetaldehyde is a toxic when applied externally for prolonged periods, an irritant, and a probable carcinogen.

Formaldehyde

Formaldehyde is an organic chemical compound containing a terminal carbonyl group. It is produced in the atmosphere by the action of sunlight and oxygen on atmospheric methane and other hydrocarbons, becoming a part of smog. Additionally, formaldehyde is an intermediate in the oxidation (or combustion) of methane as well as other carbon compounds including automobile exhaust. Formaldehyde is a flammable substance that can be toxic, allergenic, and carcinogenic. It is naturally made in small amounts in human bodies and is found in small amounts in household sources, such as fiberglass, carpets, permanent press fabrics, paper products, and some household cleaners.

BTEX Chemicals

Benzene, toluene, ethylbenzene, and xylene—commonly referred to as BTEX chemicals—are frequently co-occurring compounds, typically associated with volatilization and combustion of petroleum and natural gas products. Common sources of BTEX chemicals in urban environments include vehicle exhaust, gasoline dispensing facilities, and natural gas boilers.

Benzene is a known carcinogen, linked to multiple forms of leukemia and non-Hodgkin lymphoma. Other long-term common health risks associated with benzene include a decrease in red blood cells, leading to anemia and harmful effects on bone marrow, and ovarian damage. Toluene is commonly associated with irritation of the eyes, nose, and throat in addition to dizziness and headache. Long-term exposure can lead to numbness of the hand or feet and female reproductive system damage. Ethylbenzene affects the inner ear and hearing of individuals and is a known carcinogen when exposure occurs for a prolonged amount of time. Finally, like the other chemicals, short term exposure of xylene can lead to irritation to the eyes, nose, skin, and throat. Prolonged exposure to xylene may also lead to harmful nervous system effects.

Ammonia

Ammonia is commonly known for its use in refrigeration, blueprinting machines, and neutralizing agents. Ammonia is present in the atmosphere in a gas phase and can react with other chemicals to form ammonium salts. It is likely to cause non-carcinogenic effects such as irritation to the eyes and respiratory tract. High concentrations of this chemical can cause severe issues such as pulmonary edema, conjunctivitis, laryngitis, and difficulties breathing.

Methanol

Methanol is a flammable, mobile, colorless liquid that can be found in inks, resins, adhesives, dyes, and pharmaceuticals as a solvent. It is also found in antifreeze and has been used as an alternative motor fuel. Methanol is toxic and allergenic when exposure is short or prolonged. The chemical has not been classified by the U.S. EPA with respect to carcinogenicity.

Hexane

Hexane is a chemical compound used to extract oils from seeds and vegetables and a solvent for other chemicals. It is a highly flammable, colorless liquid with a faint odor. Hexane is toxic when applied externally and internally for prolonged periods, an irritant, and a probable carcinogen. However, the U.S. EPA has not yet classified the carcinogenicity of hexane.

Chloroform

Chloroform is a chemical compound often formed in pulp, paper mills, hazardous waste sites such as sanitary landfills, and has been observed to be present in the air as a result of the chlorination of drinking water, wastewater, and swimming pools. It is a colorless liquid with a pleasant odor. Chloroform is toxic when applied internally for prolonged periods, an irritant, and a probable carcinogen. The EPA has classified chloroform as a Group B2 carcinogen, meaning there is limited to no human data but sufficient animal data to indicate it potentially causes cancer.

Methylene Chloride

Methylene chloride is a chemical compound found in paint remover, aerosols, and degreasers. It is a popular chemical with low flammability, low boiling point, and strong solvent properties. Methylene chloride is toxic when applied internally for prolonged periods, a probable carcinogen, and mutagenic based off of several short-term tests.

Ethylene Dichloride

Ethylene dichloride is a chemical compound used as an intermediate in the formation of chlorinated and fluorinated chemical compounds. Ethylene dichloride is toxic when applied internally or externally for prolonged periods, an irritant, and a carcinogen. Ethylene dichloride has also been discovered to be genotoxic, meaning it is damaging to genetic material.

3.4 Health Risk

This Programmatic HRA assesses the potential for the proposed 2021 LRDP to result in substantial increases in carcinogenic and non-carcinogenic health risks to on- and off-site residents, workers, and students.

Carcinogenic Health Risk

Carcinogenic health risk is the probability for an individual to develop cancer over a lifetime as a result of exposure to a possible carcinogen. Carcinogenic health risk is generally presented as the incremental excess cancer risk, a probability expressed in “chances per 100,000” or “chances per million.” Incremental excess cancer risk resulting from exposure to a TAC is primarily a function of the concentration of the contaminant at exposure, the duration of exposure, and the cancer potency of the contaminant (often described as a cancer potency factor or slope factor). Other factors affecting carcinogenic health risk include individual breathing rates, exposure to risk from multiple pathways (e.g., inhalation, dermal exposure, contaminated food), and age sensitivity to mutagens, which are carcinogens that affect genetic composition.

To provide a perspective on cancer risk, the American Cancer Society (2020) reports that in the United States, men have about a 40 in 100 chance (0.40 probability) and women about a 39 in 100 chance (0.39) of developing cancer during a lifetime. Based on this background cancer risk level in the general population, application of a 10 in 1 million (1.0×10^{-5}) excess risk limit means that the contribution from a toxic hazard should not cause the resultant cancer risk for the exposed population to exceed 0.40001 for men or 0.39001 for women.

Non-Carcinogenic Health Risk

Non-carcinogenic health risks are health risks that do not result in cancer. These risks include acute and chronic health effects. Acute health risks are short-term and sometimes immediate reactions to health risks. These health risks are based on one-hour exposure and generally include symptoms such as throat pain, eye irritation, and other similar symptoms. Chronic health risks on the other hand, are long-term health issues resulting from longer-term exposure (from one year to a lifetime) that are not cancer. This may include reproductive health issues, heart disease, or respiratory illness.

Unlike carcinogenic health risk, neither chronic nor acute health risk impacts are expressed in “chances per million,” but instead as a unitless “hazard index.” The hazard index is calculated by dividing the concentration of the pollutant (i.e., maximum hourly concentration for acute risk, annual average concentration for chronic risk) by a pollutant-specific reference exposure level. The reference exposure level is the concentration level at or below which no adverse health effects are anticipated for a given contaminant, based on medical and toxicological literature.

4 Methodology

The following section describes the methodology employed to identify and quantify TAC emissions on campus under both the baseline and future scenarios, model air dispersion to obtain ground-level concentrations of TACs, and calculate health risk at on-site and off-site receptors.

4.1 Emissions Quantification

The methodology used to complete this Programmatic HRA was developed based in part on the emissions quantification, air dispersion modeling, and health risk characterization approach described in the *Health Risk Assessment in Support of the 2005 Long Range Development Plan for the University of California, Riverside* (URS 2005). The Programmatic HRA characterizes (i.e., quantifies, speciates, and sites) emissions of TACs under two scenarios:

- **Baseline Scenario.** The baseline scenario is used to evaluate existing health risk on and around campus. The University's Annual Emission Report (AER) submitted to SCAQMD serves as the foundation for characterizing baseline TAC emissions from most sources on campus. Because the 2018/2019 school year serves as the baseline year for analyses prepared in support of the 2021 LRDP EIR, this analysis could use the AER for the 2018 or 2019 reporting years. However, the 2019 AER, submitted to SCAQMD on March 11, 2020 (Appendix A) provides the most recent submitted inventory of on-campus TAC sources and emissions and, therefore, is used in the Programmatic HRA.
- **Future Scenario.** The future scenario evaluates health risk on and around campus under implementation of the proposed 2021 LRDP at horizon year 2035. As appropriate, a growth factor is applied to emissions sources based on planned development, policy, and implementation of the proposed 2021 LRDP to evaluate future health risk under the proposed project. For the purposes of this analysis, interim projects described in Section 2, *Project Description*, are considered as part of the future, 2021 LRDP scenario.

By employing a scenario-based modeling approach, this Programmatic HRA provides a direct comparison of health risk associated with buildout of the proposed 2021 LRDP to clearly assess potential impacts of the proposed project for the purposes of CEQA.

The following describes the methodology to characterize and forecast emissions from each of the sources included in the Programmatic HRA. For each source of TACs, the process used to characterize emissions under both the baseline and future scenario is described. Emissions for all sources under baseline and future scenarios are included in Appendix B.

Kitchen Equipment

Baseline Emissions

The 2019 AER includes two natural gas ovens with nearly identical annual fuel consumption (1.31 million standard cubic feet [mmscf] per year and 1.32 mmscf per year). These oven sources are located at the 342-seat Lothian and 500-seat Aberdeen-Inverness residence hall dining facilities, respectively, and emit TACs associated with natural gas combustion, including but not limited to BTEX chemicals, formaldehyde, and ammonia. Under the baseline scenario, both ovens were modeled as point sources, with emissions reflecting those reported in the 2019 AER. Table B-1 in Appendix B summarizes baseline emissions from the Lothian and Aberdeen-Inverness residence hall kitchens.

While not identified in the 2019 AER, UCR operates charbroilers and gas grills at the Alumni & Visitor's Center and the Highlander Union Building. However, due to the limited and sporadic use of such grills, emissions associated with these kitchen facilities are considered negligible and, therefore, are not quantified or included in this Programmatic HRA. Other on-campus kitchen equipment not quantified in the 2019 AER is likely exempt from SCAQMD permitting pursuant to Rule 219 (*Equipment Not Requiring a Written Permit Pursuant to Regulation II*) and Rule 1147 (*NO_x Reductions from Miscellaneous Sources*) and would be expected to result in *de minimis* emissions of TACs.

Refer to Figure 5 in Section 4.2, *Modeling*, for the location of all baseline emissions sources, including kitchen equipment.

Future Emissions

Under the proposed 2021 LRDP, the Aberdeen-Inverness residence hall dining facility would be decommissioned and replaced by the 830-seat Glasgow dining facility, identified as a recently-completed interim project immediately east of the Aberdeen-Inverness facility. Completion of UCR's North District project would also result in increased demand for residential dining seats. In total, residential dining seats on campus are anticipated to increase approximately 64.6 percent from 1,172 seats in 2018 to 1,929 seats in 2035 under the proposed 2021 LRDP. For this Programmatic HRA, it is assumed the Lothian dining facility is operating at capacity and emissions would be unchanged under the future scenario. Therefore, to obtain future emissions from the Glasgow dining facility, a growth factor of 64.6 percent was applied to the baseline Aberdeen-Inverness emissions, commensurate with the overall increase in residential dining seat capacity on campus in 2035.

In addition to expanded residential dining facilities, The Barn – a UCR Dining Services-operated restaurant and entertainment venue – is identified as an interim project, with its renovation and expansion completed in Spring 2020. Emissions from the expanded restaurant facility were included in the future scenario modeling. Emissions of TACs from this facility were estimated based on California Emissions Estimator Model (CalEEMod) outputs prepared in support of the 2021 LRDP's Greenhouse Gas Reduction Strategy (GHGRS). Based on the CalEEMod outputs, the restaurant component of The Barn is anticipated to consume approximately 0.91 mmscf of natural gas annually. While this consumption would account for all natural gas components of the restaurant, including gas-fired stoves and heating, this analysis conservatively assumes all natural gas consumption is associated with kitchen facilities. Annual emissions for 11 TACs were then estimated using the same emissions factors contained in the 2019 AER.

Table B-2 summarizes future emissions from Glasgow Dining Hall and The Barn kitchen sources under the proposed 2021 LRDP. Refer to Figure 6 in Section 4.2, *Modeling*, for the location of new or relocated future emissions sources, including kitchen equipment.

Internal Combustion Engines (Emergency Generators)

Baseline Emissions

UCR's 2019 AER includes 38 stationary internal combustion engines (emergency generators), including 36 diesel-fueled engines and two natural gas-fired engines[3]. These emergency generators are located throughout campus and generally serve critical research and infrastructure facilities, such as laboratories, data centers, the steam plant, and the campus physical plant. Given the nature of these sources as emergency back-up generators, emissions from such engines are typically short-term, sporadic, and unpredictable, driven by extenuating circumstances weather- or maintenance-induced power outages. However, routine testing and maintenance of emergency generators can result in sustained emissions of TACs. Therefore, existing emergency generators were modeled as point sources under the baseline scenario, with annual fuel throughput and TAC emissions from these generators reflecting those values reported in the 2019 AER. Table B-3 summarizes baseline TAC emissions from diesel-fueled emergency generator sources. Table B-4 summarizes baseline TAC emissions from the natural gas-fired emergency generator. Refer to Figure 5 in Section 4.2, *Modeling*, for the location of all baseline emissions sources, including generators.

Future Emissions

As described, the proposed 2021 LRDP would involve renovation, development, or expansion of Academic and Research, Academic Support, Student Life, and Other Facilities. Each of these facility categories may include buildings served by emergency generators. Under the future scenario, baseline emissions from existing diesel and natural gas-fired emergency generators on campus were assumed to continue at the same levels. Additionally, 37 future generator locations were identified and incorporated into the health risk modeling for the future scenario based on anticipated development and redevelopment sites on campus. Of these 37 future generator locations, five are associated with interim projects identified in Table 3 (Dundee-Glasgow, The Barn, Parking Structure 1, Student Success Center, and North District Phase 1). Finally, in addition to the 37 future generator locations identified based on anticipated development on-campus, three emergency generators permitted in 2019 and 2020, though not included in the 2019 AER, were modeled under the future scenario. These generators include a 903 brake-horsepower (bhp) generator replacing the existing generator at Pierce Hall, a 197 bhp generator at the UCR Police Station, and a 463 bhp generator at the Plant Growth Environments Facility.[4] As with existing generators under the baseline scenario, all future generators were modeled as point sources.

Uncertainty exists with respect to the capacity (in bhp), annual fuel consumption, and emissions for future generators. Therefore, future generator specifications and emissions were estimated based on data from existing generators on campus. The median capacity of existing generators on campus is approximately 587 bhp. A regression model was used to determine the relationship between capacity (in bhp) and annual fuel usage (in thousands of gallons). Based on the median existing generator capacity, future generators on campus would be expected to consume approximately 299.1 gallons of diesel fuel annually. Emissions factors used in the 2019 AER were then applied to this annual fuel throughput to estimate TAC emissions from future generators. For generators which have already been permitted but for which annual fuel consumption and emissions have not yet

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[3] The 2019 AER reports two natural gas-fired emergency generators: one at the 400 Humanities/University Theatre and one at Chapman Hall East. However, the generator located at Chapman Hall reported no annual fuel consumption or emissions. As such, this generator source was excluded from health risk modeling for the baseline scenario.

[4] Both the Pierce Hall Renovations and Plant Growth Environments Facility are identified as interim projects. The 903 bhp generator at Pierce Hall replaces the 190 bhp generator at Pierce Hall modeled under the baseline scenario.

been reported (i.e., Dundee-Glasgow, Pierce Hall replacement generator, Plant Growth Environments Facility, and Police Station), the capacity (in bhp) of the permitted generator, rather than the median on-campus generator capacity of 587 bhp, was used to estimate annual fuel consumption and emissions. It should be noted that this approach likely results in a conservative estimate of future generator emissions, as future generators installed under the proposed 2021 LRDP would be expected to be more fuel efficient and lower-emitting than existing generators on campus, many of which were permitted over 10 years ago.

Table B-5 summarizes the annual and hourly emissions for future generators. All future generators were assumed to be diesel-fueled and operate for testing and maintenance for 50 hours per year. Refer to Figure 6 in Section 4.2, *Modeling*, for the location of new or relocated future emissions sources, including generators.

Boilers

Baseline Emissions

The 2019 AER identifies a total of 10 natural gas-fired boilers/water heaters on campus, with six classified as less than 10 million British thermal units (MMBTU) per hour and four classified as 10 to 100 MMBTU per hour. The four larger capacity boilers are located at the campus’ Central Steam Plant. Four of the smaller capacity boilers/water heaters are located at Lothian and Aberdeen-Inverness residence halls and the remaining two are located at the Pentland Hills housing units. Natural gas-fired boilers/water heaters were modeled as point sources under the baseline scenario, with emissions reflecting those described in the 2019 AER. Table B-6 summarizes TAC emissions from existing natural gas-fired boilers/water heaters on campus under the baseline scenario. Refer to Figure 5 in Section 4.2, *Modeling*, for the location of all baseline emissions sources, including natural gas-fired boilers.

Future Emissions

Emissions from natural gas boilers/water heaters are not anticipated to increase substantially over the projected timeframe of the proposed 2021 LRDP. Smaller capacity boilers in Lothian and Aberdeen-Inverness residence halls serve their respective buildings and would not be expected to increase in use, fuel consumption, or emissions as these buildings are not increasing in area or capacity. Furthermore, the proposed 2021 LRDP states in a policy under Objective IS-NG1.1 that future projects shall not employ or expand demand for natural gas as an energy source, and UCR is committed to not expanding the use of natural gas in support of the UC Office of the President Carbon Neutrality Initiative. While the 2021 LRDP policy in conjunction with implementation of UC Sustainable Practice Policies are anticipated to reduce natural gas usage by the boilers, the extent of this decrease is not yet known. For these reasons, no growth or reduction factor for natural gas boiler emissions is proposed for the Programmatic HRA future scenario, and emissions from boilers/water heaters are assumed to remain at baseline levels.

Gasoline Dispensing Operations

Baseline Emissions

There are three gasoline storage and dispensing facilities on campus. Two such facilities are located on East Campus, including the largest facility at the campus Physical Plant (Fleet Services) with an annual throughput of 109,393.5 gallons in 2019 and a smaller facility serving at the campus Grounds operations with an annual throughput of 1,993.9 gallons. A third gasoline storage and dispensing facility with 2019 throughput of 9,445.2 gallons is located at the Agricultural Operations facility on West Campus.

The 2019 AER quantifies emissions of benzene from these three gasoline storage and dispensing facilities, which are included in this analysis. Current SCAQMD guidance for gas station HRAs recommends the use of emissions factors for naphthalene and ethylbenzene as well. While benzene is the primary driver of health risk associated with gasoline dispensing facilities, this analysis also incorporates emissions of naphthalene and ethylbenzene from the on-campus gasoline dispensing facilities for consistency with current SCAQMD guidance. Emissions factors for naphthalene and ethylbenzene are be based on those contained in SCAQMD's *Risk Assessment Procedures for Rules 1401, 1401.1, and 212 version 8.1* (SCAQMD 2017).

For further consistency with SCAQMD guidance, emissions from on-campus gasoline dispensing facilities were allocated to fuel tank loading and breathing emissions, modeled as point sources, and refueling, spillage, and hose permeation emissions, modeled as volume sources. Tank loading and breathing emissions were modeled at the location of the fuel tank and vent pipe, while refueling, spillage, and hose permeation emissions were modeled at the center of the refueling area.

Table B-7 summarizes benzene, ethylbenzene, and naphthalene emissions from gasoline storage and dispensing facilities on campus under the baseline scenario. Refer to Figure 5 in Section 4.2, *Modeling*, for the location of all baseline emissions sources, including gasoline dispensing facilities.

Future Emissions

No increase in campus area is anticipated under the proposed 2021 LRDP. Increased development within the existing campus footprint would not be expected to result in greater fuel consumption from the campus fleet. Under the UC Sustainable Practices Policy, 50 percent of all new light-duty vehicles within the campus fleet are anticipated to be zero emission vehicles by 2025.[5] Furthermore, as vehicles that are not electrified within UCR's fleet are replaced with newer, more efficient vehicles, gasoline throughput from campus dispensing facilities would be expected to decrease. Therefore, no growth factor for emissions from gasoline dispensing facilities is applied, and emissions from gasoline dispensing facilities are assumed to remain at baseline levels.

Laboratory Chemical Usage

Baseline Emissions

UCR is a major research university with specialized laboratory facilities. Some laboratory facilities require the use of chemicals with the potential to result in TAC emissions. The 2019 AER quantifies emissions from laboratory fume hoods based on methodology developed in a UC-commissioned report, *Development of an Emissions Estimating Technique for Research Laboratories* (ENSR Consulting and Engineering 1990), which determined that emissions from laboratory fume hoods account for approximately 6.74 percent of laboratory chemical usage. While the 2019 AER reports all emissions from laboratory fume hoods as a single source, in reality, fume hood emissions are distributed across campus research facilities. UCR tracks the number and location of fume hoods for laboratories across campus. For the baseline scenario, emissions from fume hoods were distributed

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[5] University of California. *Sustainable Practices Policy*. 2019. Available: <http://ucal.us/suspolicy>. Accessed July 8, 2020.

to each building containing at least five fume hoods designated for chemical use.[6] Overall fume hood emissions were distributed to each building proportionate to the number of fume hoods in the building. For air dispersion modeling purposes, fume hood emissions were modeled as volume sources. Table B-8 summarizes laboratory fume hood emissions from 29 campus laboratory facilities under the baseline scenario. Refer to Figure 5 for the location of all baseline emissions sources, including laboratory fume hoods.

Future Emissions

As laboratory space increases under the proposed 2021 LRDP, chemical use and, consequently, laboratory fume hood emissions, would be expected to increase as well. As described in Table 2 in Section 2, *Project Description*, both Research Lab & Service and Teaching Lab & Service facilities are anticipated to increase in gross square footage under the proposed 2021 LRDP. These two building types would be most likely to include wet lab space that would result in greater usage of lab chemicals. In total, Research Lab & Service and Teaching Lab & Service building area is anticipated to increase approximately 29.4 percent under the proposed 2021 LRDP, from 990,258 square feet in 2018 to 1,281,100 square feet in 2035. Therefore, a growth factor of 29.4 percent was applied to baseline laboratory fume hood emissions for the future scenario health risk modeling.

Because the precise locations of future laboratory buildings and emissions under the proposed 2021 LRDP are unknown at this time, increased emissions under the future scenario were applied to the existing fume hood sources on campus modeled under the baseline scenario. This assumption is reasonable, as all existing laboratory fume hoods are located in the Academic and Research portion of the 2021 LRDP Land Use plan, which would be most likely to include future laboratory space upon buildout of the proposed 2021 LRDP.

Table B-9 summarizes laboratory fume hood emissions from campus buildings under the future scenario.

Diesel-fueled Delivery Trucks

Baseline Emissions

UCR operations include the use of medium- and heavy-duty diesel trucks for delivery and various other services on campus. The services employed by UCR that involve the operation of diesel trucks on campus include hazardous waste pick-up, dining facilities deliveries, food trucks, municipal waste trash and refuse service, and Airgas delivery. Modeling was based on delivery route and service frequency provided by UCR for the above noted services. DPM generated from the delivery and service vehicles were calculated based on the annual and maximum hourly trips, the mileage traveled per trip based on the defined route for that delivery or service type, and emission factors for exhaust PM_{10} obtained from CARB's EMission FACtors (EMFAC2017) model.[7] Emission factors were weighted based on the vehicle class used for deliveries and services.

Based on the provided delivery and service frequency intervals, the number of annual and daily trips were calculated. The maximum trips per hour were conservatively estimated assuming that all

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[6] While only facilities with at least five fume hoods designated for chemical use were considered, multiple greenhouse research facilities on campus include one to three fume hoods. Because greenhouse research facilities are generally clustered in close proximity to each other and their exclusion would have the potential to result in a substantial underestimation of localized TAC emissions, all greenhouse research facilities—regardless of the number of fume hoods they contain—were included in this Programmatic HRA.

[7] CARB. 2018. EMFAC2017 Volume III – Technical Documentation. Available: <https://www.arb.ca.gov/emfac/>. Accessed November 2020.

possible trips that could occur in a day occurred at the same hour. For routes with frequencies less than once per day, it was conservatively assumed that trips occurred on the same day. Table 4 presents the annual and maximum hourly trips and associated mileage by service type used for emissions calculations for the baseline scenario.

Table 4 Delivery and Service Vehicle Frequency – Baseline Scenario

Route Type[1]	Annual Trips (trips/year)[2]	Annual VMT (miles)[4]	Hourly (trips/hour)[3]	Hourly VMT (miles)[4]
Hazardous Waste	65	906	1.00	14
Dining Facilities	3,508	17,618	9.61	48
Chameleon Food Truck	2,808	13,642	7.69	39
Municipal Waste Trash/Refuse Service	676	13,015	1.85	9
Airgas	260	658	1.00	3

VMT = vehicle miles traveled

[1] Delivery and service frequency information was provided by UCR on October 29, 2020.

[2] Following assumptions for delivery routes were used based on information provided by UCR: The hazardous waste truck collects biohazard waste weekly, chemical waste monthly, and radioactive waste once a year. UCR provided a list of dining facility vendor and food truck delivery schedules by week and indicated that food trucks on average make two round trips on campus each delivery day; annual vendor and food truck trips are based on the total number of trips occurring in a week multiplied by 52 weeks in a year. One refuse truck operates 5 days a week, one single bin truck operates 5 days a week, and one recycle unit operates 3 days a week. Airgas is delivery once per day, this was assumed to occur M-F. Unless otherwise noted it is assumed that one round trip is made per day per delivery route.

[3] Maximum trips per hour were conservatively estimated that all possible trips that could occur in a day would occur at the same hour. For routes that occur less than once per day, it was conservatively assumed that they occurred on the same day.

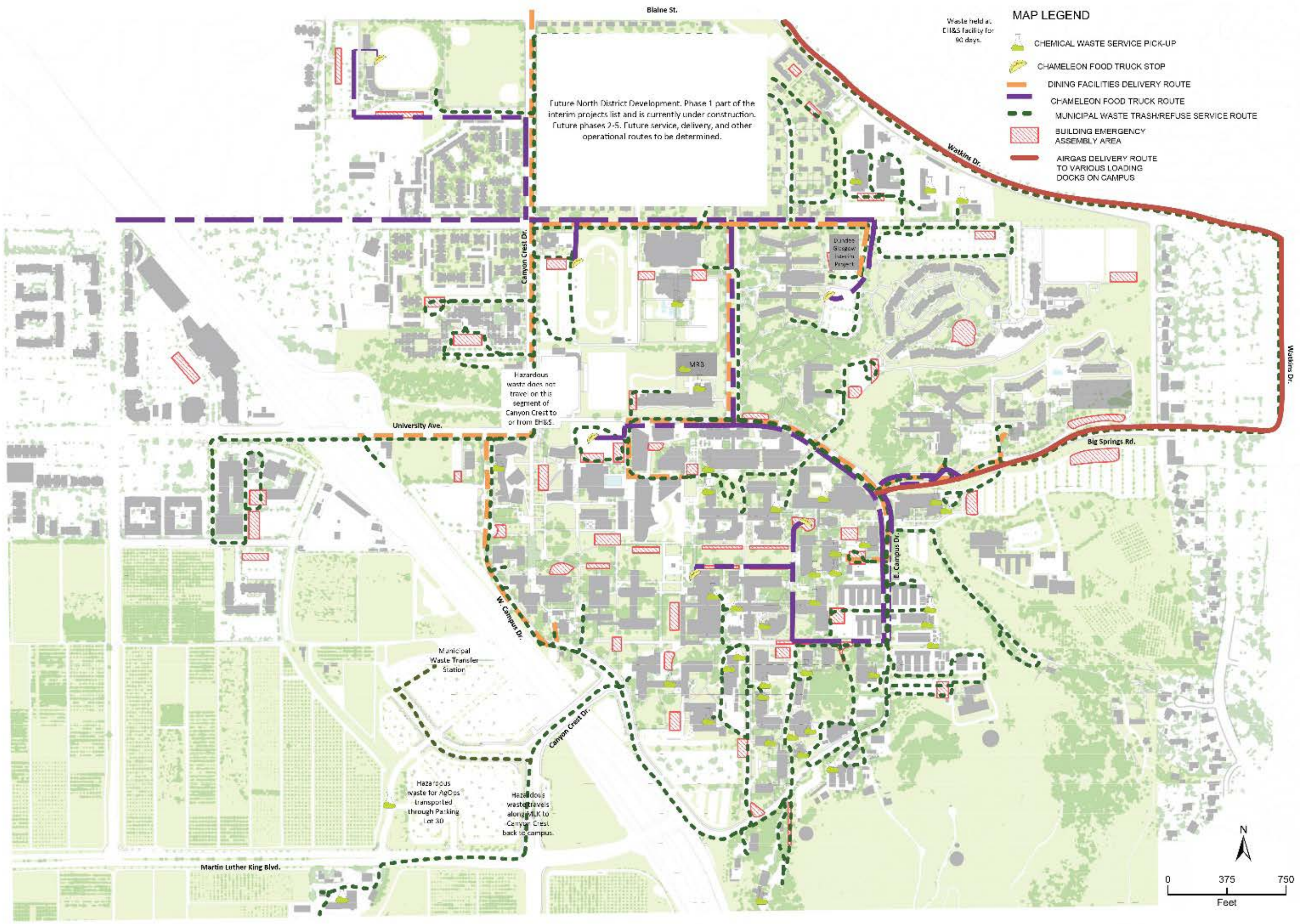
[4] Trip route distances were estimated using Google Earth and based on the "UCR Delivery and Service Routes" map provided by UCR presented in Figure 4. Annual and hourly vehicle miles traveled was based on the route distance for the 5 distinct delivery and service routes provided and the frequency of trips.

Figure 4 presents the delivery and service routes on and adjacent to UCR campus that were modeled for baseline emissions. The delivery and service routes were modeled as a series of volume sources such that the length did not extend greater than 10 times the width of the source. Because the routes were modeled as a series of sources, emissions for a given delivery or service route were attributed to the individual segments based on the percent the segment contributed to the overall route length. Over 300 individual volume sources were modeled to represent the various delivery and service routes. Therefore, emissions modeled for baseline conditions are presented in Table B-10 as the sum of DPM emissions by route. Refer to Figure 5 in Section 4.2, *Modeling*, for the location of all baseline emissions sources, including roadway segments.

Future Emissions

Development of campus space and growth in student population would result in an increase in delivery and other services for the campus. The growth rate of deliveries and services that use medium- and heavy-duty diesel trucks was developed from the Fehr & Peers transportation assessment prepared in support of the 2021 LRDP EIR. The Fehr & Peers transportation assessment is based on the RivTAM travel demand model modified based on UCR population data and reports the daily vehicle miles traveled (VMT) by vehicle class for the baseline scenario in 2018 and for the full buildout scenario (i.e., future scenario) under the 2021 LRDP in 2035. However, the RivTAM model is all encompassing of VMT associated with UCR and is not specific to the UCR delivery and service vehicles that are used for UCR operations. Because an HRA is based on localized emissions, the on-site measured routes and frequency was considered to be more appropriate than VMT

Figure 4 University Service and Delivery Routes



Source: UCR, 2020.

estimates by Fehr & Peers for determining localized DPM emissions. Therefore, to ensure that the diesel truck emissions evaluated in the future scenario were consistent with the baseline scenario and only included those vehicles causing the localized impact, future scenario emissions were calculated and modeled following the same methodology as the baseline scenario. Based on the VMT projections by Fehr & Peers between the baseline year and future scenario the percent growth in VMT by vehicle class was determined. These growth rates were then applied to the mileage traveled by vehicle class by route in the baseline scenario to estimate the increase in mileage traveled under the future scenario due to increased delivery and services provided. Table 5 presents the annual and maximum hourly trips and associated mileage by service type used for emission calculations for the future scenario.

Table 5 Delivery and Service Vehicle Frequency – Future Scenario

Route Type[1]	Annual Trips (trips/year)[2]	Annual VMT (miles)[4]	Hourly (trips/hour)[2,3]	Hourly VMT (miles)[4]
Hazardous Waste	126	1,756	2	27
Dining Facilities	6,697	33,636	18	92
Chameleon Food Truck	5,488	26,660	16	76
Municipal Waste Trash/Refuse Service	1,311	25,234	1	18
Airgas	504	1,277	2	5

VMT = vehicle miles traveled

[1] Delivery and service frequency information was provided by UCR on October 29, 2020.

[2] Growth rates from the baseline to 2035 with full LRDP buildout are based on VMT projections developed and the percentage change from 2018 projections, which are as follows: LDT2 (166% increase), MHDT (190%), HHDT (194%), LHDT2 (202%)

[3] Maximum trips per hour were conservatively estimated assuming that all possible trips that could occur in a day would occur at the same hour. For routes that occur less than once per day, it was conservatively assumed that they occurred on the same day.

[4] Trip route distances were estimated using Google Earth and based on the "UCR Delivery and Service Routes" map provided by UCR presented in Figure 4. Annual and hourly vehicle miles traveled was based on the route distance for the 5 distinct delivery and service routes provided and the frequency of trips.

Because it is unknown at this time how the precise routes for the delivery and services for UCR operations may change under the proposed 2021 LRDP, increased emissions under the future scenario were applied to the existing delivery and service routes as modeled under the baseline scenario. Diesel truck emissions modeled for the future scenario are presented in Table B-11 as the sum of DPM emissions by route. While delivery and service trips are anticipated to increase in frequency and result in increased VMT under the proposed 2021 LRDP, annual and hourly emissions of DPM are anticipated to decrease due to emissions reductions mandated by California law and captured in EMFAC2017 projections.

4.2 Modeling

Air Dispersion Modeling

Source Characterization

Sources were modeled as either point or volume sources, depending on the nature of the source. Point sources are applied to emissions sources released from stacks or isolated vents and were deemed most appropriate for on-campus kitchen, generator, boiler/water heater, and gasoline storage tank (breathing and loading) emissions. Volume sources are typically used to model releases from buildings or areas with multiple vents or releases and were deemed appropriate for laboratory fume hood emissions emanating from research buildings and gasoline dispensing facility refueling, spillage, and hose permeation sources. Additionally, emissions from diesel delivery trucks were modeled as a series of volume sources along the delivery route roadways, as described above.

Figure 5 shows the location of all sources modeled under the baseline scenario. Figure 6 shows kitchen and generator sources modeled under the future scenario, as these are the only sources with locational changes modeled under the proposed 2021 LRDP HRA.

Meteorology and Topography

Dispersion of TAC emissions was modeled using the Hotspots Analysis and Reporting Program version 2 (HARP 2), which incorporates the latest compiled version of the U.S. EPA's AERMOD atmospheric dispersion modeling system. AERMOD is a steady-state, multiple-source, Gaussian dispersion model designed for use with emission sources situated in terrain where ground elevations can exceed the stack heights of the emission sources. The AERMOD model requires hourly meteorological data consisting of wind vector, wind speed, temperature, stability class, and mixing height. Specific meteorology and terrain for the site were input to the model using the nearest available meteorological data set, Riverside Municipal Airport station (KRAL), located approximately 6.9 miles southwest of campus, and 10-meter Digital Elevation Model (DEM) data for the Riverside East Quadrangle. AERMOD's urban option was applied based on SCAQMD's population parameter for Riverside County of 2,189,641 (SCAQMD 2021).

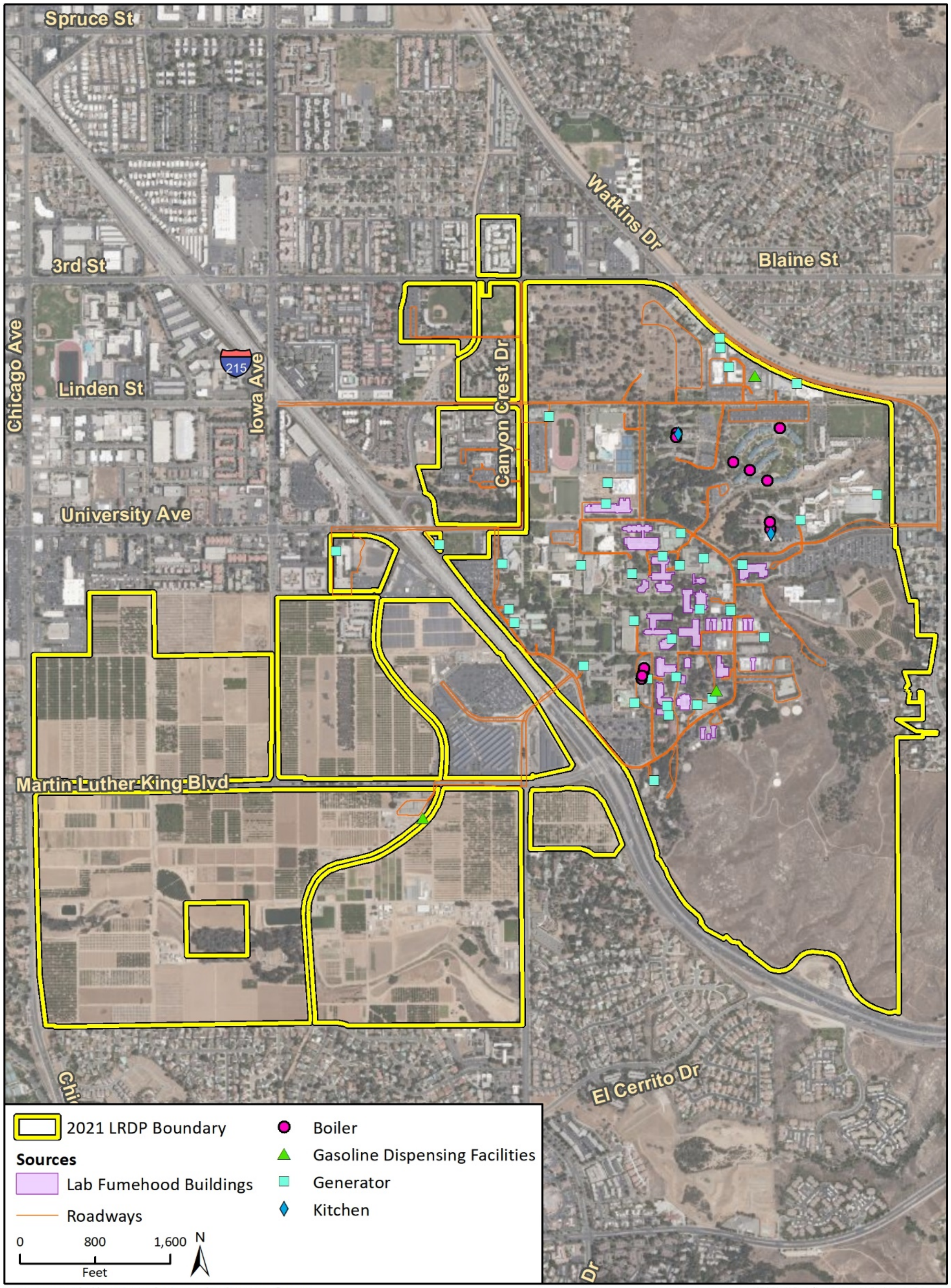
Building Downwash

Buildings or structures can affect the dispersion of air and pollutants by interrupting airflow patterns or creating eddies or currents. AERMOD allows for buildings/structures to be incorporated into the model for dispersion of point source emissions through its Building Profile Input Program (BPIP), a building pre-processing tool, in order to account for the potential effects of building downwash on air dispersion patterns. Algorithms used to apply downwash affects in AERMOD only apply to point sources and are not applied to volume sources. Given the substantial number of buildings on campus and potential implications for pollutant dispersion on and around campus, the analysis incorporated profiles of 150 campus buildings adjacent to or within approximately 300 feet of any modeled point sources. Figure 7 shows the footprints of all buildings incorporated into AERMOD and their location relative to modeled point sources.

Receptors

AERMOD allows users to input discrete sensitive receptor locations to evaluate ground-level pollutant concentrations and health risk at individual points. Additionally, AERMOD allows users to input receptor networks through the use of grids, which provide multiple receptor points spanning a larger, defined area. Unlike discrete receptor points, receptor networks, or grids, allow users to assess patterns of health risk exposure over a particular area of interest. Receptor grids are defined by the number of points in each direction and the spacing between each point. Grids may be either Cartesian, forming a rectangular shape defined by an x- and y-axis, or polar, forming a circular pattern emanating outward from a particular point of interest. For this analysis, a total of nine Cartesian receptor grids and 22 discrete sensitive receptors were applied. Table 6 summarizes the dimensions and locations of sensitive receptors and grids applied in AERMOD. Figure 8 shows the location of all receptor grids and discrete sensitive receptor points considered in the analysis. In total, this analysis evaluates health risk at 6,363 receptors across campus and surrounding neighborhoods.

Figure 5 Baseline Scenario Emissions Sources



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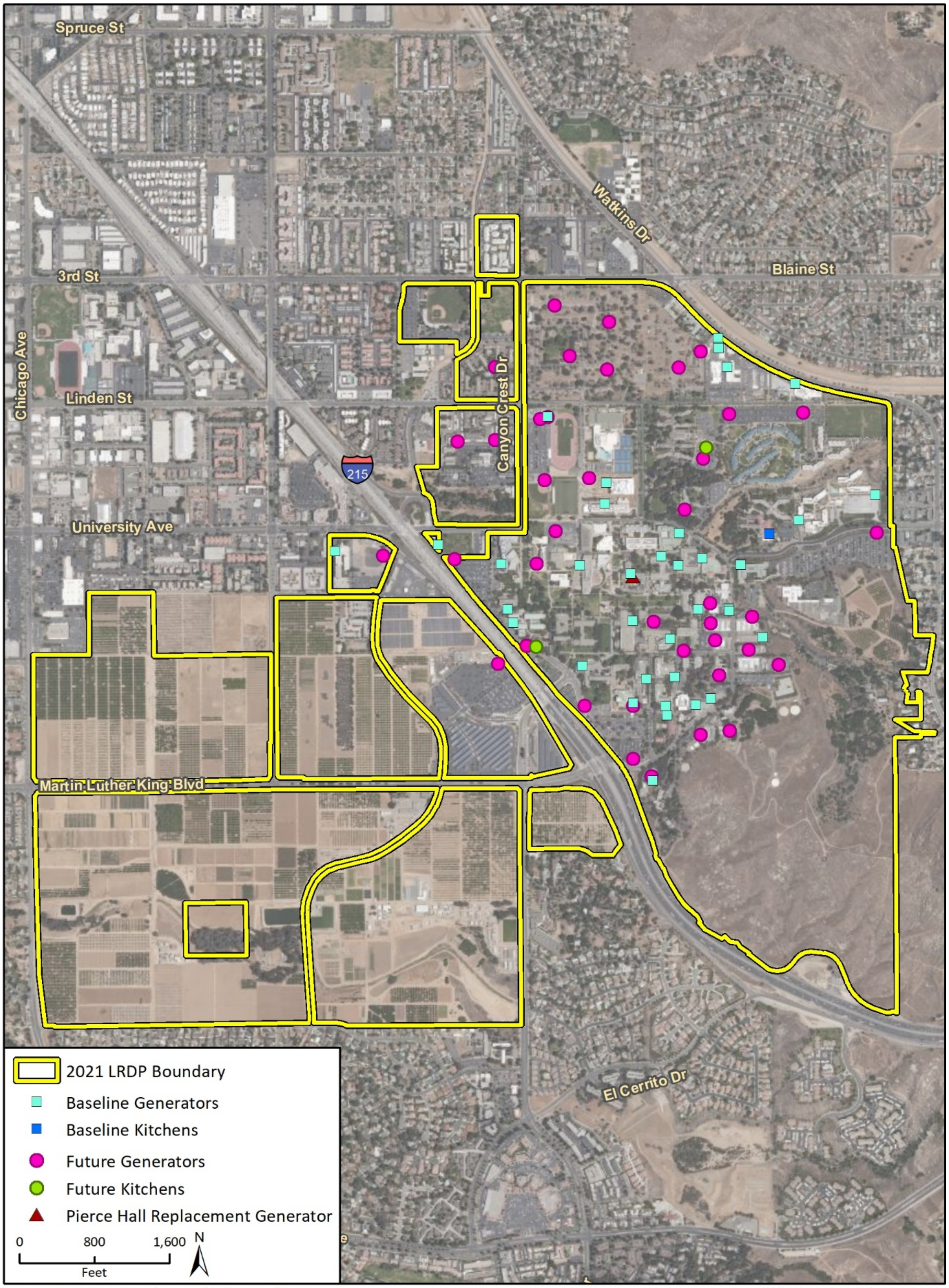
HRAFig X Baseline Scenario Emissions Sources

Figure 6 New/Relocated Future Scenario Emissions Sources



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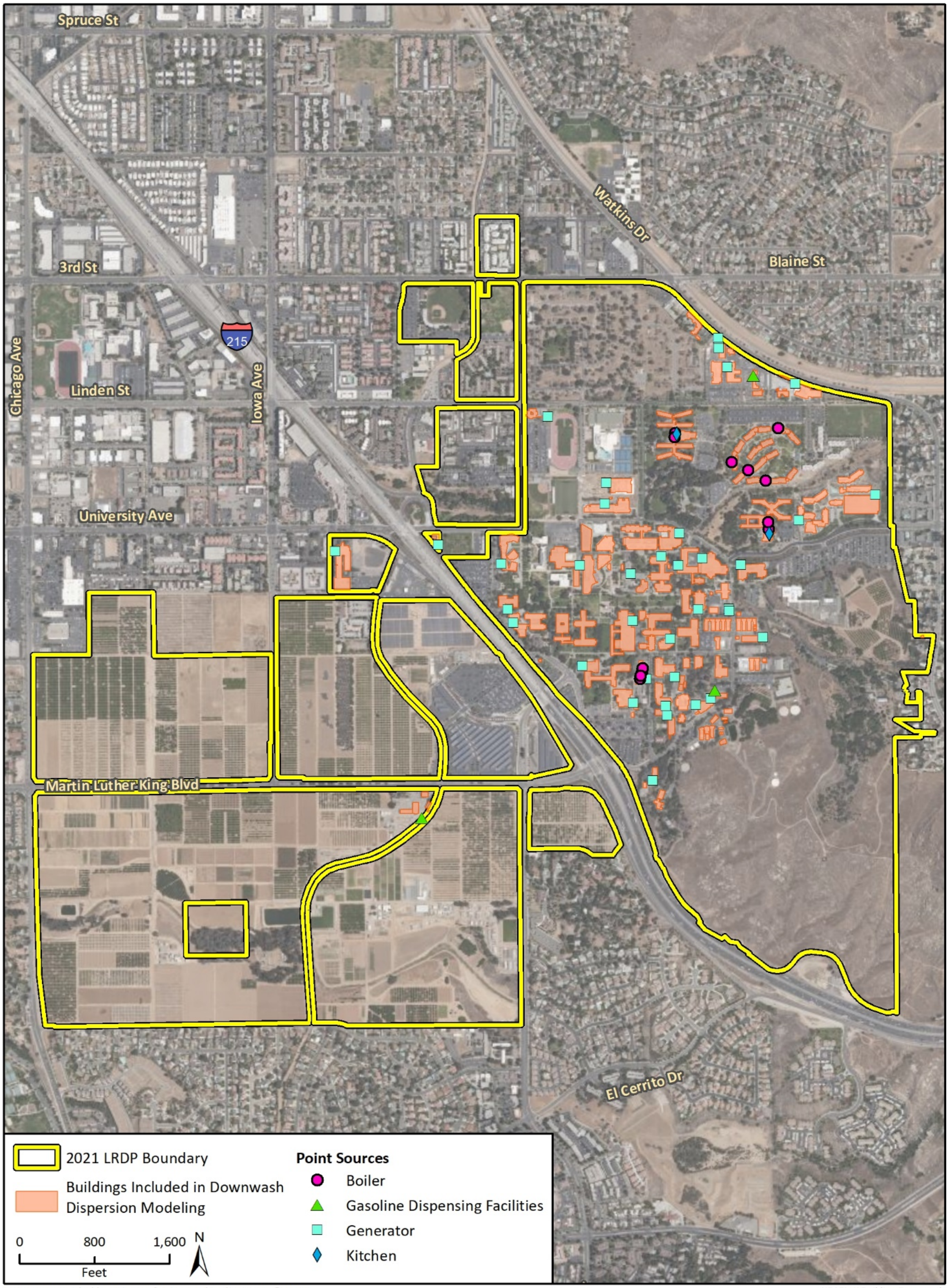
HRAFig X Future Scenario Emissions Sources

Figure 7 Buildings Modeled for Downwash Effects



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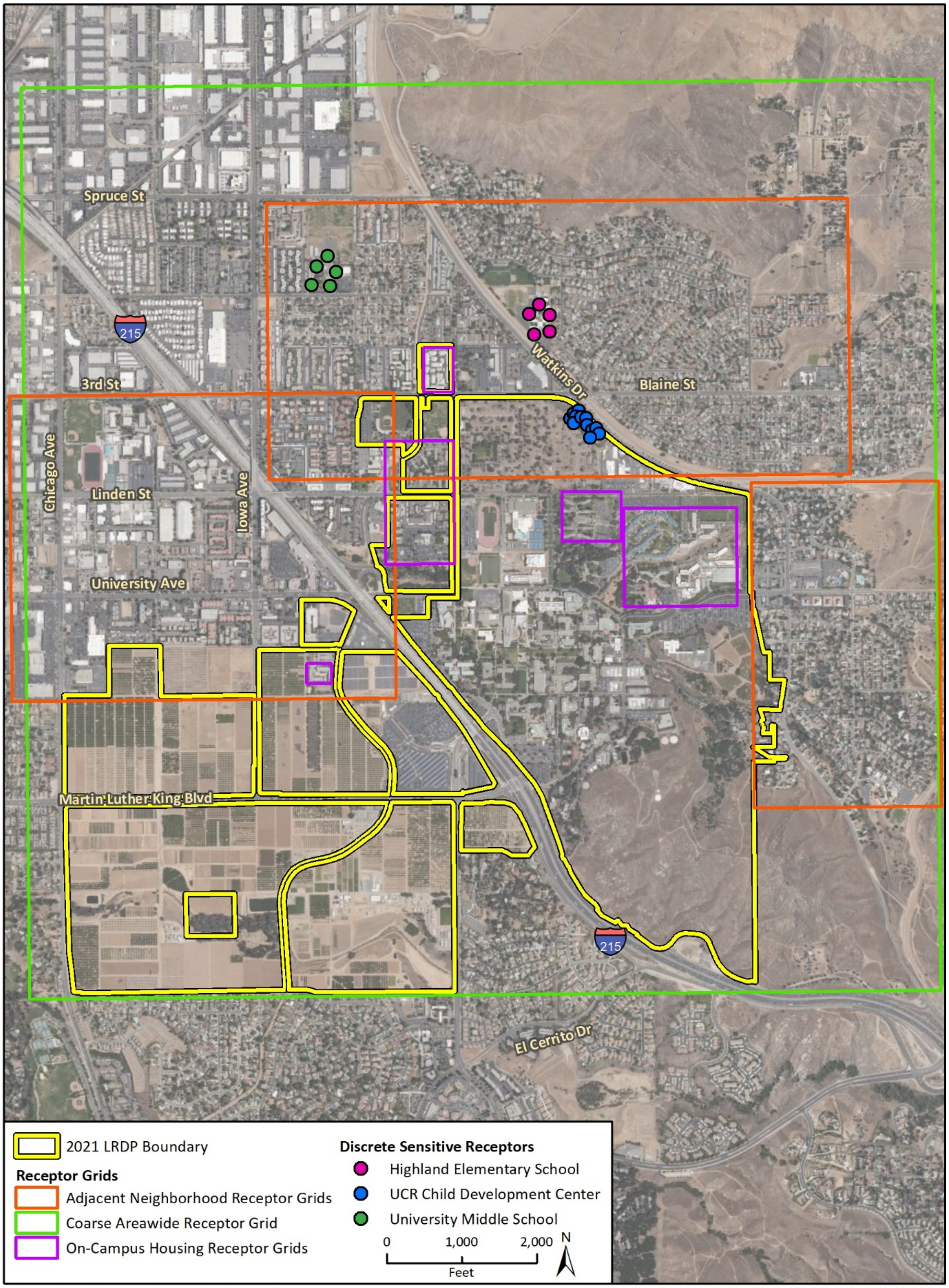
HRAFig X Building Downwash

Figure 8 Receptor Grids and Locations



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HRAFig X Receptor Grids - No Health Services

Table 6 Grid and Sensitive Receptors

Location	Receptor Grid?	Grid Dimensions[1]	Grid Spacing (m)	Number of Points
Greater Campus Area				
Campus and Surrounding Neighborhoods	Yes	38 x 38	1,000	1,444
Off-Campus Neighborhoods				
University Avenue Corridor (West of Campus)	Yes	40 x 32	40	1,280
North Campus Neighborhoods (North of Linden Street)	Yes	60 x 40	40	1,800
Watkins Drive Corridor (East of Valencia Hill Drive)	Yes	20 x 34	40	680
On-Campus Residences				
Aberdeen-Inverness Residence Hall	Yes	13 x 11	20	143
Lothian, Glen Mor, and Pentland Hills Residence Halls	Yes	24 x 21	20	504
Oban and The Plaza Family Housing and Bannockburn Village	Yes	15 x 26	20	390
International Village	Yes	6 x 5	20	30
Stonehaven Student Housing	Yes	7 x 10	20	70
Discrete Sensitive Receptor Locations				
UCR Child Development Center	No	–	–	12
University Middle School[2]	No	–	–	5
Highland Elementary School[2]	No	–	–	5

[1] Dimensions are defined by number of points along the x-axis (east-west alignment) by number of points along the y-axis (north-south alignment).

[2] Located off-campus.

Health Risk Modeling

Upon completion of air dispersion modeling, health risk was estimated using CARB's HARP 2 model. Maximum cancer and non-cancer health risks were evaluated under both the baseline and future scenarios for on- and off-campus residents, on- and off-campus workers, and on-campus daycare facilities.

Health risk is a function of both the ground-level concentration of pollutants and the duration of exposure; greater concentrations and longer-term exposure generally result in greater risk. Other factors, such as age-sensitivity for younger populations and individual breathing rates, may also affect estimated health risk. While non-cancer chronic and acute health risks are calculated based on a one-year and one-hour exposure to TAC concentrations, respectively, carcinogenic risk may be calculated based on longer-term exposure durations. For example, SCAQMD recommends that residential cancer risk be evaluated over a 30-year exposure duration, while worker risk should be evaluated over a 25-year exposure duration (SCAQMD 2017). Shorter or longer exposure durations may be appropriate depending on source- or receptor-specific considerations.

In addition to exposure durations, HARP 2 allows users to apply fraction-of-time-at-home (FAH) values to provide more refined estimates of residential health risk. By applying FAH values, health risk calculations assume a receptor is not exposed to project-generated pollutant concentrations for a fixed percentage of the day during which they are not at their residence. SCAQMD recommends that a FAH of 73 percent be applied for ages 16 years or older; children under 16 years old should be conservatively assumed to attend a school or daycare nearby, therefore resulting in pollutant exposure at all times. Table 7 summarizes health risk exposure assumptions for each receptor scenario.

Table 7 Cancer Risk Exposure Assumptions

Receptor	Exposure Duration (years)	Intake Rate Percentile[1]	Starting Age of Exposure[2]	Fraction of Time at Home?[3]	Pathways Included[4]
Off-Campus Resident	30	RMP Using the Derived Method	3rd Trimester	1 (<16 years); 0.73 (>16 years)	Inhalation, Dermal, Soil, Mother's Milk, Homegrown Produce
On-Campus Resident	6[5]	RMP Using the Derived Method	16 years[6]	1[7]	Inhalation, Dermal, Soil, Mother's Milk, Homegrown Produce
Off-Campus/On-Campus Worker	25	OEHHA Derived Method	16 years[8]	N/A[9]	Inhalation, Soil, Dermal
On-Campus Daycare	6[10]	RMP Using the Derived Method	3rd Trimester	1	Inhalation, Soil, Dermal, Mother's Milk, Homegrown Produce

RMP = Risk Management Policy; OEHHA = Office of Environmental Health and Hazard Assessment

[1] South Coast Air Quality Management District Risk Assessment Procedures recommend residential cancer risk be evaluated using the RMP Using the Derived Method intake rate percentile. All other scenarios are recommended to use the OEHHA Derived Method (SCAQMD 2017).

[2] Describes the age at which exposure to pollutant concentrations from the project is assumed to begin. Residential exposure conservatively assumed to begin during the third trimester prior to birth.

[3] Describes the fraction of time residents are assumed to be at their home and exposed to pollutant concentrations.

[4] Describes the pathways of pollutant exposure. SCAQMD recommends inhalation, dermal, soil, mother's milk, and homegrown produce pathways be considered for residential exposure. Inhalation, soil, and dermal exposure are considered for worker exposure.

[5] A 30-year residential exposure duration is not appropriate for on-site residences, as individuals would not be expected to live in campus housing beyond their tenure as students at UCR. Therefore, an on-campus residential exposure duration of six years is proposed, consistent with how the University typically reports its graduation rate.

[6] Assumes on-campus residents are 16 years of age or older.

[7] Assumes on-campus residents are exposed to campus-generated pollutant concentrations at all times.

[8] Workers are assumed to be of working age (i.e., greater than 16 years old).

[9] Worker exposure automatically considers 8-hour exposure to pollutant concentrations.

[10] UCR Child Development Center provides infant care, preschool, and kindergarten classes. Therefore, on-campus daycare facilities were modeled assuming the six-year residential exposure duration, beginning during the third trimester prior to birth.

4.3 Significance Thresholds

This Programmatic HRA assesses the potential for the proposed 2021 LRDP to result in a significant health risk impact using SCAQMD health risk criteria. Pursuant to these criteria, the proposed 2021 LRDP would have a significant impact if it would result in:

- A Maximum Incremental Excess Cancer Risk greater than or equal to 10 in 1 million;
- A Chronic or Acute Hazard Index greater than or equal to 1.0; or
- A Cancer Burden greater than 0.5 cancer cases in areas greater than or equal to 1 in 1 million.

UCR contains multiple sources of TACs spanning the 1,108-acre campus. The campus complies with all existing regulatory requirements pertaining to emissions of TACs, including submittal of annual emissions reports and payment of TAC fees to SCAQMD and preparation of regular HRAs for operation of stationary emissions sources on campus in accordance with AB 2588 and SCAQMD Rule 1402 (*Control of Toxic Air Contaminants from Existing Sources)*. As described above, the proposed 2021 LRDP is expected to result in emissions increases from several sources on campus, while other sources would be expected to remain at baseline emission levels. UCR would continue to comply with all applicable regulations pertaining to emissions of TACs from existing or future sources, including notification and risk reduction requirements should facility-generated health risk exceed applicable standards pursuant to AB 2588 or SCAQMD Rule 1402.

This Programmatic HRA evaluates the potential for growth and development under the proposed 2021 LRDP to result in health risk impacts. To isolate, analyze, and disclose the effects of the proposed 2021 LRDP itself, this analysis focuses on the net increase in health risk between the baseline and future scenarios. This is a reasonable approach to analyze the health risks posed by implementation of the 2021 LRDP relative to baseline conditions to determine impact significance for the purposes of CEQA.

5 Impact Analysis

This section describes the results of health risk modeling for the baseline and future scenarios and determines the level of significance of potential health risk impacts.

5.1 Health Risk Results

The maximally exposed receptor is the modeled receptor experiencing the highest health risk under the exposure scenario being modeled. This Programmatic HRA identifies the off-campus and on-campus Maximally Exposed Individual Residents (MEIRs), as well as the off-campus and on-campus Maximally Exposed Individual Workers (MEIWs). Additionally, modeled receptors at the UCR Child Development Center were evaluated to identify the maximum health risk faced by children at the daycare facility. The maximally exposed receptors were determined through an iterative process evaluating potential receptors based on model-generated risk contours to ensure the maximum health risks were captured for each scenario.

Different TACs elicit different toxicological responses in the human body. As described in Section 3.4, *Health Risk*, TACs may be carcinogenic – resulting in an incremental excess cancer risk – and may also generate chronic and/or acute health problems. Similarly, different TACs disperse through the atmosphere differently depending on their unique physical properties. For example, emissions of particulate matter, such as DPM, will disperse differently than gaseous compounds. As a result, the MEIR for cancer, chronic, and acute risk may not occur at the same location.

Cancer Risk

Incremental excess cancer risk values at the off-campus and on-campus MEIR, MEIW, and UCR Child Development Center are described in Table 8. HARP 2 dispersion modeling outputs and health risk results are provided in Appendix C. As shown in Table 8, incremental excess cancer risks attributable to the proposed 2021 LRDP would not exceed the SCAQMD threshold of 10 in 1 million at the off- or on-campus MEIR, MEIW, or UCR Child Development Center. Cancer risk contours for off-campus residents, on-campus residents, and workers under the baseline and future scenarios are shown in Figure 9 through Figure 14.

Table 8 Cancer Risk Results

Scenario	Cancer Risk
Off-Campus Resident[1]	
Baseline Scenario	20.9 in 1 million
Future Scenario	25.8 in 1 million
Net Increase	4.9 in 1 million
SCAQMD Significance Threshold	10 in 1 million
Exceeds Threshold?	No
On-Campus Resident[2]	
Baseline Scenario	3.2 in 1 million
Future Scenario	3.5 in 1 million
Net Increase	0.3 in 1 million
SCAQMD Significance Threshold	10 in 1 million
Exceeds Threshold?	No
Off-Campus Worker[3]	
Baseline Scenario	1.1 in 1 million
Future Scenario	1.4 in 1 million
Net Increase	0.3 in 1 million
SCAQMD Significance Threshold	10 in 1 million
Exceeds Threshold?	No
On-Campus Worker[4]	
Baseline Scenario	14.0 in 1 million
Future Scenario	14.1 in 1 million
Net Increase	0.1 in 1 million
SCAQMD Significance Threshold	10 in 1 million
Exceeds Threshold?	No
Child Development Center[5]	
Baseline Scenario	3.7 in 1 million
Future Scenario	6.8 in 1 million
Net Increase	3.1 in 1 million
SCAQMD Significance Threshold	10 in 1 million
Exceeds Threshold?	No

[1] Evaluated over a 30-year exposure duration. Off-campus MEIR for cancer risk is located at residence near the intersection of Valencia Hill Drive and West Big Springs Road.

[2] Evaluated over a 6-year exposure duration. On-campus MEIR for cancer risk is located in Glen Mor Building H.

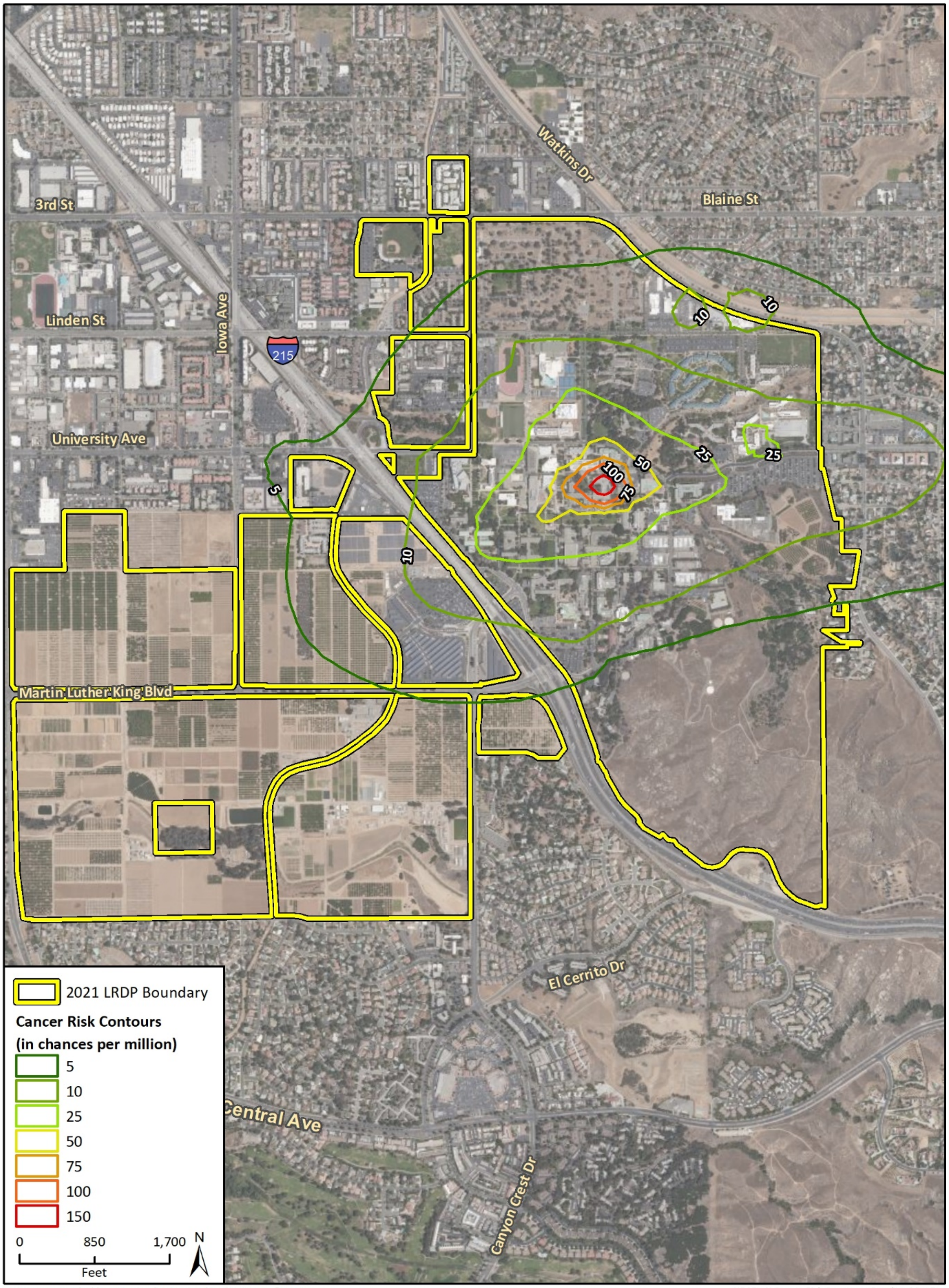
[3] Evaluated over 25-year exposure duration. Off-campus MEIW for cancer risk is located at commercial structure near the intersection of Watkins Drive and West Big Springs Road.

[4] Evaluated over 25-year exposure duration. On-campus MEIW for cancer risk is located at Geology building.

[5] Evaluated over 6-year exposure duration.

Health risk model outputs provided in Appendix C.

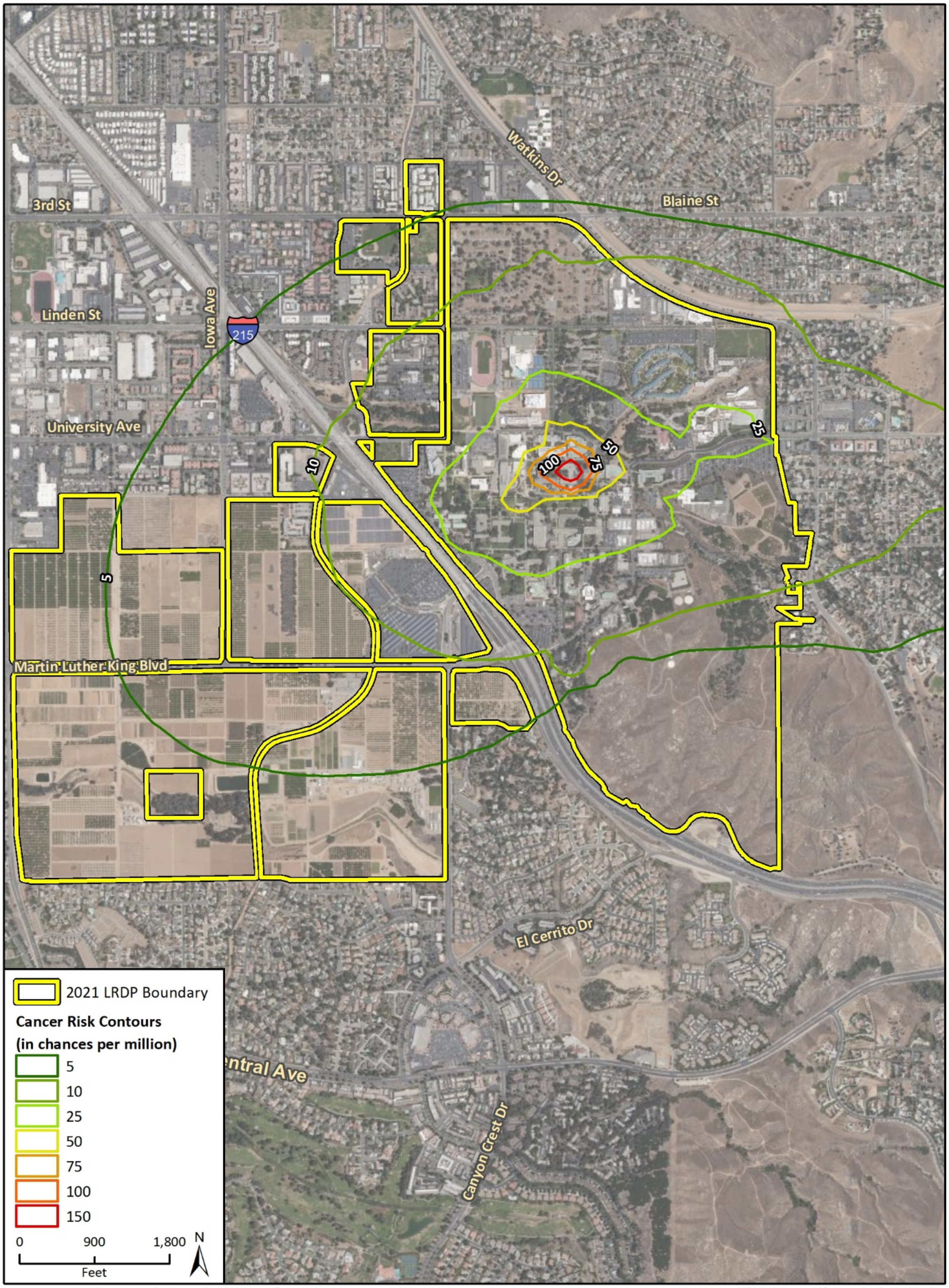
Figure 9 Off-Campus Residential Cancer Risk Contours – Baseline Scenario



Imagery provided by Microsoft Bing and its licensors © 2021.

HRAFig X Cancer Risk Contours - Baseline 30yr Res

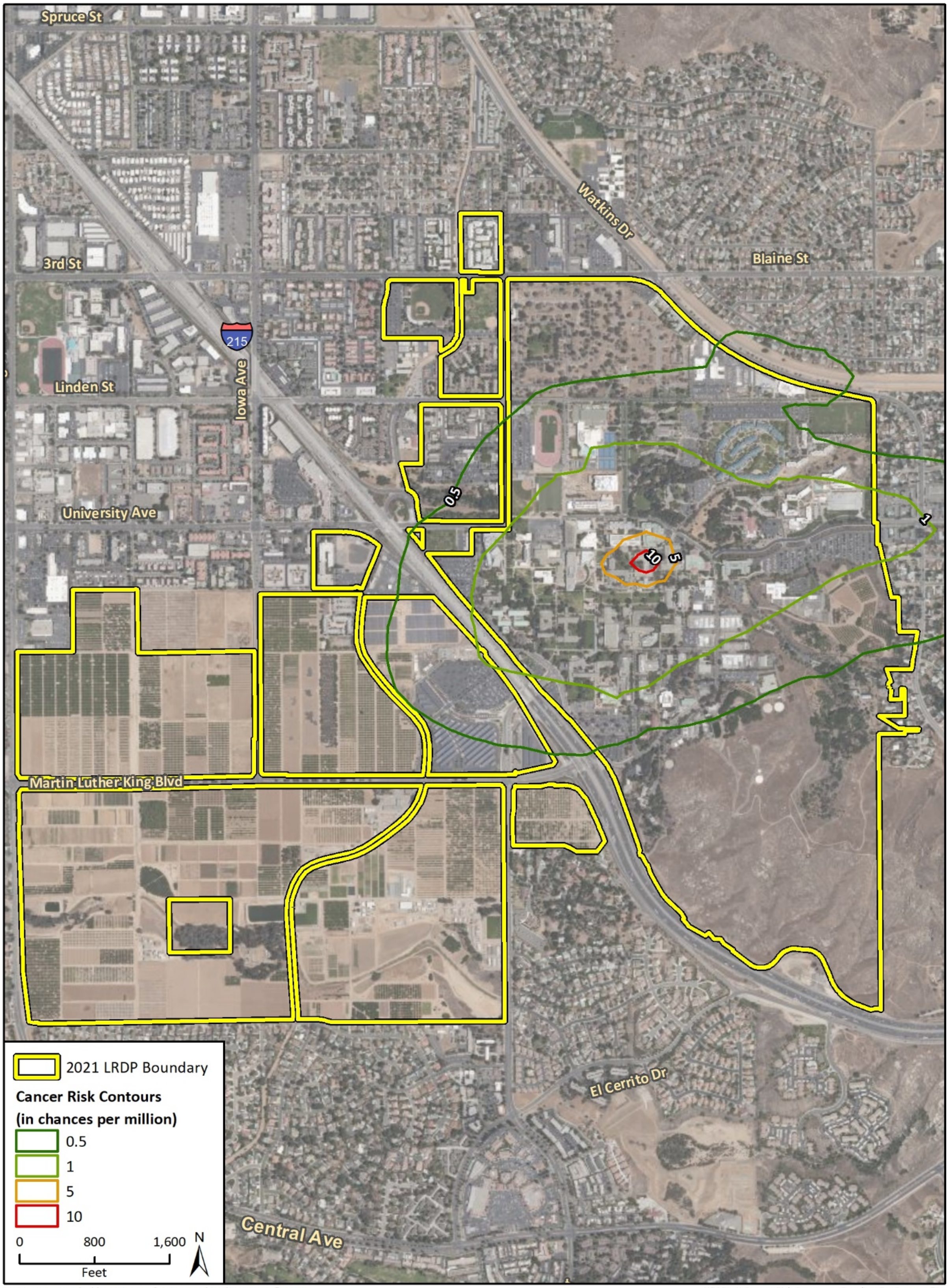
Figure 10 Off-Campus Residential Cancer Risk Contours – Future Scenario



Imagery provided by Microsoft Bing and its licensors © 2021.

HRAFig X Cancer Risk Contours - Future 30yr Res

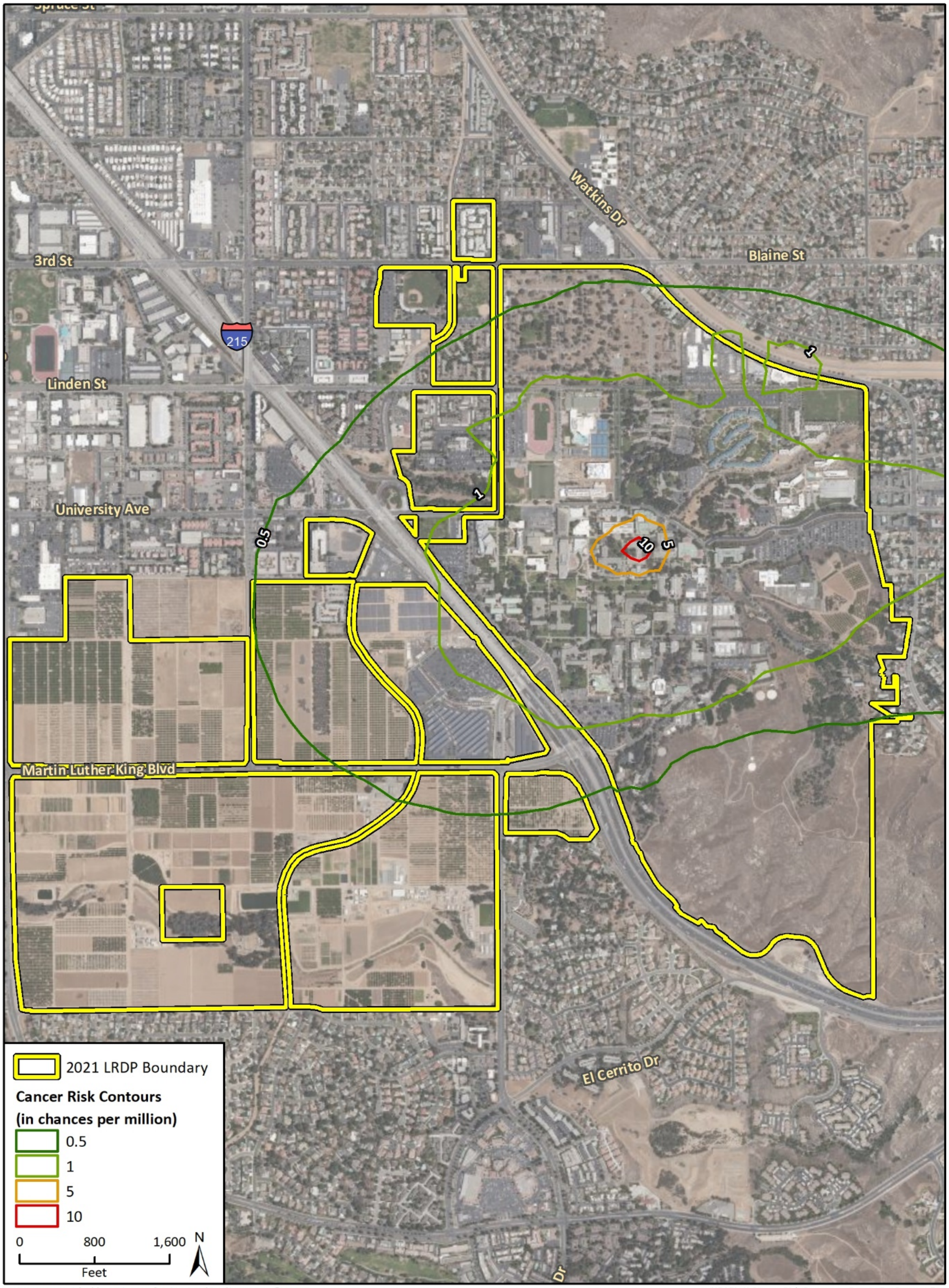
Figure 11 On-Campus Residential Cancer Risk Contours – Baseline Scenario



Imagery provided by Microsoft Bing and its licensors © 2021.

HRAFig X Cancer Risk Contours - Baseline On Campus Res

Figure 12 On-Campus Residential Cancer Risk Contours – Future Scenario



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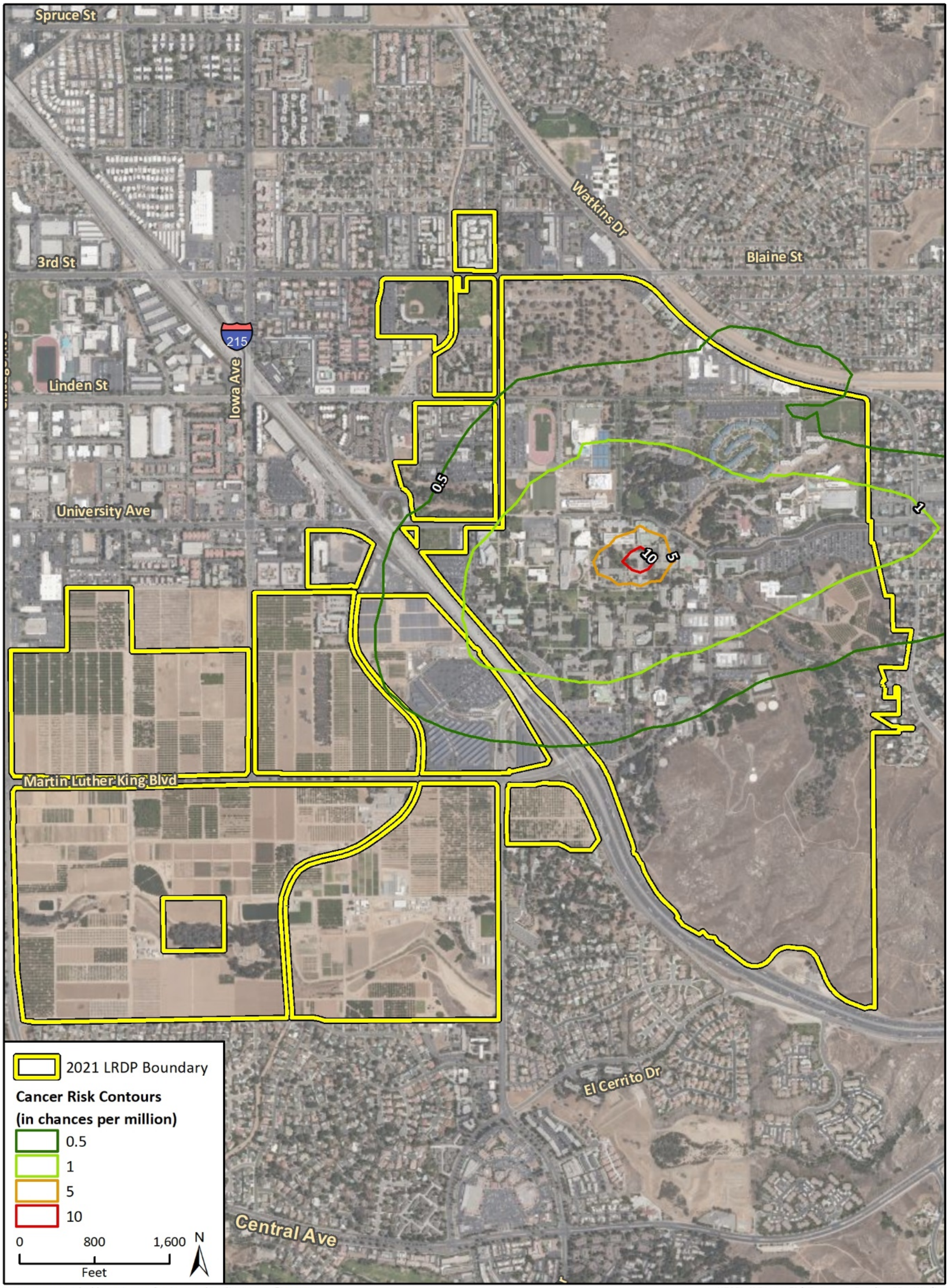
HRAFig X Cancer Risk Contours - Future On Campus Res

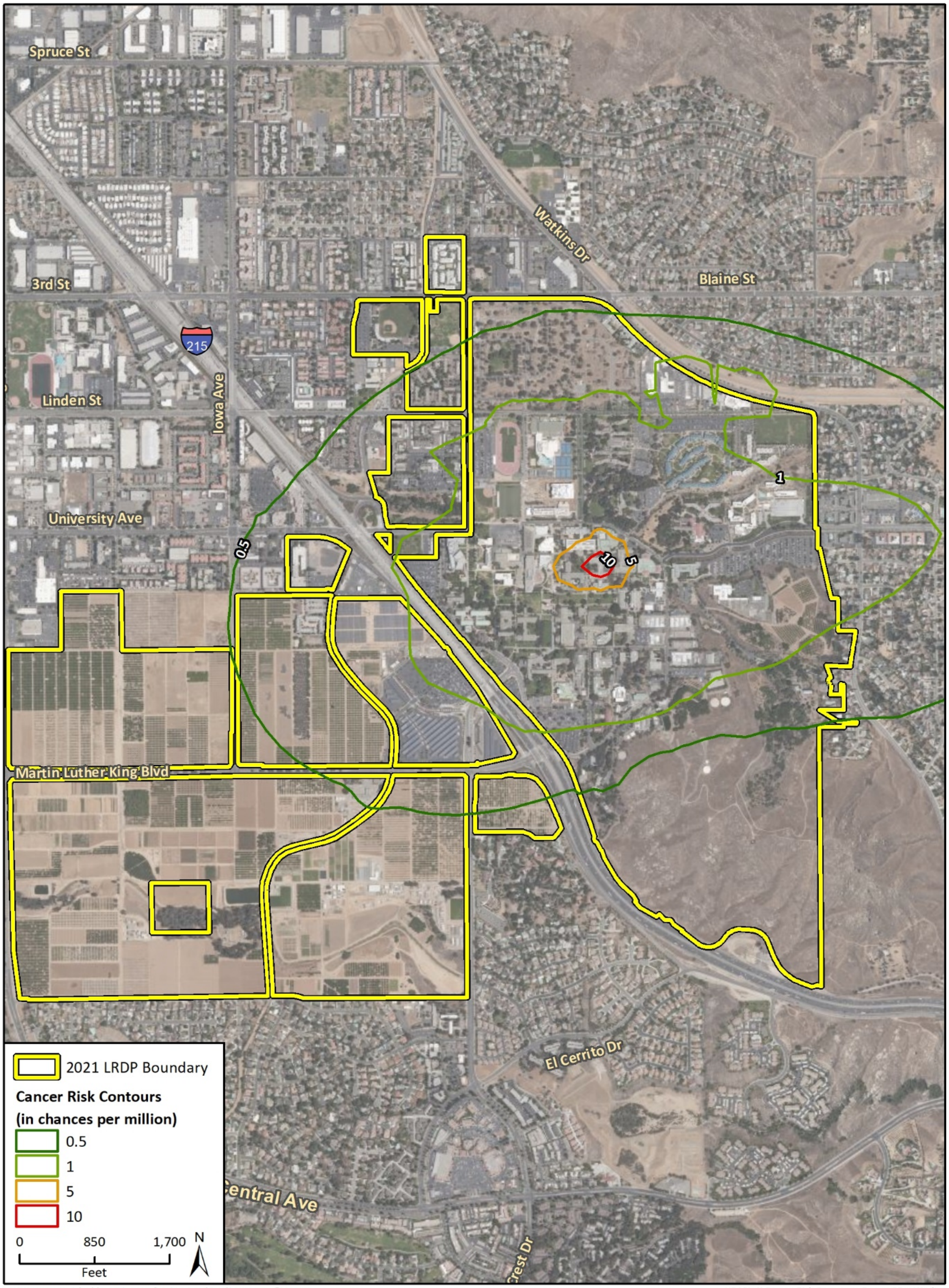
Figure 13 Worker Cancer Risk Contours – Baseline Scenario



Imagery provided by Microsoft Bing and its licensors © 2021.

HRAFig X Cancer Risk Contours - Baseline 25yr Worker

Figure 14 Worker Cancer Risk Contours – Future Scenario



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HRAFig X Cancer Risk Contours - Future 25yr Worker

Non-Cancer Risk

Chronic Health Risk Impacts

Chronic hazard indices at the off-campus and on-campus MEIR, MEIW, and UCR Child Development Center are described in Table 9. HARP 2 dispersion modeling outputs and health risk results are provided in Appendix C. As shown in Table 9, chronic hazard indices under the proposed 2021 LRDP would not exceed the SCAQMD threshold of 1.0 at the off- or on-campus MEIR, MEIW, or UCR Child Development Center.

Table 9 Chronic Health Risk Results

Scenario	Chronic Hazard Index
Off-Campus Resident[1]	
Baseline Scenario	0.04
Future Scenario	0.06
Net Increase	0.02
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**
On-Campus Resident[2]	
Baseline Scenario	0.09
Future Scenario	0.11
Net Increase	0.02
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**
Off-Campus Worker[3]	
Baseline Scenario	0.01
Future Scenario	0.02
Net Increase	0.01
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**
On-Campus Worker[4]	
Baseline Scenario	0.13
Future Scenario	0.15
Net Increase	0.02
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**
Child Development Center	
Baseline Scenario	0.01
Future Scenario	0.02
Net Increase	0.01
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**

[1] Off-campus MEIR for chronic health risk is located in the rear/side yard of a single-family residence at the western terminus of West Broadbent Drive.

[2] On-campus MEIR for chronic health risk is located in the southern portion of Lothian Hall.

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[3] Off-campus MEIW for chronic health risk is located at commercial structure near the intersection of Watkins Drive and West Big Springs Road.

[4] On-campus MEIW for chronic health risk is located at Geology building under baseline scenario and Science Lab 1 under future scenario.

Health risk model outputs provided in Appendix C.

Acute Health Risk Impacts

Acute hazard indices at the off-campus and on-campus MEIR, off-campus MEIW, and UCR Child Development Center are described in Table 10. HARP 2 dispersion modeling outputs and health risk results are provided in Appendix C. As shown in Table 10, acute hazard indices under the proposed 2021 LRDP would not exceed the SCAQMD threshold of 1.0 at the off- or on-campus MEIR, off-campus MEIW, or UCR Child Development Center.

Table 10 Acute Health Risk Results

Scenario	Acute Hazard Index
Off-Campus Resident[1]	
Baseline Scenario	0.10
Future Scenario	0.13
Net Increase	0.03
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**
On-Campus Resident[2]	
Baseline Scenario	0.23
Future Scenario	0.27
Net Increase	0.04
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**
Off-Campus Worker[3]	
Baseline Scenario	0.07
Future Scenario	0.11
Net Increase	0.04
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**
Child Development Center	
Baseline Scenario	0.10
Future Scenario	0.14
Net Increase	0.04
SCAQMD Significance Threshold	1.0
Exceeds Threshold?	**No**

[1] Off-campus MEIR for acute health risk is located in the rear yard of a single-family residence along West Campus View Drive, north of the campus Physical Plant.

[2] On-campus MEIR for acute health risk is located in the eastern portion of Lothian Hall.

[3] Off-campus MEIW for acute health risk is located at church near the intersection of University Avenue and West. Campus Drive.

Health risk model outputs provided in Appendix C.

This Programmatic HRA evaluates health risk from approximately 84 TACs, many of which are associated with emissions from laboratory fume hoods at UCR's various research facilities. The screening acute non-cancer risk calculated by HARP 2 as presented in this analysis is a conservative approximation. It is calculated by assuming that the contribution of risk from each emitting source is at its maximum at the same instant in time. For analyses that include more than one emitting source, such as this Programmatic HRA, the maximum hourly risk from each source is summed to give the screening value, as if they had all occurred at the same time. In reality, the time that the risk from each emitting source is at a maximum will differ depending on location and meteorology. Furthermore, this screening level acute risk value does not account for the various safety measures implemented at UCR when handling, storing, and using laboratory chemicals. UCR laboratories implement various safety measures related different programs such as biosafety, chemical safety, radiation/laser safety, and other related programs. These safety measures include utilizing lab fume hoods, safety goggles and personal protective equipment, and other safety measures that are described further in program-specific policies overseen by UCR Environment, Health & Safety (UCR 2021).

Unsurprisingly, health risk modeling as described in this Programmatic HRA identified the on-campus MEIW for acute health risk at campus laboratory facilities. However, for the reasons described above, this methodology results in an inflated acute hazard index for on-campus workers, given that standard laboratory safety procedures cannot be incorporated. Such screening values are not reflective of the true acute health risk posed to on-campus workers under baseline or future scenarios, and therefore, are not described further in this analysis. Nevertheless, health risk modeling indicates a net increase in acute hazard index of less than 0.1 for the on-campus MEIW between the baseline and future scenarios, below the SCAQMD significance threshold of 1.0.

5.2 Emissions Sources Not Quantified

In addition to the emissions sources characterized in this Programmatic HRA, campus operations include sources of emissions that were not quantified for this analysis, either due to their unpredictable or diffuse nature or because such emissions are not anticipated to continue or increase under buildout of the proposed 2021 LRDP. These sources are discussed qualitatively below.

Off-Road Vehicles/Equipment

The 2019 AER does not quantify emissions from diesel-powered off-road vehicles and equipment. UCR currently maintains a list of 11 diesel-powered off-road engines, as reported to CARB's Diesel Off-Road Online Reporting System (DOORS) registry. This list includes two off-highway tractors, one skid steer loader, and eight pieces of general industrial equipment ranging from 28 to 80 horsepower (hp). UCR estimates that this equipment is operated from as few as one to as many as 15 hours per week under baseline conditions.

The primary TAC associated with operation of diesel-powered off-road equipment is diesel particulate matter. Equipment used on an as-needed basis for building or hardscape maintenance projects is temporary in nature and emissions would be expected to diffuse quickly. The off-road vehicles and equipment identified above are primarily used for landscape maintenance across campus. Given the temporary use of such equipment without a defined area of consistent operation, localized TAC emission impacts are anticipated to be minimal. Further, minimal change or growth in landscaped area is anticipated under the proposed 2021 LRDP. As such, current use and emissions of off-road equipment is not anticipated to change. For these reasons, off-road emissions and potential health impacts under the baseline scenario were not modeled in this Programmatic HRA.

Painting Operations

According to the 2020 SCAQMD equipment list provided by UCR, one identified spray booth[8] is located at the Physical Plant paint shop on campus. Emissions from painting operations and/or spray booths have not been reported in UCR's AER for several years. Presently, the permitted spray booth at the Physical Plant is not operational. The spray booth has been out of commission for several years and there is no plan to re-instate operation in the future. Because the spray booths that remain on campus are not active, no such source was included in this Programmatic HRA.

Construction Activities

Construction-related activities would result in temporary emissions of DPM exhaust from off-road, heavy-duty diesel equipment for site preparation, grading, building construction, and other construction activities.

The dose of a contaminant to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period generally results in a higher exposure level for the maximally exposed individual. The risks estimated for a maximally exposed individual are higher if a fixed exposure occurs over a longer period of time.

Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk. Given the anticipated buildout of campus under the proposed 2021 LRDP, it is possible that construction activities may occur more regularly within the campus boundaries through 2035. However, individual projects would be located throughout the approximately 1,108-acre campus. Generation of DPM from individual construction projects under the proposed 2021 LRDP would occur in a single area for a relatively short period of time, limiting the potential for localized health risk impacts associated with construction.

The maximum DPM emissions would generally occur during site preparation and grading activities when heavy equipment is operating most consistently. These activities would typically be expected to last on the order of months for individual construction projects. DPM emissions would decrease for other construction activities such as building construction and architectural coating, as these activities would require less diesel-fueled construction equipment. Given that the maximum DPM emissions associated with construction would occur at a single site for a small fraction of the recommended health risk exposure period and that construction emissions would be dispersed across the greater, approximately 1,108-acre campus area, DPM generated by construction of individual project construction under the proposed 2021 LRDP would not create unsafe or potentially hazardous conditions for sensitive receptors.

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[8] For the purposes of the Programmatic HRA, emissions from spray booths refer to large scale, permitted painting and coating spray booths on campus. Various painting activities for academic purposes may occur on campus, such as those associated arts and theater programs. However, it is assumed that such activities are not of a scale or duration to trigger air quality permitting or substantially contribute to health risk on campus.

6 Limitations, Assumptions, and Conclusion

As noted in Section 5, *Impact Analysis*, implementation of the proposed 2021 LRDP would not expose on- or off-campus sensitive receptors or workers to health risks in excess of applicable SCAQMD thresholds.

The analysis contained herein is conducted at a programmatic level and, as such, is subject to limitations. First, the precise location of all sources of TACs on-campus under the future scenario is not known. This analysis makes reasonable assumptions regarding the location of future TAC emissions sources; for example, potential locations of new emergency generators were sited based on potential areas planned for development or redevelopment, and emissions sources associated with interim projects were sited at their known, respective locations. Nevertheless, the potential exists for new sources to be located outside of sites contemplated in this Programmatic HRA during buildout of the proposed 2021 LRDP.

Second, there remains uncertainty as to the rate and extent TAC emissions will grow on-campus. This analysis applies growth factors to emissions sources based on reasonable proxies (e.g., laboratory fume hood emissions increasing relative to the increase in wet laboratory space). However, it is possible that emissions may increase or decrease at rates faster or slower than those anticipated in this Programmatic HRA.

Projects implemented under the proposed 2021 LRDP that include new sources of TACs will be required to undergo the appropriate level of project-specific environmental review to determine their consistency with the conclusions of the 2021 LRDP EIR, including this Programmatic HRA. Furthermore, new or altered sources of TACs would remain subject to all applicable State and air district regulations, including AB 2588 and SCAQMD New Source Review and Rule 1402 (*Control of Toxic Air Contaminants from Existing Sources*). Sources of TACs exceeding air district health risk standards would be required to implement risk reduction measures to minimize potential health risks to sensitive receptors.

Furthermore, this Programmatic HRA employs the following conservative assumptions to alleviate uncertainty inherent to a programmatic analysis:

- The analysis conservatively analyzes exposure of residents, workers, and students at existing building edges. Realistically, residents, workers, and students on and near campus spend a substantial portion of their time indoors, separated from existing and future emissions sources and modeled ground-level concentrations by walls, windows, and doors, which would reduce exposure.
- The analysis assumes no use of air filtration systems at any buildings on or surrounding the campus under baseline or future scenarios. Pursuant to the 2019 California Energy Code, Minimum Efficiency Reporting Value (MERV) 13 filtration is required in HVAC systems for new residential construction, effective January 1, 2020. Other MERV-rated filtration systems may already be in place at existing residential or non-residential buildings on- or off-campus. Use of such filters would result in a substantial reduction in health risk at these receptors relative to the values presented in this report due to the efficiency of such filters at trapping particulate-based TACs, such as DPM.
- Where specific information regarding future emissions sources is not known, this analysis uses data from existing emissions sources on-campus to characterize future sources. For example,

emissions from all future emergency generators are based on typical capacity (in bhp), fuel consumption, and emissions from existing generators on campus. In reality, future emissions sources would likely employ new, more efficient control technology and may replace older, less efficient equipment. Furthermore, some sources of TAC emissions—such as gasoline dispensing facilities and natural gas boilers/water heaters—may decrease under the proposed 2021 LRDP due to increasingly efficient vehicles and electrification of building heating systems. Nevertheless, this analysis does not factor in emissions reductions under the future scenario for these sources and assumes such emissions would remain at baseline levels, resulting in an inherently conservative analysis.

Despite these conservative assumptions, the analysis contained herein determines that health risk impacts associated with implementation of the proposed 2021 LRDP would not exceed SCAQMD thresholds.

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Appendix A

2019 Annual Emissions Report

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South Coast

AQMD

Annual Emission Report

Reporting Year: **2019**

Print Date: **03/11/2020**

Facility Id:	**49387**
Facility Name	**UNIV CAL, RIVERSIDE**
Facility Type:	**Schools and Educational Institutions**

StatusUpdate

Facility ID	49387
Facility Shutdown Date	N/A
Change of Ownership Date	N/A
Change in Equipment Location Date	N/A
Emissions are zero for this year’s report, or emissions reduced by 50%	N/A
Exemption Request	N/A
Use of alternative Calculation methodology	N/A
Other	N/A
Refund Request	N/A

Annual Emission Report

Reporting Year: **2019**

Print Date: **03/11/2020**

Facility Id: **49387**
Facility Name **UNIV CAL, RIVERSIDE**
Facility Type: **Schools and Educational Institutions**

External Combustion Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES31		467189	P1	Boiler 10-100 MMBTU/HR	Natural Gas	57.140000	mmscf	EF	lbs/ mmscf	5.500000		4.215960	0.600000	84.000000	7.600000
								Emissions	lbs	314.27		240.90	34.28	4,799.76	434.26
ES31		467189	P2	Boiler 10-100 MMBTU/HR	Propane	0.000000	M gal	EF	lbs/ M gal	0.260000		12.800000	4.600000	3.200000	0.280000
								Emissions	lbs	0.00		0.00	0.00	0.00	0.00
ES40		543160	P1	Boiler <10 MMBTU/HR	Natural Gas	0.190000	mmscf	EF	lbs/ mmscf	5.500000		15.100000	0.600000	84.000000	7.600000
								Emissions	lbs	1.05		2.87	0.11	15.96	1.44
ES41		543162	P1	Boiler <10 MMBTU/HR	Natural Gas	7.900000	mmscf	EF	lbs/ mmscf	5.500000		34.400000	0.600000	84.000000	7.600000
								Emissions	lbs	43.45		271.76	4.74	663.60	60.04
ES42		543163	P1	Boiler <10 MMBTU/HR	Natural Gas	7.900000	mmscf	EF	lbs/ mmscf	5.500000		34.400000	0.600000	84.000000	7.600000
								Emissions	lbs	43.45		271.76	4.74	663.60	60.04
ES43		546715	P1	Boiler 10-100 MMBTU/HR	Natural Gas	56.300000	mmscf	EF	lbs/ mmscf	5.500000		5.132680	0.600000	84.000000	7.600000
								Emissions	lbs	309.65		288.97	33.78	4,729.20	427.88
ES44		546716	P1	Boiler 10-100 MMBTU/HR	Natural Gas	47.210000	mmscf	EF	lbs/ mmscf	5.500000		8.172840	0.600000	84.000000	7.600000
								Emissions	lbs	259.66		385.84	28.33	3,965.64	358.80
ES49		551422	P1	Boiler 10-100 MMBTU/HR	Natural Gas	183.330000	mmscf	EF	lbs/ mmscf	5.500000		4.021380	0.600000	84.000000	7.600000
								Emissions	lbs	1,008.32		737.24	110.00	15,399.70	1,393.31

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES52		553959	P1	Boiler <10 MMBTU/HR	Natural Gas	11.470000	mmscf	EF	lbs/ mmscf	5.500000		24.600000	0.600000	84.000000	7.600000
								Emissions	lbs	63.09		282.16	6.88	963.48	87.17
ES56			P1	Oven <10 MMBTU/HR	Natural Gas	1.310000	mmscf	EF	lbs/ mmscf	7.000000		130.000000	0.600000	35.000000	7.500000
								Emissions	lbs	9.17		170.30	0.79	45.85	9.83
ES57			P1	Oven <10 MMBTU/HR	Natural Gas	1.320000	mmscf	EF	lbs/ mmscf	7.000000		130.000000	0.600000	35.000000	7.500000
								Emissions	lbs	9.24		171.60	0.79	46.20	9.90
ES58			P1	Boiler <10 MMBTU/HR	Natural Gas	4.320000	mmscf	EF	lbs/ mmscf	5.500000		100.000000	0.600000	84.000000	7.600000
								Emissions	lbs	23.76		432.00	2.59	362.88	32.83
ES59			P1	Boiler <10 MMBTU/HR	Natural Gas	2.070000	mmscf	EF	lbs/ mmscf	5.500000		100.000000	0.600000	84.000000	7.600000
								Emissions	lbs	11.39		207.00	1.24	173.88	15.73

Total Emissions	lbs	2,096.48		3,462.40	228.28	31,829.75	2,891.24
Total Emissions	tons	1.05	0.00	1.73	0.11	15.91	1.45

Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Internal Combustion Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES4		447071	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	1.029450	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	38.60		482.81	0.22	105.00	34.49
ES5		447072	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.418250	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	15.68		196.16	0.09	42.66	14.01
ES6		447073	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.118780	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	4.45		55.71	0.02	12.12	3.98
ES7		450411	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.020730	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.78		9.72	0.00	2.11	0.69
ES8		450427	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.008670	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.33		4.07	0.00	0.88	0.29
ES9		450429	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Natural Gas	0.004536	mmscf	EF	lbs/ mmscf	120.000000		4,162.000000	0.600000	323.000000	10.000000
								Emissions	lbs	0.54		18.88	0.00	1.47	0.05
ES10		450431	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Natural Gas	0.000000	mmscf	EF	lbs/ mmscf	120.000000		4,162.000000	0.600000	323.000000	10.000000
								Emissions	lbs	0.00		0.00	0.00	0.00	0.00
ES11		450434	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.059980	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	2.25		28.13	0.01	6.12	2.01

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES12		450435	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.099850	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	3.74		46.83	0.02	10.18	3.34
ES13		450436	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.316890	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	11.88		148.62	0.07	32.32	10.62
ES14		450437	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.080010	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	3.00		37.52	0.02	8.16	2.68
ES15		450438	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.011630	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.44		5.45	0.00	1.19	0.39
ES16		450439	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.660330	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	24.76		309.70	0.14	67.35	22.12
ES17		450440	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.446170	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	16.73		209.25	0.09	45.51	14.95
ES18		450441	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.155680	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	5.84		73.01	0.03	15.88	5.22
ES19		450443	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.077530	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	2.91		36.36	0.02	7.91	2.60
ES20		450444	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.026950	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	1.01		12.64	0.01	2.75	0.90
ES21		450445	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	1.050000	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	39.38		492.45	0.22	107.10	35.18
ES22		450446	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	1.319460	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	49.48		618.83	0.28	134.59	44.20
ES23		450447	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.197190	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	7.39		92.48	0.04	20.11	6.61
ES24		450448	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.177500	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	6.66		83.25	0.04	18.11	5.95

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES25		456729	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.078360	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	2.94		36.75	0.02	7.99	2.63
ES26		456730	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	1.711770	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	64.19		802.82	0.36	174.60	57.34
ES27		456731	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.017720	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.66		8.31	0.00	1.81	0.59
ES28		461065	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.025650	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	0.96		12.03	0.01	2.62	0.86
ES29		466716	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.550600	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	20.65		258.23	0.12	56.16	18.45
ES30		466717	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.367660	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	13.79		172.43	0.08	37.50	12.32
ES33		469717	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.069960	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	2.62		32.81	0.01	7.14	2.34
ES34		470516	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.042780	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	1.60		20.06	0.01	4.36	1.43
ES35		479835	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.928030	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	34.80		435.25	0.19	94.66	31.09
ES37		507767	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.506080	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	18.98		237.35	0.11	51.62	16.95
ES38		510988	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.123650	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	4.64		57.99	0.03	12.61	4.14
ES47		551184	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	1.118060	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	41.93		524.37	0.23	114.04	37.46
ES48		551186	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.035910	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	1.35		16.84	0.01	3.66	1.20

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Fuel	Fuel Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES51		553940	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.059240	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	2.22		27.78	0.01	6.04	1.98
ES53		560806	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.357830	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	13.42		167.82	0.08	36.50	11.99
ES65		577485	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	0.892890	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	33.48		418.77	0.19	91.07	29.91
ES66		597017	P1	Stationary I.C. Engines, 4 Stroke-Lean Burn	Distillate Fuel Oil No. 2	1.150970	M gal	EF	lbs/ M gal	37.500000		469.000000	0.210000	102.000000	33.500000
								Emissions	lbs	43.16		539.81	0.24	117.40	38.56

Total Emissions	lbs	537.25		6,731.30	3.01	1,461.31	479.50
Total Emissions	tons	0.27	0.00	3.37	0.00	0.73	0.24

Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Other Use of Organics Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES60			P2	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	107-06-2	183.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	12.33					
ES60			P3	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	123-91-1	181.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	12.20					
ES60			P5	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	50-00-0	529.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	35.65					
ES60			P6	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	56-23-5	130.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	8.76					
ES60			P7	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	71-43-2	228.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	15.37					
ES60			P12	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	75-09-2	3,021.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P13	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	75-21-8	1.600000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.11					
ES60			P14	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	7664-41-7	1,197.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES60			P15	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	79-01-6	93.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	6.27					
ES60			P16	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	120-12-7	8.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.54					
ES60			P17	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	129-00-0	2.500000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.17					
ES60			P21	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	83-32-9	1.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.07					
ES60			P22	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	85-01-8	1.900000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.13					
ES60			P23	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	86-73-7	2.900000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.20					
ES60			P24	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	91-20-3	35.300000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	2.38					
ES60			P28	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	106-93-4	29.600000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	2.00					
ES60			P44	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	7440-43-9	3.810000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P73	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	127-18-4	13.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P82	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	91-57-6	2.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.13					
ES60			P83	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	75-69-4	6.000000	lbs	EF	lbs/ lbs		0.0674				
									Emissions	lbs		0.40				
ES60			P84	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	75-71-8	0.000000	lbs	EF	lbs/ lbs		0.0674				
									Emissions	lbs		0.00				

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES60			P85	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	76-13-1	13.000000	lbs	EF	lbs/ lbs		0.0674				
									Emissions	lbs		0.88				
ES60			P86	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	71-55-6	0.000000	lbs	EF	lbs/ lbs		0.0674				
									Emissions	lbs		0.00				
ES60			P87	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	7440-38-2	0.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P88	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	106-99-0	9.200000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.62					
ES60			P89	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	7439-92-1	2.500000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P90	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	75-01-4	0.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.00					
ES60			P91	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	7440-41-7	0.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P92	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	69 51796 Urethane {Ethyl carbamate]	3.200000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.22					
ES60			P93	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	43 58899 Lindane {gamma-Hexachlorocyclohexane}	0.200000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.01					
ES60			P94	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	51 67561 Methanol	4,558.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	307.21					
ES60			P95	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	35 67663 Chloroform	2,336.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	157.45					
ES60			P96	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	62 75569 Propylene oxide	14.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.94					
ES60			P97	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	25 79005 1,1,2-Trichloroethane {Vinyl trichloride}	4.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.27					

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES60			P98	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	24 79345 1,1,2,2-Tetrachloroethane	8.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.54					
ES60			P99	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	48 101688 Methylene diphenyl diisocyanate {MDI} [POM]	1.200000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.08					
ES60			P100	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	61 101779 4,4'-Methylenedianiline (and its dichloride) [POM]	0.900000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.06					
ES60			P101	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	57 106467 p-Dichlorobenzene {1,4-Dichlorobenzene}	6.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.40					
ES60			P102	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	30 107028 Acrolein	5.120000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.35					
ES60			P103	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	31 107131 Acrylonitrile	5.100000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.34					
ES60			P104	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	54 108101 Methyl isobutyl ketone {Hexone}	59.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	3.98					
ES60			P105	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	68 108883 Toluene	1,051.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	70.84					
ES60			P106	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	41 109864 Ethylene glycol monomethyl ether	15.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	1.01					
ES60			P107	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	44 110543 Hexane	1,529.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	103.06					
ES60			P108	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	41 110714 Ethylene glycol dimethyl ether	100.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	6.74					
ES60			P109	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	41 110805 Ethylene glycol monoethyl ether	88.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	5.93					
ES60			P110	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	41 112492 Triethylene glycol dimethyl ether	134.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	9.03					

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES60			P111	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	42 118741 Hexachlorobenzene	0.400000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.03					
ES60			P112	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	19 208968 Acenaphthylene [PAH, POM]	0.500000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.03					
ES60			P113	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	45 302012 Hydrazine	2.920000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P114	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	43 319846 alpha-Hexachlorocyclohexane	1.100000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.07					
ES60			P115	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	48 822060 Hexamethylene-1,6-diisocyanate	0.060000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	0.00					
ES60			P116	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	65 1310732 Sodium hydroxide	1,194.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P117	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	60 1314563 Phosphorus pentoxide	0.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P118	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	70 1330207 Xylenes	557.000000	lbs	EF	lbs/ lbs	0.067400					
									Emissions	lbs	37.54					
ES60			P119	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	49 7439965 Manganese	1.600000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P120	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	50 7439976 Mercury	15.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P121	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	17 7440020 Nickel	0.900000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P122	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	36 74400508 Copper	19.400000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P123	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	50 7487947 Mercuric chloride	12.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES60			P124	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	37 7631869 Crystalline silica	5.800000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P125	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	46 7647010 Hydrochloric acid	8,656.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P126	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	60 7664382 Phosphoric acid	687.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P127	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	73 7664393 Hydrogen fluoride (hydrofluoric acid)	150.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P128	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	67 7664939 Sulfuric acid	915.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P129	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	59 7723140 Phosphorus	0.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P130	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	64 7782492 Selenium	2.200000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P131	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	34 7782505 Chlorine	1.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P132	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	67 8014957 Oleum	14.300000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES60			P133	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	60 10026138 Phosphorus pentachloride	0.000000	lbs	EF	lbs/ lbs						
									Emissions	lbs						
ES61			P1	Other evaporative sources	Others : Regulated Specific Organic Emissions : Other : Chlorodifluoromethane (HCFC-22)	R-22 CAS 1104	306.940000	lbs	EF	lbs/ lbs		1				
									Emissions	lbs		306.94				
ES61			P2	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	R-12 75-71-8	0.000000	lbs	EF	lbs/ lbs		1				
									Emissions	lbs		0.00				
ES61			P4	Other evaporative sources	Others : Usage of Organic Contained Materials : Other : Specialty Material	CFC-113 76-13-1	0.000000	lbs	EF	lbs/ lbs		1				
									Emissions	lbs		0.00				

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Material Activity Code	Material Description	Usage	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES61			P5	Other evaporative sources	Others : Regulated Specific Organic Emissions : Other : Tetrafluororethane (HFC-134a)	R-134a 811-97-2 1,1,1,2 -Tetrafluorethane	880.700000	lbs	EF	lbs/ lbs		1				
									Emissions	lbs		880.70				
ES61			P6	Other evaporative sources	Others : Regulated Specific Organic Emissions : Other : 1,1,1-Trifluoroethane (HFC-143a)	R-404A R-125/143a/134a (44±2/52±1/4±2)	144.190000	lbs	EF	lbs/ lbs		1				
									Emissions	lbs		144.19				
ES61			P7	Other evaporative sources	Others : Regulated Specific Organic Emissions : Other : Tetrafluororethane (HFC-134a)	R-407C R-32/125/134a (23±2/25±2/52±2)	178.480000	lbs	EF	lbs/ lbs		1				
									Emissions	lbs		178.48				
ES61			P8	Other evaporative sources	Others : Regulated Specific Organic Emissions : Other : Chlorodifluoromethane (HCFC-22)	R-410A R-22/152a/124 (53±2/13+.5,-1.5/34±1)	0.000000	lbs	EF	lbs/ lbs		1				
									Emissions	lbs		0.00				

Total Emissions	lbs	803.06	1,511.59				
Total Emissions	tons	0.40	0.76	0.00	0.00	0.00	0.00

South Coast

AQMD

Annual Emission Report

Reporting Year: **2019**

Print Date: **03/11/2020**

Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Storage Tanks Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Equipment	Product	Throughput	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM
ES36		489973	P1	Underground Small storage tank - <10,000 gallons	Gasoline (RVP 7)	109.393500	M gal	EF	lbs/ M gal	1.440000					
								Emissions	lbs	157.53					
ES54		566114	P1	Storage tank and Dispensing	Gasoline (RVP 7)	1.993900	M gal	EF	lbs/ M gal	0.843000					
								Emissions	lbs	1.68					
ES54		566114	P2	Storage tank and Dispensing	Distillate fuel oil no. 2	2.910200	M gal	EF	lbs/ M gal	0.028000					
								Emissions	lbs	0.08					
ES55		566115	P1	Storage tank and Dispensing	Gasoline (RVP 7)	9.445200	M gal	EF	lbs/ M gal	0.843000					
								Emissions	lbs	7.96					
ES55		566115	P2	Storage tank and Dispensing	Distillate fuel oil no. 2	4.122000	M gal	EF	lbs/ M gal	0.028000					
								Emissions	lbs	0.12					

		ROG	SPOG	NOx	SOx	CO	PM
Total Emissions	lbs	167.37					
Total Emissions	tons	0.08	0.00	0.00	0.00	0.00	0.00

Facility Id: **49387**
Facility Name **UNIV CAL, RIVERSIDE**
Facility Type: **Schools and Educational Institutions**

Other Process Emissions Process List Overview

AER Device ID	Permit Device ID	A/N	Process ID	Activity	Throughput	Units		Criteria Pollutant Units	ROG	SPOG	NOx	SOx	CO	PM	Permit Equipment Description
ES62			P1	Miscellaneous Operations and Services : Cooling Towers : Comfort Cooling (HVAC) : Natural Draft	14.260000	MMgal/day	EF	lbs/ MMgal/day						117.356000	
							Emissions	lbs						1,673.50	
ES63			P1	Miscellaneous Operations and Services : Cooling Towers : Comfort Cooling (HVAC) : Natural Draft	8.930000	MMgal/day	EF	lbs/ MMgal/day						120.736000	
							Emissions	lbs						1,078.17	
ES64			P1	Miscellaneous Operations and Services : Cooling Towers : Comfort Cooling (HVAC) : Natural Draft	13.540000	MMgal/day	EF	lbs/ MMgal/day						189.511000	
							Emissions	lbs						2,565.98	

Total Emissions	lbs						5,317.65	
Total Emissions	tons	0.00	0.00	0.00	0.00	0.00	2.66	

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Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Criteria Pollutants Permitted Emissions Summary

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	1.02	0.00	1.24	0.00	0.11	0.00	15.60	1.41
Internal Combustion	0.27	0.00	3.37	0.00	0.00	0.00	0.73	0.24
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Permitted Emissions	**1.37**	**0.00**	**4.61**	**0.00**	**0.11**	**0.00**	**16.33**	**1.65**

Annual Emission Report

Reporting Year: **2019**

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Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Criteria Pollutants Non-Permitted Emissions Summary

	VOC (tons)	SPOG (tons)	NOx (tons)	NOx RECLAIM (tons)	SOx (tons)	SOx RECLAIM (tons)	CO (tons)	PM (tons)
External Combustion	0.03	0.00	0.49	0.00	0.00	0.00	0.31	0.03
Internal Combustion	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Spray Coating/ Spray Booth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Use of Organics	0.40	0.76	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Components	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Process Emissions	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.66
Shutdown/Startup/Turnaround and Upsets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Non-Permitted Emissions	**0.43**	**0.76**	**0.49**	**0.00**	**0.00**	**0.00**	**0.31**	**2.69**

Annual Emission Report

Reporting Year: **2019**

Print Date: **03/11/2020**

Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Toxic Air Contaminants (TAC) / Ozone Depleting Compounds (ODC) Emissions and Fees Summary

For detailed TAC Records please see
related “AER TAC Report” Excel file

Annual Emission Report

Reporting Year: **2019**

Print Date: **03/11/2020**

Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Other Toxic Air Contaminants (TAC) Emissions Summary Applicable to AB2588 Facility

For detailed TAC Records please see
related “AER TAC Report” Excel file

South Coast

AQMD

Annual Emission Report

Reporting Year: **2019**

Print Date: **03/11/2020**

Facility Id: **49387**

Facility Name **UNIV CAL, RIVERSIDE**

Facility Type: **Schools and Educational Institutions**

Total Emissions and Fees

Submittal Date: No later than March 17 2020	Total Permitted Emissions (tons)	Total Non-Permitted Emissions (tons)	Total RECLAIM Emissions (tons)	Total Emission (tons)	Total Emissions/ Subject To Fee (tons)	Emissions Fees Due
Organic Gasses	1.37	0.43		1.80	0.00	$0.00
Specific Organics	0.00	0.76		0.76	0.00	$0.00
Nitrogen Oxides	4.61	0.49	0.00	5.10	5.00	$757.10
Sulfur Oxides	0.11	0.00	0.00	0.11	0.00	$0.00
Carbon Monoxide	16.33	0.31		16.64	0.00	$0.00
Particulate Matter	1.65	2.69		4.34	4.00	$494.78

1. TOTAL EMISSION FEES FOR ALL CRITERIA POLLUTANTS	$1,251.88
2. TOXIC AIR CONTAMINANTS/ OZONE DEPLETER FEES (Total amount from Form TACS or DC)	$9,677.02

TAC Fees Breakdown	
Facility Flat Fee:	$78.03
CPWE Emission Fees:	$2700.00
Ammonia & Depleting Compounds (ODC) Fees:	$402.89
Per Device Fees (total devices with fees 38):	$6496.10
	$9677.02

3. TOTAL FEES DUE	$10,928.90
4. INSTALLMENTS PAID FOR 2019 - (if any) -- All Criteria Pollutants	$0.00
5. INSTALLMENTS PAID FOR 2019 - (if any) -- Toxic Air Contaminants/Ozone Depleters	$0.00
6. BALANCE DUE (Line 3 - Line 4 - Line 5)	$10,928.90
7. LATE PAYMENT SURCHARGE	$0.00
8. AMOUNT DUE	**$10,928.90**

South Coast

AQMD

Annual Emission Report

Reporting Year: **2019**

Print Date: **03/11/2020**

Facility Id:	**49387**
Facility Name	**UNIV CAL, RIVERSIDE**
Facility Type:	**Schools and Educational Institutions**

Electronic Certification Sheet

Information

NAICS code:	
AB2588 Filing Period:	Yes
RECLAIM:	No
Facility Operating Status:	Operating
Classified As Small Business:	No

Business Operating Hours

Hours/Day;	8
Days/Week:	5
Weeks/Year:	50

AB2588 Receptor Distance

Worker (ft):

Residential(ft):

Brief Description of Operation

Research and academic

Equipment Location Address

Facility Name:
UNIV CAL, RIVERSIDE
900 UNIVERSITY AVE
RIVERSIDE, CA 92521

Mailing Information

Facility Name:
UNIV CAL, RIVERSIDE
900 UNIVERSITY AVE
RIVERSIDE, CA 92521

Contact Information

Name:	Amanda Grey	Phone:	951 827-2416
Title:	Environmental Programs Manager	Fax:	951 827-5122
E-mail:	amanda.grey@ucr.edu		

Preparer Information

Name:	Amanda Grey	Phone:	951 827-2416
Title:	Environmental Programs Manager	Fax:	951 827-5122
E-mail:	amanda.grey@ucr.edu		

Authorized Person Information

Name:	Sheila Hedayati	Phone:	951 827-4378
Title:	Executive Director, Environmental Health & Safety	Fax:	951 827-5122
E-mail:	sheila.hedayati@ucr.edu		

I declare under penalty of perjury that the data submitted truly represents throughput and emissions for this reporting period, and that the emission factors represent the best available data for my company in the calculation of annual emission figures.

☒ I acknowledge that I have read the South Coast AQMD Certification Statement.*

☒ I agree on the responsibility for this AER Report Submission in accordance with Certification Statement.*

AER Submittal Confirmation

Thank you for submitting your Annual Emissions Report for Facility ID: 49387.

Please print the AER Payment Voucher and include the check for emission fees due if applicable and mail them to the SCAQMD.

AER Payment Voucher and check are first received and processed by Bank of America for check deposits, return receipts for certified mails will be stamped by Bank of America rather than AQMD. Please mail the required AER Payment Voucher and check to the following address:

South Coast Air Quality Management District
Annual Emission Reporting Program
File No. 54493
Los Angeles, CA 90074-4493

* To avoid late payment surcharges, all mails must be postmarked by the Post Office on or before March 17, 2020

NOTE: For any overnight delivery, example FedEx, please use the following address:

Bank of America Lockbox Services
Lockbox LAC-054493
2706 Media Center Drive
Los Angeles, CA. 90065

If you wish to use a messenger (or hand deliver), the package should be delivered to the cashier’s booth at AQMD Headquarters at the address listed below in Diamond Bar on or before 5:00 p.m. March 17, 2020
Please note that AQMD is closed on Mondays.

South Coast Air Quality Management District
ATTN: Finance Cashier
Annual Emission Reporting Program
21865 Copley Drive
Diamond Bar, CA 91765-4178

TAC Code	TAC Name	CAS #	AER Device ID	Equipment Code	Equipment Description	Process Type	Process ID	Total Emissions	Throughput Type	Throughput Type Description	Throughput Value	Throughput UnitID	Throughput Unit Name	Control Efficiency	Emission Factor
12	Formaldehyde	50000	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.77693	I	Input	1029.45	100	GALLONS		1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00010294	I	Input	1029.45	100	GALLONS		0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00164712	I	Input	1029.45	100	GALLONS		0.0016
15	Lead compounds (inorganic)	7439921	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00854443	I	Input	1029.45	100	GALLONS		0.0083
4	Butadiene [1,3]	106990	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.223802	I	Input	1029.45	100	GALLONS		0.2174
5	Cadmium	7440439	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00154418	I	Input	1029.45	100	GALLONS		0.0015
17	Nickel	7440020	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00401486	I	Input	1029.45	100	GALLONS		0.0039
19	PAHs [PAH, POM]	1151	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0372661	I	Input	1029.45	100	GALLONS		0.0362
2	Benzene	71432	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.191787	I	Input	1029.45	100	GALLONS		0.1863
19	Naphthalene [PAH, POM]	91203	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0202802	I	Input	1029.45	100	GALLONS		0.0197
32	Ammonia	7664417	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.9854	I	Input	1029.45	100	GALLONS		2.9
29	Acetaldehyde	75070	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.806368	I	Input	1029.45	100	GALLONS		0.7833
30	Acrolein	107028	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0348984	I	Input	1029.45	100	GALLONS		0.0339
36	Copper	7440508	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00422074	I	Input	1029.45	100	GALLONS		0.0041
40	Ethyl benzene	100414	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.011221	I	Input	1029.45	100	GALLONS		0.0109
44	Hexane	110543	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0276922	I	Input	1029.45	100	GALLONS		0.0269
46	Hydrochloric acid	7647010	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.191787	I	Input	1029.45	100	GALLONS		0.1863
49	Manganese	7439965	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00319129	I	Input	1029.45	100	GALLONS		0.0031
50	Mercury	7439976	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0020589	I	Input	1029.45	100	GALLONS		0.002
64	Selenium	7782492	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00226479	I	Input	1029.45	100	GALLONS		0.0022
68	Toluene	108883	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.108504	I	Input	1029.45	100	GALLONS		0.1054
70	Xylenes	1330207	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0436487	I	Input	1029.45	100	GALLONS		0.0424
72	Diesel exhaust particulates	9901	ES4	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	34.4866	I	Input	1029.45	100	GALLONS		33.5
2	Benzene	71432	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.07792	I	Input	418.25	100	GALLONS		0.1863
4	Butadiene [1,3]	106990	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0909275	I	Input	418.25	100	GALLONS		0.2174
5	Cadmium	7440439	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00062737	I	Input	418.25	100	GALLONS		0.0015
13	Chromium, hexavalent (and compounds)	18540299	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004182	I	Input	418.25	100	GALLONS		0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0006692	I	Input	418.25	100	GALLONS		0.0016
15	Lead compounds (inorganic)	7439921	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00347148	I	Input	418.25	100	GALLONS		0.0083
17	Nickel	7440020	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00163118	I	Input	418.25	100	GALLONS		0.0039
19	PAHs [PAH, POM]	1151	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0151406	I	Input	418.25	100	GALLONS		0.0362
19	Naphthalene [PAH, POM]	91203	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00823952	I	Input	418.25	100	GALLONS		0.0197
12	Formaldehyde	50000	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.721941	I	Input	418.25	100	GALLONS		1.7261
32	Ammonia	7664417	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.21292	I	Input	418.25	100	GALLONS		2.9
29	Acetaldehyde	75070	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.327615	I	Input	418.25	100	GALLONS		0.7833
30	Acrolein	107028	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0141787	I	Input	418.25	100	GALLONS		0.0339
36	Copper	7440508	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00171482	I	Input	418.25	100	GALLONS		0.0041
40	Ethyl benzene	100414	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00455892	I	Input	418.25	100	GALLONS		0.0109
44	Hexane	110543	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0112509	I	Input	418.25	100	GALLONS		0.0269
46	Hydrochloric acid	7647010	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.07792	I	Input	418.25	100	GALLONS		0.1863
49	Manganese	7439965	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00129657	I	Input	418.25	100	GALLONS		0.0031
50	Mercury	7439976	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0008365	I	Input	418.25	100	GALLONS		0.002
64	Selenium	7782492	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00092015	I	Input	418.25	100	GALLONS		0.0022
68	Toluene	108883	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0440836	I	Input	418.25	100	GALLONS		0.1054
70	Xylenes	1330207	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0177338	I	Input	418.25	100	GALLONS		0.0424
72	Diesel exhaust particulates	9901	ES5	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	14.0114	I	Input	418.25	100	GALLONS		33.5
19	Naphthalene [PAH, POM]	91203	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00233997	I	Input	118.78	100	GALLONS		0.0197
13	Chromium, hexavalent (and compounds)	18540299	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001187	I	Input	118.78	100	GALLONS		0.0001
17	Nickel	7440020	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00046324	I	Input	118.78	100	GALLONS		0.0039
2	Benzene	71432	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0221287	I	Input	118.78	100	GALLONS		0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00019004	I	Input	118.78	100	GALLONS		0.0016
15	Lead compounds (inorganic)	7439921	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00098587	I	Input	118.78	100	GALLONS		0.0083
19	PAHs [PAH, POM]	1151	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00429984	I	Input	118.78	100	GALLONS		0.0362
12	Formaldehyde	50000	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.205026	I	Input	118.78	100	GALLONS		1.7261
4	Butadiene [1,3]	106990	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0258228	I	Input	118.78	100	GALLONS		0.2174
5	Cadmium	7440439	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017817	I	Input	118.78	100	GALLONS		0.0015
32	Ammonia	7664417	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.344462	I	Input	118.78	100	GALLONS		2.9
29	Acetaldehyde	75070	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0930404	I	Input	118.78	100	GALLONS		0.7833
30	Acrolein	107028	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00402664	I	Input	118.78	100	GALLONS		0.0339
36	Copper	7440508	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00048699	I	Input	118.78	100	GALLONS		0.0041
40	Ethyl benzene	100414	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0012947	I	Input	118.78	100	GALLONS		0.0109
44	Hexane	110543	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00319518	I	Input	118.78	100	GALLONS		0.0269
46	Hydrochloric acid	7647010	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0221287	I	Input	118.78	100	GALLONS		0.1863
49	Manganese	7439965	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00036821	I	Input	118.78	100	GALLONS		0.0031
50	Mercury	7439976	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00023756	I	Input	118.78	100	GALLONS		0.002
64	Selenium	7782492	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00026131	I	Input	118.78	100	GALLONS		0.0022
68	Toluene	108883	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0125194	I	Input	118.78	100	GALLONS		0.1054
70	Xylenes	1330207	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00503627	I	Input	118.78	100	GALLONS		0.0424
72	Diesel exhaust particulates	9901	ES6	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	3.97913	I	Input	118.78	100	GALLONS		33.5
4	Butadiene [1,3]	106990	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0045067	I	Input	20.73	100	GALLONS		0.2174
5	Cadmium	7440439	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003109	I	Input	20.73	100	GALLONS		0.0015
2	Benzene	71432	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.003862	I	Input	20.73	100	GALLONS		0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003316	I	Input	20.73	100	GALLONS		0.0016
15	Lead compounds (inorganic)	7439921	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017205	I	Input	20.73	100	GALLONS		0.0083
12	Formaldehyde	50000	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0357821	I	Input	20.73	100	GALLONS		1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000207	I	Input	20.73	100	GALLONS		0.0001
17	Nickel	7440020	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00008084	I	Input	20.73	100	GALLONS		0.0039
19	PAHs [PAH, POM]	1151	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00075042	I	Input	20.73	100	GALLONS		0.0362
19	Naphthalene [PAH, POM]	91203	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00040838	I	Input	20.73	100	GALLONS		0.0197
32	Ammonia	7664417	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.060117	I	Input	20.73	100	GALLONS		2.9
29	Acetaldehyde	75070	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0162378	I	Input	20.73	100	GALLONS		0.7833
30	Acrolein	107028	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00070274	I	Input	20.73	100	GALLONS		0.0339
36	Copper	7440508	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00008499	I	Input	20.73	100	GALLONS		0.0041
40	Ethyl benzene	100414	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00022595	I	Input	20.73	100	GALLONS		0.0109
44	Hexane	110543	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00055763	I	Input	20.73	100	GALLONS		0.0269
46	Hydrochloric acid	7647010	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.003862	I	Input	20.73	100	GALLONS		0.1863
49	Manganese	7439965	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00006426	I	Input	20.73	100	GALLONS		0.0031
50	Mercury	7439976	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004146	I	Input	20.73	100	GALLONS		0.002
64	Selenium	7782492	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000456	I	Input	20.73	100	GALLONS		0.0022
68	Toluene	108883	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00218494	I	Input	20.73	100	GALLONS		0.1054
70	Xylenes	1330207	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00087895	I	Input	20.73	100	GALLONS		0.0424
72	Diesel exhaust particulates	9901	ES7	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.694455	I	Input	20.73	100	GALLONS		33.5
19	Naphthalene [PAH, POM]	91203	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017079	I	Input	8.67	100	GALLONS		0.0197
32	Ammonia	7664417	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.025143	I	Input	8.67	100	GALLONS		2.9
17	Nickel	7440020	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003381	I	Input	8.67	100	GALLONS		0.0039
19	PAHs [PAH, POM]	1151	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00031385	I	Input	8.67	100	GALLONS		0.0362
12	Formaldehyde	50000	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0149653	I	Input	8.67	100	GALLONS		1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000086	I	Input	8.67	100	GALLONS		0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001387	I	Input	8.67	100	GALLONS		0.0016
15	Lead compounds (inorganic)	7439921	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00007196	I	Input	8.67	100	GALLONS		0.0083
2	Benzene	71432	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00161522	I	Input	8.67	100	GALLONS		0.1863
4	Butadiene [1,3]	106990	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00188486	I	Input	8.67	100	GALLONS		0.2174
5	Cadmium	7440439	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.000013	I	Input	8.67	100	GALLONS		0.0015
29	Acetaldehyde	75070	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00679121	I	Input	8.67	100	GALLONS		0.7833
30	Acrolein	107028	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00029391	I	Input	8.67	100	GALLONS		0.0339
36	Copper	7440508	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003554	I	Input	8.67	100	GALLONS		0.0041
40	Ethyl benzene	100414	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000945	I	Input	8.67	100	GALLONS		0.0109
44	Hexane	110543	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00023322	I	Input	8.67	100	GALLONS		0.0269
46	Hydrochloric acid	7647010	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00161522	I	Input	8.67	100	GALLONS		0.1863

49	Manganese	7439965	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00002687	I	Input	8.67	100	GALLONS	0.0031
50	Mercury	7439976	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001734	I	Input	8.67	100	GALLONS	0.002
64	Selenium	7782492	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001907	I	Input	8.67	100	GALLONS	0.0022
68	Toluene	108883	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00091381	I	Input	8.67	100	GALLONS	0.1054
70	Xylenes	1330207	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0003676	I	Input	8.67	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES8	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.290445	I	Input	8.67	100	GALLONS	33.5
19	Acenaphthylene [PAH, POM]	208968	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00002558	I	Input	4536	96	STANDARD CUBIC FEET	0.0056406
9	Ethylene dibromide {1,2-Dibromoethane}	106934	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00020496	I	Input	4536	96	STANDARD CUBIC FEET	0.045186
10	Ethylene dichloride {1,2-Dichloroethane}	107062	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00010919	I	Input	4536	96	STANDARD CUBIC FEET	0.024072
12	Formaldehyde	50000	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.244291	I	Input	4536	96	STANDARD CUBIC FEET	53.856
16	Methylene chloride {Dichloromethane}	75092	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00009253	I	Input	4536	96	STANDARD CUBIC FEET	0.0204
2	Benzene	71432	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00203576	I	Input	4536	96	STANDARD CUBIC FEET	0.4488
4	Butadiene [1,3]	106990	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00123533	I	Input	4536	96	STANDARD CUBIC FEET	0.27234
6	Carbon tetrachloride	56235	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0001698	I	Input	4536	96	STANDARD CUBIC FEET	0.037434
19	Fluorene [PAH, POM]	86737	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00002623	I	Input	4536	96	STANDARD CUBIC FEET	0.0057834
19	Naphthalene [PAH, POM]	91203	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00034422	I	Input	4536	96	STANDARD CUBIC FEET	0.075888
19	Acenaphthene [PAH, POM]	83329	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000578	I	Input	4536	96	STANDARD CUBIC FEET	0.001275
19	Phenanthrene [PAH, POM]	85018	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004811	I	Input	4536	96	STANDARD CUBIC FEET	0.010608
19	2-Methyl naphthalene [PAH, POM]	91576	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0001536	I	Input	4536	96	STANDARD CUBIC FEET	0.033864
19	Pyrene [PAH, POM]	129000	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000629	I	Input	4536	96	STANDARD CUBIC FEET	0.0013872
19	Benzo[g,h,i]perylene [PAH, POM]	191242	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000191	I	Input	4536	96	STANDARD CUBIC FEET	0.00042228
19	Benzo[e]pyrene [PAH, POM]	192972	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000192	I	Input	4536	96	STANDARD CUBIC FEET	0.0004233
19	Chrysene [PAH, POM]	218019	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000032	I	Input	4536	96	STANDARD CUBIC FEET	0.00070686
21	Vinyl chloride	75014	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00006893	I	Input	4536	96	STANDARD CUBIC FEET	0.015198
32	Ammonia	7664417	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.081648	I	Input	4536	96	STANDARD CUBIC FEET	18
19	Benzo[b]fluoranthene [PAH, POM]	205992	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000076	I	Input	4536	96	STANDARD CUBIC FEET	0.00016932
19	Fluoranthene [PAH, POM]	206440	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000513	I	Input	4536	96	STANDARD CUBIC FEET	0.0011322
24	1,1,2,2-Tetrachloroethane	79345	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00018506	I	Input	4536	96	STANDARD CUBIC FEET	0.0408
25	1,1,2-Trichloroethane {Vinyl trichloride}	79005	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00014713	I	Input	4536	96	STANDARD CUBIC FEET	0.032436
26	1,2,4-Trimethylbenzene	95636	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00006616	I	Input	4536	96	STANDARD CUBIC FEET	0.014586
27	1,2-Dichloropropane {Propylene dichloride}	78875	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00012445	I	Input	4536	96	STANDARD CUBIC FEET	0.027438
28	1,3-Dichloropropene	542756	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00012214	I	Input	4536	96	STANDARD CUBIC FEET	0.026928
29	Acetaldehyde	75070	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0386794	I	Input	4536	96	STANDARD CUBIC FEET	8.5272
30	Acrolein	107028	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0237813	I	Input	4536	96	STANDARD CUBIC FEET	5.2428
35	Chloroform	67663	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00013186	I	Input	4536	96	STANDARD CUBIC FEET	0.02907
40	Ethyl benzene	100414	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00018368	I	Input	4536	96	STANDARD CUBIC FEET	0.040494
44	Hexane	110543	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00513566	I	Input	4536	96	STANDARD CUBIC FEET	1.1322
51	Methanol	67561	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0115668	I	Input	4536	96	STANDARD CUBIC FEET	2.55
66	Styrene	100425	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00010919	I	Input	4536	96	STANDARD CUBIC FEET	0.024072
68	Toluene	108883	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0018877	I	Input	4536	96	STANDARD CUBIC FEET	0.41616
70	Xylenes	1330207	ES9	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00085131	I	Input	4536	96	STANDARD CUBIC FEET	0.18768
19	Benzo[e]pyrene [PAH, POM]	192972	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.0004233
19	Benzo[b]fluoranthene [PAH, POM]	205992	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.00016932
19	Naphthalene [PAH, POM]	91203	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.075888
19	2-Methyl naphthalene [PAH, POM]	91576	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.033864
19	Pyrene [PAH, POM]	129000	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.0013872
19	Benzo[g,h,i]perylene [PAH, POM]	191242	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.00042228
2	Benzene	71432	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.4488
4	Butadiene [1,3]	106990	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.27234
6	Carbon tetrachloride	56235	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.037434
9	Ethylene dibromide {1,2-Dibromoethane}	106934	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.045186
10	Ethylene dichloride {1,2-Dichloroethane}	107062	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.024072
12	Formaldehyde	50000	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	53.856
16	Methylene chloride {Dichloromethane}	75092	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.0204
19	Acenaphthene [PAH, POM]	83329	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.001275
19	Phenanthrene [PAH, POM]	85018	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.010608
19	Fluorene [PAH, POM]	86737	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.0057834
19	Fluoranthene [PAH, POM]	206440	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.0011322
19	Acenaphthylene [PAH, POM]	208968	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.0056406
19	Chrysene [PAH, POM]	218019	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.00070686
21	Vinyl chloride	75014	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.015198
32	Ammonia	7664417	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	18
24	1,1,2,2-Tetrachloroethane	79345	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.0408
25	1,1,2-Trichloroethane {Vinyl trichloride}	79005	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.032436
26	1,2,4-Trimethylbenzene	95636	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.014586
27	1,2-Dichloropropane {Propylene dichloride}	78875	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.027438
28	1,3-Dichloropropene	542756	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.026928
29	Acetaldehyde	75070	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	8.5272
30	Acrolein	107028	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	5.2428
35	Chloroform	67663	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.02907
40	Ethyl benzene	100414	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.040494
44	Hexane	110543	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	1.1322
51	Methanol	67561	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	2.55
66	Styrene	100425	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.024072
68	Toluene	108883	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.41616
70	Xylenes	1330207	ES10	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0	I	Input	0	96	STANDARD CUBIC FEET	0.18768
2	Benzene	71432	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0111743	I	Input	59.98	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0130397	I	Input	59.98	100	GALLONS	0.2174
5	Cadmium	7440439	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00008997	I	Input	59.98	100	GALLONS	0.0015
32	Ammonia	7664417	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.173942	I	Input	59.98	100	GALLONS	2.9
14	Arsenic and Compounds (inorganic)	7440382	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00009596	I	Input	59.98	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00049783	I	Input	59.98	100	GALLONS	0.0083
17	Nickel	7440020	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00023392	I	Input	59.98	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00217128	I	Input	59.98	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00118161	I	Input	59.98	100	GALLONS	0.0197
12	Formaldehyde	50000	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.103531	I	Input	59.98	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000599	I	Input	59.98	100	GALLONS	0.0001
29	Acetaldehyde	75070	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0469823	I	Input	59.98	100	GALLONS	0.7833
30	Acrolein	107028	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00203332	I	Input	59.98	100	GALLONS	0.0339
36	Copper	7440508	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00024591	I	Input	59.98	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00065378	I	Input	59.98	100	GALLONS	0.0109
44	Hexane	110543	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00161346	I	Input	59.98	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0111743	I	Input	59.98	100	GALLONS	0.1863
49	Manganese	7439965	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00018593	I	Input	59.98	100	GALLONS	0.0031
50	Mercury	7439976	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011996	I	Input	59.98	100	GALLONS	0.002
64	Selenium	7782492	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00013195	I	Input	59.98	100	GALLONS	0.0022
68	Toluene	108883	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00632189	I	Input	59.98	100	GALLONS	0.1054
70	Xylenes	1330207	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00254315	I	Input	59.98	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES11	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.00933	I	Input	59.98	100	GALLONS	33.5
32	Ammonia	7664417	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.289565	I	Input	99.85	100	GALLONS	2.9
15	Lead compounds (inorganic)	7439921	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00082875	I	Input	99.85	100	GALLONS	0.0083
17	Nickel	7440020	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00038941	I	Input	99.85	100	GALLONS	0.0039
12	Formaldehyde	50000	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.172351	I	Input	99.85	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000998	I	Input	99.85	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00015976	I	Input	99.85	100	GALLONS	0.0016
2	Benzene	71432	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0186021	I	Input	99.85	100	GALLONS	0.1863
19	Naphthalene [PAH, POM]	91203	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00196704	I	Input	99.85	100	GALLONS	0.0197
5	Cadmium	7440439	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00014977	I	Input	99.85	100	GALLONS	0.0015
19	PAHs [PAH, POM]	1151	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00361457	I	Input	99.85	100	GALLONS	0.0362
4	Butadiene [1,3]	106990	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0217074	I	Input	99.85	100	GALLONS	0.2174

29	Acetaldehyde	75070	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0782125	I	Input	99.85	100	GALLONS	0.7833
30	Acrolein	107028	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00338492	I	Input	99.85	100	GALLONS	0.0339
36	Copper	7440508	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00040938	I	Input	99.85	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00108836	I	Input	99.85	100	GALLONS	0.0109
44	Hexane	110543	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00268596	I	Input	99.85	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0186021	I	Input	99.85	100	GALLONS	0.1863
49	Manganese	7439965	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00030953	I	Input	99.85	100	GALLONS	0.0031
50	Mercury	7439976	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0001997	I	Input	99.85	100	GALLONS	0.002
64	Selenium	7782492	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00021967	I	Input	99.85	100	GALLONS	0.0022
68	Toluene	108883	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0105242	I	Input	99.85	100	GALLONS	0.1054
70	Xylenes	1330207	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00423364	I	Input	99.85	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES12	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	3.34498	I	Input	99.85	100	GALLONS	33.5
15	Lead compounds (inorganic)	7439921	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00263019	I	Input	316.89	100	GALLONS	0.0083
17	Nickel	7440020	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00123587	I	Input	316.89	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0114714	I	Input	316.89	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00624273	I	Input	316.89	100	GALLONS	0.0197
2	Benzene	71432	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0590366	I	Input	316.89	100	GALLONS	0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00050702	I	Input	316.89	100	GALLONS	0.0016
4	Butadiene [1,3]	106990	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0688919	I	Input	316.89	100	GALLONS	0.2174
5	Cadmium	7440439	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00047533	I	Input	316.89	100	GALLONS	0.0015
12	Formaldehyde	50000	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.546984	I	Input	316.89	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003168	I	Input	316.89	100	GALLONS	0.0001
32	Ammonia	7664417	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.918981	I	Input	316.89	100	GALLONS	2.9
29	Acetaldehyde	75070	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.24822	I	Input	316.89	100	GALLONS	0.7833
30	Acrolein	107028	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0107426	I	Input	316.89	100	GALLONS	0.0339
36	Copper	7440508	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00129925	I	Input	316.89	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0034541	I	Input	316.89	100	GALLONS	0.0109
44	Hexane	110543	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00852434	I	Input	316.89	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0590366	I	Input	316.89	100	GALLONS	0.1863
49	Manganese	7439965	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00098235	I	Input	316.89	100	GALLONS	0.0031
50	Mercury	7439976	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00063378	I	Input	316.89	100	GALLONS	0.002
64	Selenium	7782492	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00069715	I	Input	316.89	100	GALLONS	0.0022
68	Toluene	108883	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0334002	I	Input	316.89	100	GALLONS	0.1054
70	Xylenes	1330207	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0134361	I	Input	316.89	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES13	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	10.6158	I	Input	316.89	100	GALLONS	33.5
15	Lead compounds (inorganic)	7439921	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00066408	I	Input	80.01	100	GALLONS	0.0083
12	Formaldehyde	50000	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.138105	I	Input	80.01	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.000008	I	Input	80.01	100	GALLONS	0.0001
17	Nickel	7440020	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00031203	I	Input	80.01	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00289636	I	Input	80.01	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0015762	I	Input	80.01	100	GALLONS	0.0197
32	Ammonia	7664417	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.232029	I	Input	80.01	100	GALLONS	2.9
2	Benzene	71432	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0149059	I	Input	80.01	100	GALLONS	0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00012801	I	Input	80.01	100	GALLONS	0.0016
4	Butadiene [1,3]	106990	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0173942	I	Input	80.01	100	GALLONS	0.2174
5	Cadmium	7440439	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00012001	I	Input	80.01	100	GALLONS	0.0015
29	Acetaldehyde	75070	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0626718	I	Input	80.01	100	GALLONS	0.7833
30	Acrolein	107028	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00271234	I	Input	80.01	100	GALLONS	0.0339
36	Copper	7440508	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00032804	I	Input	80.01	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0008721	I	Input	80.01	100	GALLONS	0.0109
44	Hexane	110543	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00215227	I	Input	80.01	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0149059	I	Input	80.01	100	GALLONS	0.1863
49	Manganese	7439965	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00024803	I	Input	80.01	100	GALLONS	0.0031
50	Mercury	7439976	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00016002	I	Input	80.01	100	GALLONS	0.002
64	Selenium	7782492	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017602	I	Input	80.01	100	GALLONS	0.0022
68	Toluene	108883	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00843305	I	Input	80.01	100	GALLONS	0.1054
70	Xylenes	1330207	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00339242	I	Input	80.01	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES14	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.68034	I	Input	80.01	100	GALLONS	33.5
17	Nickel	7440020	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004535	I	Input	11.63	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.000421	I	Input	11.63	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00022911	I	Input	11.63	100	GALLONS	0.0197
2	Benzene	71432	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00216667	I	Input	11.63	100	GALLONS	0.1863
12	Formaldehyde	50000	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0200745	I	Input	11.63	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000116	I	Input	11.63	100	GALLONS	0.0001
32	Ammonia	7664417	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.033727	I	Input	11.63	100	GALLONS	2.9
15	Lead compounds (inorganic)	7439921	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00009652	I	Input	11.63	100	GALLONS	0.0083
14	Arsenic and Compounds (inorganic)	7440382	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000186	I	Input	11.63	100	GALLONS	0.0016
4	Butadiene [1,3]	106990	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00252836	I	Input	11.63	100	GALLONS	0.2174
5	Cadmium	7440439	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001744	I	Input	11.63	100	GALLONS	0.0015
29	Acetaldehyde	75070	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00910978	I	Input	11.63	100	GALLONS	0.7833
30	Acrolein	107028	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00039425	I	Input	11.63	100	GALLONS	0.0339
36	Copper	7440508	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004768	I	Input	11.63	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00012676	I	Input	11.63	100	GALLONS	0.0109
44	Hexane	110543	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00031284	I	Input	11.63	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00216667	I	Input	11.63	100	GALLONS	0.1863
49	Manganese	7439965	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003605	I	Input	11.63	100	GALLONS	0.0031
50	Mercury	7439976	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00002326	I	Input	11.63	100	GALLONS	0.002
64	Selenium	7782492	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00002558	I	Input	11.63	100	GALLONS	0.0022
68	Toluene	108883	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0012258	I	Input	11.63	100	GALLONS	0.1054
70	Xylenes	1330207	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00049311	I	Input	11.63	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES15	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.389605	I	Input	11.63	100	GALLONS	33.5
2	Benzene	71432	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.123019	I	Input	660.33	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.143556	I	Input	660.33	100	GALLONS	0.2174
5	Cadmium	7440439	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00099049	I	Input	660.33	100	GALLONS	0.0015
12	Formaldehyde	50000	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.1398	I	Input	660.33	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00006603	I	Input	660.33	100	GALLONS	0.0001
32	Ammonia	7664417	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.91496	I	Input	660.33	100	GALLONS	2.9
19	PAHs [PAH, POM]	1151	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0239039	I	Input	660.33	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0130085	I	Input	660.33	100	GALLONS	0.0197
15	Lead compounds (inorganic)	7439921	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00548074	I	Input	660.33	100	GALLONS	0.0083
17	Nickel	7440020	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00257529	I	Input	660.33	100	GALLONS	0.0039
14	Arsenic and Compounds (inorganic)	7440382	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00105653	I	Input	660.33	100	GALLONS	0.0016
29	Acetaldehyde	75070	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.517236	I	Input	660.33	100	GALLONS	0.7833
30	Acrolein	107028	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0223852	I	Input	660.33	100	GALLONS	0.0339
36	Copper	7440508	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00270735	I	Input	660.33	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0071976	I	Input	660.33	100	GALLONS	0.0109
44	Hexane	110543	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0177629	I	Input	660.33	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.123019	I	Input	660.33	100	GALLONS	0.1863
49	Manganese	7439965	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00204702	I	Input	660.33	100	GALLONS	0.0031
50	Mercury	7439976	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00132066	I	Input	660.33	100	GALLONS	0.002
64	Selenium	7782492	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00145273	I	Input	660.33	100	GALLONS	0.0022
68	Toluene	108883	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0695988	I	Input	660.33	100	GALLONS	0.1054
70	Xylenes	1330207	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.027998	I	Input	660.33	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES16	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	22.1211	I	Input	660.33	100	GALLONS	33.5
19	Naphthalene [PAH, POM]	91203	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00878955	I	Input	446.17	100	GALLONS	0.0197
32	Ammonia	7664417	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.29389	I	Input	446.17	100	GALLONS	2.9
12	Formaldehyde	50000	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.770134	I	Input	446.17	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004461	I	Input	446.17	100	GALLONS	0.0001
2	Benzene	71432	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0831215	I	Input	446.17	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0969974	I	Input	446.17	100	GALLONS	0.2174

5	Cadmium	7440439	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00066925	I	Input	446.17	100	GALLONS	0.0015
14	Arsenic and Compounds (inorganic)	7440382	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00071387	I	Input	446.17	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00370321	I	Input	446.17	100	GALLONS	0.0083
17	Nickel	7440020	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00174006	I	Input	446.17	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0161514	I	Input	446.17	100	GALLONS	0.0362
29	Acetaldehyde	75070	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.349485	I	Input	446.17	100	GALLONS	0.7833
30	Acrolein	107028	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0151252	I	Input	446.17	100	GALLONS	0.0339
36	Copper	7440508	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0018293	I	Input	446.17	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00486325	I	Input	446.17	100	GALLONS	0.0109
44	Hexane	110543	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.012002	I	Input	446.17	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0831215	I	Input	446.17	100	GALLONS	0.1863
49	Manganese	7439965	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00138313	I	Input	446.17	100	GALLONS	0.0031
50	Mercury	7439976	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00089234	I	Input	446.17	100	GALLONS	0.002
64	Selenium	7782492	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00098157	I	Input	446.17	100	GALLONS	0.0022
68	Toluene	108883	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0470263	I	Input	446.17	100	GALLONS	0.1054
70	Xylenes	1330207	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0189176	I	Input	446.17	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES17	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	14.9467	I	Input	446.17	100	GALLONS	33.5
17	Nickel	7440020	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00060715	I	Input	155.68	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00563562	I	Input	155.68	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0030669	I	Input	155.68	100	GALLONS	0.0197
32	Ammonia	7664417	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.451472	I	Input	155.68	100	GALLONS	2.9
2	Benzene	71432	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0290032	I	Input	155.68	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0338448	I	Input	155.68	100	GALLONS	0.2174
15	Lead compounds (inorganic)	7439921	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00129214	I	Input	155.68	100	GALLONS	0.0083
13	Chromium, hexavalent (and compounds)	18540299	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001556	I	Input	155.68	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00024908	I	Input	155.68	100	GALLONS	0.0016
5	Cadmium	7440439	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00023352	I	Input	155.68	100	GALLONS	0.0015
12	Formaldehyde	50000	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.268719	I	Input	155.68	100	GALLONS	1.7261
29	Acetaldehyde	75070	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.121944	I	Input	155.68	100	GALLONS	0.7833
30	Acrolein	107028	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00527755	I	Input	155.68	100	GALLONS	0.0339
36	Copper	7440508	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00063828	I	Input	155.68	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00169691	I	Input	155.68	100	GALLONS	0.0109
44	Hexane	110543	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00418779	I	Input	155.68	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0290032	I	Input	155.68	100	GALLONS	0.1863
49	Manganese	7439965	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0004826	I	Input	155.68	100	GALLONS	0.0031
50	Mercury	7439976	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00031136	I	Input	155.68	100	GALLONS	0.002
64	Selenium	7782492	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00034249	I	Input	155.68	100	GALLONS	0.0022
68	Toluene	108883	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0164087	I	Input	155.68	100	GALLONS	0.1054
70	Xylenes	1330207	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00660083	I	Input	155.68	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES18	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	5.21528	I	Input	155.68	100	GALLONS	33.5
14	Arsenic and Compounds (inorganic)	7440382	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00012404	I	Input	77.53	100	GALLONS	0.0016
12	Formaldehyde	50000	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.133825	I	Input	77.53	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000775	I	Input	77.53	100	GALLONS	0.0001
5	Cadmium	7440439	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011629	I	Input	77.53	100	GALLONS	0.0015
2	Benzene	71432	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0144438	I	Input	77.53	100	GALLONS	0.1863
15	Lead compounds (inorganic)	7439921	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00064349	I	Input	77.53	100	GALLONS	0.0083
19	PAHs [PAH, POM]	1151	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00280659	I	Input	77.53	100	GALLONS	0.0362
4	Butadiene [1,3]	106990	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.016855	I	Input	77.53	100	GALLONS	0.2174
19	Naphthalene [PAH, POM]	91203	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00152734	I	Input	77.53	100	GALLONS	0.0197
17	Nickel	7440020	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00030236	I	Input	77.53	100	GALLONS	0.0039
32	Ammonia	7664417	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.224837	I	Input	77.53	100	GALLONS	2.9
29	Acetaldehyde	75070	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0607292	I	Input	77.53	100	GALLONS	0.7833
30	Acrolein	107028	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00262827	I	Input	77.53	100	GALLONS	0.0339
36	Copper	7440508	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00031787	I	Input	77.53	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00084507	I	Input	77.53	100	GALLONS	0.0109
44	Hexane	110543	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00208556	I	Input	77.53	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0144438	I	Input	77.53	100	GALLONS	0.1863
49	Manganese	7439965	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00024034	I	Input	77.53	100	GALLONS	0.0031
50	Mercury	7439976	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00015506	I	Input	77.53	100	GALLONS	0.002
64	Selenium	7782492	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017056	I	Input	77.53	100	GALLONS	0.0022
68	Toluene	108883	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00817166	I	Input	77.53	100	GALLONS	0.1054
70	Xylenes	1330207	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00328727	I	Input	77.53	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES19	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.59726	I	Input	77.53	100	GALLONS	33.5
14	Arsenic and Compounds (inorganic)	7440382	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004312	I	Input	26.95	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00022368	I	Input	26.95	100	GALLONS	0.0083
17	Nickel	7440020	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0001051	I	Input	26.95	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00097559	I	Input	26.95	100	GALLONS	0.0362
12	Formaldehyde	50000	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0465184	I	Input	26.95	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000269	I	Input	26.95	100	GALLONS	0.0001
32	Ammonia	7664417	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.078155	I	Input	26.95	100	GALLONS	2.9
19	Naphthalene [PAH, POM]	91203	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00053091	I	Input	26.95	100	GALLONS	0.0197
2	Benzene	71432	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00502078	I	Input	26.95	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00585893	I	Input	26.95	100	GALLONS	0.2174
5	Cadmium	7440439	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004042	I	Input	26.95	100	GALLONS	0.0015
29	Acetaldehyde	75070	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0211099	I	Input	26.95	100	GALLONS	0.7833
30	Acrolein	107028	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0009136	I	Input	26.95	100	GALLONS	0.0339
36	Copper	7440508	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011049	I	Input	26.95	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00029375	I	Input	26.95	100	GALLONS	0.0109
44	Hexane	110543	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00072495	I	Input	26.95	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00502078	I	Input	26.95	100	GALLONS	0.1863
49	Manganese	7439965	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00008354	I	Input	26.95	100	GALLONS	0.0031
50	Mercury	7439976	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000539	I	Input	26.95	100	GALLONS	0.002
64	Selenium	7782492	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00005929	I	Input	26.95	100	GALLONS	0.0022
68	Toluene	108883	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00284053	I	Input	26.95	100	GALLONS	0.1054
70	Xylenes	1330207	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00114268	I	Input	26.95	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES20	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.902825	I	Input	26.95	100	GALLONS	33.5
2	Benzene	71432	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.195615	I	Input	1050	100	GALLONS	0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00168	I	Input	1050	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.008715	I	Input	1050	100	GALLONS	0.0083
12	Formaldehyde	50000	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.8124	I	Input	1050	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.000105	I	Input	1050	100	GALLONS	0.0001
4	Butadiene [1,3]	106990	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.22827	I	Input	1050	100	GALLONS	0.2174
5	Cadmium	7440439	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.001575	I	Input	1050	100	GALLONS	0.0015
17	Nickel	7440020	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.004095	I	Input	1050	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.03801	I	Input	1050	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.020685	I	Input	1050	100	GALLONS	0.0197
32	Ammonia	7664417	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	3.045	I	Input	1050	100	GALLONS	2.9
29	Acetaldehyde	75070	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.822465	I	Input	1050	100	GALLONS	0.7833
30	Acrolein	107028	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.035595	I	Input	1050	100	GALLONS	0.0339
36	Copper	7440508	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.004305	I	Input	1050	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.011445	I	Input	1050	100	GALLONS	0.0109
44	Hexane	110543	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.028245	I	Input	1050	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.195615	I	Input	1050	100	GALLONS	0.1863
49	Manganese	7439965	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.003255	I	Input	1050	100	GALLONS	0.0031
50	Mercury	7439976	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0021	I	Input	1050	100	GALLONS	0.002
64	Selenium	7782492	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00231	I	Input	1050	100	GALLONS	0.0022
68	Toluene	108883	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.11067	I	Input	1050	100	GALLONS	0.1054
70	Xylenes	1330207	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.04452	I	Input	1050	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES21	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	35.175	I	Input	1050	100	GALLONS	33.5
19	Naphthalene [PAH, POM]	91203	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0259934	I	Input	1319.46	100	GALLONS	0.0197

32	Ammonia	7664417	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	3.82643	I	Input	1319.46	100	GALLONS	2.9
13	Chromium, hexavalent (and compounds)	18540299	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00013194	I	Input	1319.46	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00211114	I	Input	1319.46	100	GALLONS	0.0016
2	Benzene	71432	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.245815	I	Input	1319.46	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.286851	I	Input	1319.46	100	GALLONS	0.2174
19	PAHs [PAH, POM]	1151	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0477645	I	Input	1319.46	100	GALLONS	0.0362
5	Cadmium	7440439	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00197919	I	Input	1319.46	100	GALLONS	0.0015
12	Formaldehyde	50000	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.27752	I	Input	1319.46	100	GALLONS	1.7261
15	Lead compounds (inorganic)	7439921	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0109515	I	Input	1319.46	100	GALLONS	0.0083
17	Nickel	7440020	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00514589	I	Input	1319.46	100	GALLONS	0.0039
29	Acetaldehyde	75070	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.03353	I	Input	1319.46	100	GALLONS	0.7833
30	Acrolein	107028	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0447297	I	Input	1319.46	100	GALLONS	0.0339
36	Copper	7440508	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00540979	I	Input	1319.46	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0143821	I	Input	1319.46	100	GALLONS	0.0109
44	Hexane	110543	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0354935	I	Input	1319.46	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.245815	I	Input	1319.46	100	GALLONS	0.1863
49	Manganese	7439965	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00409033	I	Input	1319.46	100	GALLONS	0.0031
50	Mercury	7439976	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00263892	I	Input	1319.46	100	GALLONS	0.002
64	Selenium	7782492	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00290281	I	Input	1319.46	100	GALLONS	0.0022
68	Toluene	108883	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.139071	I	Input	1319.46	100	GALLONS	0.1054
70	Xylenes	1330207	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0559451	I	Input	1319.46	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES22	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	44.2019	I	Input	1319.46	100	GALLONS	33.5
13	Chromium, hexavalent (and compounds)	18540299	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001971	I	Input	197.19	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0003155	I	Input	197.19	100	GALLONS	0.0016
19	Naphthalene [PAH, POM]	91203	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00388464	I	Input	197.19	100	GALLONS	0.0197
32	Ammonia	7664417	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.571851	I	Input	197.19	100	GALLONS	2.9
5	Cadmium	7440439	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00029578	I	Input	197.19	100	GALLONS	0.0015
12	Formaldehyde	50000	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.34037	I	Input	197.19	100	GALLONS	1.7261
19	PAHs [PAH, POM]	1151	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00713828	I	Input	197.19	100	GALLONS	0.0362
15	Lead compounds (inorganic)	7439921	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00163668	I	Input	197.19	100	GALLONS	0.0083
17	Nickel	7440020	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00076904	I	Input	197.19	100	GALLONS	0.0039
4	Butadiene [1,3]	106990	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0428691	I	Input	197.19	100	GALLONS	0.2174
2	Benzene	71432	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0367365	I	Input	197.19	100	GALLONS	0.1863
29	Acetaldehyde	75070	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.154459	I	Input	197.19	100	GALLONS	0.7833
30	Acrolein	107028	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00668474	I	Input	197.19	100	GALLONS	0.0339
36	Copper	7440508	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00080847	I	Input	197.19	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00214937	I	Input	197.19	100	GALLONS	0.0109
44	Hexane	110543	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00530441	I	Input	197.19	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0367365	I	Input	197.19	100	GALLONS	0.1863
49	Manganese	7439965	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00061128	I	Input	197.19	100	GALLONS	0.0031
50	Mercury	7439976	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00039438	I	Input	197.19	100	GALLONS	0.002
64	Selenium	7782492	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00043381	I	Input	197.19	100	GALLONS	0.0022
68	Toluene	108883	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0207838	I	Input	197.19	100	GALLONS	0.1054
70	Xylenes	1330207	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00836086	I	Input	197.19	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES23	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	6.60586	I	Input	197.19	100	GALLONS	33.5
5	Cadmium	7440439	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00026625	I	Input	177.5	100	GALLONS	0.0015
12	Formaldehyde	50000	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.306383	I	Input	177.5	100	GALLONS	1.7261
32	Ammonia	7664417	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.51475	I	Input	177.5	100	GALLONS	2.9
4	Butadiene [1,3]	106990	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0385885	I	Input	177.5	100	GALLONS	0.2174
19	PAHs [PAH, POM]	1151	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0064255	I	Input	177.5	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00349675	I	Input	177.5	100	GALLONS	0.0197
2	Benzene	71432	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0330682	I	Input	177.5	100	GALLONS	0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.000284	I	Input	177.5	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00147325	I	Input	177.5	100	GALLONS	0.0083
13	Chromium, hexavalent (and compounds)	18540299	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001775	I	Input	177.5	100	GALLONS	0.0001
17	Nickel	7440020	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00069225	I	Input	177.5	100	GALLONS	0.0039
29	Acetaldehyde	75070	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.139036	I	Input	177.5	100	GALLONS	0.7833
30	Acrolein	107028	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00601725	I	Input	177.5	100	GALLONS	0.0339
36	Copper	7440508	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00072775	I	Input	177.5	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00193475	I	Input	177.5	100	GALLONS	0.0109
44	Hexane	110543	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00477475	I	Input	177.5	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0330682	I	Input	177.5	100	GALLONS	0.1863
49	Manganese	7439965	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00055025	I	Input	177.5	100	GALLONS	0.0031
50	Mercury	7439976	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.000355	I	Input	177.5	100	GALLONS	0.002
64	Selenium	7782492	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0003905	I	Input	177.5	100	GALLONS	0.0022
68	Toluene	108883	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0187085	I	Input	177.5	100	GALLONS	0.1054
70	Xylenes	1330207	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.007526	I	Input	177.5	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES24	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	5.94625	I	Input	177.5	100	GALLONS	33.5
14	Arsenic and Compounds (inorganic)	7440382	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00012537	I	Input	78.36	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00065038	I	Input	78.36	100	GALLONS	0.0083
17	Nickel	7440020	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0003056	I	Input	78.36	100	GALLONS	0.0039
13	Chromium, hexavalent (and compounds)	18540299	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000783	I	Input	78.36	100	GALLONS	0.0001
19	PAHs [PAH, POM]	1151	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00283663	I	Input	78.36	100	GALLONS	0.0362
12	Formaldehyde	50000	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.135257	I	Input	78.36	100	GALLONS	1.7261
19	Naphthalene [PAH, POM]	91203	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00154369	I	Input	78.36	100	GALLONS	0.0197
32	Ammonia	7664417	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.227244	I	Input	78.36	100	GALLONS	2.9
2	Benzene	71432	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0145985	I	Input	78.36	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0170355	I	Input	78.36	100	GALLONS	0.2174
5	Cadmium	7440439	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011754	I	Input	78.36	100	GALLONS	0.0015
29	Acetaldehyde	75070	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0613794	I	Input	78.36	100	GALLONS	0.7833
30	Acrolein	107028	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0026564	I	Input	78.36	100	GALLONS	0.0339
36	Copper	7440508	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00032127	I	Input	78.36	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00085412	I	Input	78.36	100	GALLONS	0.0109
44	Hexane	110543	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00210788	I	Input	78.36	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0145985	I	Input	78.36	100	GALLONS	0.1863
49	Manganese	7439965	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00024291	I	Input	78.36	100	GALLONS	0.0031
50	Mercury	7439976	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00015672	I	Input	78.36	100	GALLONS	0.002
64	Selenium	7782492	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017239	I	Input	78.36	100	GALLONS	0.0022
68	Toluene	108883	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00825914	I	Input	78.36	100	GALLONS	0.1054
70	Xylenes	1330207	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00332246	I	Input	78.36	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES25	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.62506	I	Input	78.36	100	GALLONS	33.5
19	Naphthalene [PAH, POM]	91203	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0337219	I	Input	1711.77	100	GALLONS	0.0197
32	Ammonia	7664417	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	4.96413	I	Input	1711.77	100	GALLONS	2.9
17	Nickel	7440020	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0066759	I	Input	1711.77	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0619661	I	Input	1711.77	100	GALLONS	0.0362
15	Lead compounds (inorganic)	7439921	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0142077	I	Input	1711.77	100	GALLONS	0.0083
12	Formaldehyde	50000	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.95469	I	Input	1711.77	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017117	I	Input	1711.77	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00273883	I	Input	1711.77	100	GALLONS	0.0016
4	Butadiene [1,3]	106990	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.372139	I	Input	1711.77	100	GALLONS	0.2174
5	Cadmium	7440439	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00256765	I	Input	1711.77	100	GALLONS	0.0015
2	Benzene	71432	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.318903	I	Input	1711.77	100	GALLONS	0.1863
29	Acetaldehyde	75070	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.34083	I	Input	1711.77	100	GALLONS	0.7833
30	Acrolein	107028	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.058029	I	Input	1711.77	100	GALLONS	0.0339
36	Copper	7440508	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00701826	I	Input	1711.77	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0186583	I	Input	1711.77	100	GALLONS	0.0109
44	Hexane	110543	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0460466	I	Input	1711.77	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.318903	I	Input	1711.77	100	GALLONS	0.1863
49	Manganese	7439965	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00530649	I	Input	1711.77	100	GALLONS	0.0031
50	Mercury	7439976	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00342354	I	Input	1711.77	100	GALLONS	0.002

64	Selenium	7782492	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00376589	I	Input	1711.77	100	GALLONS	0.0022
68	Toluene	108883	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.180421	I	Input	1711.77	100	GALLONS	0.1054
70	Xylenes	1330207	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.072579	I	Input	1711.77	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES26	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	57.3443	I	Input	1711.77	100	GALLONS	33.5
2	Benzene	71432	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00330124	I	Input	17.72	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00385233	I	Input	17.72	100	GALLONS	0.2174
32	Ammonia	7664417	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.051388	I	Input	17.72	100	GALLONS	2.9
19	PAHs [PAH, POM]	1151	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00064146	I	Input	17.72	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00034908	I	Input	17.72	100	GALLONS	0.0197
12	Formaldehyde	50000	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0305865	I	Input	17.72	100	GALLONS	1.7261
17	Nickel	7440020	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000691	I	Input	17.72	100	GALLONS	0.0039
5	Cadmium	7440439	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00002658	I	Input	17.72	100	GALLONS	0.0015
13	Chromium, hexavalent (and compounds)	18540299	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000177	I	Input	17.72	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00002835	I	Input	17.72	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00014707	I	Input	17.72	100	GALLONS	0.0083
29	Acetaldehyde	75070	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0138801	I	Input	17.72	100	GALLONS	0.7833
30	Acrolein	107028	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0006007	I	Input	17.72	100	GALLONS	0.0339
36	Copper	7440508	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00007265	I	Input	17.72	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00019314	I	Input	17.72	100	GALLONS	0.0109
44	Hexane	110543	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00047666	I	Input	17.72	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00330124	I	Input	17.72	100	GALLONS	0.1863
49	Manganese	7439965	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00005493	I	Input	17.72	100	GALLONS	0.0031
50	Mercury	7439976	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003544	I	Input	17.72	100	GALLONS	0.002
64	Selenium	7782492	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003898	I	Input	17.72	100	GALLONS	0.0022
68	Toluene	108883	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00186769	I	Input	17.72	100	GALLONS	0.1054
70	Xylenes	1330207	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00075132	I	Input	17.72	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES27	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.59362	I	Input	17.72	100	GALLONS	33.5
13	Chromium, hexavalent (and compounds)	18540299	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000256	I	Input	25.65	100	GALLONS	0.0001
19	PAHs [PAH, POM]	1151	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00092853	I	Input	25.65	100	GALLONS	0.0362
5	Cadmium	7440439	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003847	I	Input	25.65	100	GALLONS	0.0015
12	Formaldehyde	50000	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0442745	I	Input	25.65	100	GALLONS	1.7261
4	Butadiene [1,3]	106990	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00557631	I	Input	25.65	100	GALLONS	0.2174
14	Arsenic and Compounds (inorganic)	7440382	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00004104	I	Input	25.65	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00021289	I	Input	25.65	100	GALLONS	0.0083
17	Nickel	7440020	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00010003	I	Input	25.65	100	GALLONS	0.0039
32	Ammonia	7664417	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.074385	I	Input	25.65	100	GALLONS	2.9
19	Naphthalene [PAH, POM]	91203	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0005053	I	Input	25.65	100	GALLONS	0.0197
2	Benzene	71432	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0047786	I	Input	25.65	100	GALLONS	0.1863
29	Acetaldehyde	75070	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0200916	I	Input	25.65	100	GALLONS	0.7833
30	Acrolein	107028	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00086953	I	Input	25.65	100	GALLONS	0.0339
36	Copper	7440508	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00010516	I	Input	25.65	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00027958	I	Input	25.65	100	GALLONS	0.0109
44	Hexane	110543	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00068998	I	Input	25.65	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0047786	I	Input	25.65	100	GALLONS	0.1863
49	Manganese	7439965	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00007951	I	Input	25.65	100	GALLONS	0.0031
50	Mercury	7439976	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000513	I	Input	25.65	100	GALLONS	0.002
64	Selenium	7782492	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00005643	I	Input	25.65	100	GALLONS	0.0022
68	Toluene	108883	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00270351	I	Input	25.65	100	GALLONS	0.1054
70	Xylenes	1330207	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00108756	I	Input	25.65	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES28	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.859275	I	Input	25.65	100	GALLONS	33.5
19	PAHs [PAH, POM]	1151	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0199317	I	Input	550.6	100	GALLONS	0.0362
15	Lead compounds (inorganic)	7439921	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00456998	I	Input	550.6	100	GALLONS	0.0083
19	Naphthalene [PAH, POM]	91203	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0108468	I	Input	550.6	100	GALLONS	0.0197
32	Ammonia	7664417	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.59674	I	Input	550.6	100	GALLONS	2.9
12	Formaldehyde	50000	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.950391	I	Input	550.6	100	GALLONS	1.7261
17	Nickel	7440020	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00214734	I	Input	550.6	100	GALLONS	0.0039
5	Cadmium	7440439	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0008259	I	Input	550.6	100	GALLONS	0.0015
4	Butadiene [1,3]	106990	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.1197	I	Input	550.6	100	GALLONS	0.2174
2	Benzene	71432	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.102577	I	Input	550.6	100	GALLONS	0.1863
13	Chromium, hexavalent (and compounds)	18540299	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00005506	I	Input	550.6	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00088096	I	Input	550.6	100	GALLONS	0.0016
29	Acetaldehyde	75070	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.431285	I	Input	550.6	100	GALLONS	0.7833
30	Acrolein	107028	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0186653	I	Input	550.6	100	GALLONS	0.0339
36	Copper	7440508	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00225746	I	Input	550.6	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00600154	I	Input	550.6	100	GALLONS	0.0109
44	Hexane	110543	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0148111	I	Input	550.6	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.102577	I	Input	550.6	100	GALLONS	0.1863
49	Manganese	7439965	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00170686	I	Input	550.6	100	GALLONS	0.0031
50	Mercury	7439976	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0011012	I	Input	550.6	100	GALLONS	0.002
64	Selenium	7782492	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00121132	I	Input	550.6	100	GALLONS	0.0022
68	Toluene	108883	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0580332	I	Input	550.6	100	GALLONS	0.1054
70	Xylenes	1330207	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0233454	I	Input	550.6	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES29	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	18.4451	I	Input	550.6	100	GALLONS	33.5
32	Ammonia	7664417	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.06621	I	Input	367.66	100	GALLONS	2.9
19	Naphthalene [PAH, POM]	91203	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0072429	I	Input	367.66	100	GALLONS	0.0197
19	PAHs [PAH, POM]	1151	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0133093	I	Input	367.66	100	GALLONS	0.0362
13	Chromium, hexavalent (and compounds)	18540299	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003676	I	Input	367.66	100	GALLONS	0.0001
17	Nickel	7440020	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00143387	I	Input	367.66	100	GALLONS	0.0039
5	Cadmium	7440439	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00055149	I	Input	367.66	100	GALLONS	0.0015
12	Formaldehyde	50000	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.634618	I	Input	367.66	100	GALLONS	1.7261
2	Benzene	71432	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0684951	I	Input	367.66	100	GALLONS	0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00058825	I	Input	367.66	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00305158	I	Input	367.66	100	GALLONS	0.0083
4	Butadiene [1,3]	106990	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0799293	I	Input	367.66	100	GALLONS	0.2174
29	Acetaldehyde	75070	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.287988	I	Input	367.66	100	GALLONS	0.7833
30	Acrolein	107028	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0124637	I	Input	367.66	100	GALLONS	0.0339
36	Copper	7440508	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00150741	I	Input	367.66	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00400749	I	Input	367.66	100	GALLONS	0.0109
44	Hexane	110543	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00989005	I	Input	367.66	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0684951	I	Input	367.66	100	GALLONS	0.1863
49	Manganese	7439965	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00113975	I	Input	367.66	100	GALLONS	0.0031
50	Mercury	7439976	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00073532	I	Input	367.66	100	GALLONS	0.002
64	Selenium	7782492	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00080885	I	Input	367.66	100	GALLONS	0.0022
68	Toluene	108883	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0387514	I	Input	367.66	100	GALLONS	0.1054
70	Xylenes	1330207	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0155888	I	Input	367.66	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES30	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	12.3166	I	Input	367.66	100	GALLONS	33.5
2	Benzene	71432	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.331412	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0058
12	Formaldehyde	50000	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.702822	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0123
19	PAHs [PAH, POM]	1151	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.005714	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0001
32	Ammonia	7664417	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1028.52	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	18
19	Naphthalene [PAH, POM]	91203	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.017142	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0003
29	Acetaldehyde	75070	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.177134	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0031
30	Acrolein	107028	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.154278	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0027
40	Ethyl benzene	100414	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.394266	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0069
44	Hexane	110543	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.262844	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0046
68	Toluene	108883	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1.51421	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0265
70	Xylenes	1330207	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1.12566	I	Input	57.14	38	MILLION STANDARD CUBIC FEET	0.0197
32	Ammonia	7664417	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.3
2	Benzene	71432	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.000514608
19	Naphthalene [PAH, POM]	91203	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	2.66176E-05

12	Formaldehyde	50000	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.00109132
19	PAHs [PAH, POM]	1151	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	8.87255E-06
29	Acetaldehyde	75070	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.000275049
30	Acrolein	107028	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.000239559
40	Ethyl benzene	100414	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.000612206
44	Hexane	110543	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.000408137
68	Toluene	108883	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.00235123
70	Xylenes	1330207	ES31	1b	Boiler 10-100 MMBTU/HR	External Combustion	P2	0	I	Input	0	43	GALLONS	0.00174789
2	Benzene	71432	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0130335	I	Input	69.96	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0152093	I	Input	69.96	100	GALLONS	0.2174
5	Cadmium	7440439	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00010494	I	Input	69.96	100	GALLONS	0.0015
12	Formaldehyde	50000	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.120758	I	Input	69.96	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000699	I	Input	69.96	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011193	I	Input	69.96	100	GALLONS	0.0016
32	Ammonia	7664417	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.202884	I	Input	69.96	100	GALLONS	2.9
19	PAHs [PAH, POM]	1151	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00253255	I	Input	69.96	100	GALLONS	0.0362
15	Lead compounds (inorganic)	7439921	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00058066	I	Input	69.96	100	GALLONS	0.0083
17	Nickel	7440020	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00027284	I	Input	69.96	100	GALLONS	0.0039
19	Naphthalene [PAH, POM]	91203	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00137821	I	Input	69.96	100	GALLONS	0.0197
29	Acetaldehyde	75070	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0547997	I	Input	69.96	100	GALLONS	0.7833
30	Acrolein	107028	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00237164	I	Input	69.96	100	GALLONS	0.0339
36	Copper	7440508	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00028683	I	Input	69.96	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00076256	I	Input	69.96	100	GALLONS	0.0109
44	Hexane	110543	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00188192	I	Input	69.96	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0130335	I	Input	69.96	100	GALLONS	0.1863
49	Manganese	7439965	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00021687	I	Input	69.96	100	GALLONS	0.0031
50	Mercury	7439976	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00013992	I	Input	69.96	100	GALLONS	0.002
64	Selenium	7782492	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00015391	I	Input	69.96	100	GALLONS	0.0022
68	Toluene	108883	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00737378	I	Input	69.96	100	GALLONS	0.1054
70	Xylenes	1330207	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0029663	I	Input	69.96	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES33	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.34366	I	Input	69.96	100	GALLONS	33.5
14	Arsenic and Compounds (inorganic)	7440382	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00006844	I	Input	42.78	100	GALLONS	0.0016
32	Ammonia	7664417	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.124062	I	Input	42.78	100	GALLONS	2.9
15	Lead compounds (inorganic)	7439921	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00035507	I	Input	42.78	100	GALLONS	0.0083
2	Benzene	71432	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00796991	I	Input	42.78	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00930037	I	Input	42.78	100	GALLONS	0.2174
5	Cadmium	7440439	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00006417	I	Input	42.78	100	GALLONS	0.0015
19	PAHs [PAH, POM]	1151	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00154864	I	Input	42.78	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00084276	I	Input	42.78	100	GALLONS	0.0197
17	Nickel	7440020	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00016684	I	Input	42.78	100	GALLONS	0.0039
13	Chromium, hexavalent (and compounds)	18540299	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000427	I	Input	42.78	100	GALLONS	0.0001
12	Formaldehyde	50000	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0738426	I	Input	42.78	100	GALLONS	1.7261
29	Acetaldehyde	75070	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0335096	I	Input	42.78	100	GALLONS	0.7833
30	Acrolein	107028	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00145024	I	Input	42.78	100	GALLONS	0.0339
36	Copper	7440508	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00017539	I	Input	42.78	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0004663	I	Input	42.78	100	GALLONS	0.0109
44	Hexane	110543	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00115078	I	Input	42.78	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00796991	I	Input	42.78	100	GALLONS	0.1863
49	Manganese	7439965	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00013261	I	Input	42.78	100	GALLONS	0.0031
50	Mercury	7439976	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00008556	I	Input	42.78	100	GALLONS	0.002
64	Selenium	7782492	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00009411	I	Input	42.78	100	GALLONS	0.0022
68	Toluene	108883	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00450901	I	Input	42.78	100	GALLONS	0.1054
70	Xylenes	1330207	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00181387	I	Input	42.78	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES34	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.43313	I	Input	42.78	100	GALLONS	33.5
32	Ammonia	7664417	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.69129	I	Input	928.03	100	GALLONS	2.9
12	Formaldehyde	50000	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.60187	I	Input	928.03	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000928	I	Input	928.03	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00148485	I	Input	928.03	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00770265	I	Input	928.03	100	GALLONS	0.0083
17	Nickel	7440020	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00361932	I	Input	928.03	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0335947	I	Input	928.03	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0182822	I	Input	928.03	100	GALLONS	0.0197
5	Cadmium	7440439	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00139204	I	Input	928.03	100	GALLONS	0.0015
2	Benzene	71432	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.172892	I	Input	928.03	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.201754	I	Input	928.03	100	GALLONS	0.2174
29	Acetaldehyde	75070	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.726926	I	Input	928.03	100	GALLONS	0.7833
30	Acrolein	107028	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0314602	I	Input	928.03	100	GALLONS	0.0339
36	Copper	7440508	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00380492	I	Input	928.03	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0101155	I	Input	928.03	100	GALLONS	0.0109
44	Hexane	110543	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.024964	I	Input	928.03	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.172892	I	Input	928.03	100	GALLONS	0.1863
49	Manganese	7439965	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00287689	I	Input	928.03	100	GALLONS	0.0031
50	Mercury	7439976	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00185606	I	Input	928.03	100	GALLONS	0.002
64	Selenium	7782492	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00204167	I	Input	928.03	100	GALLONS	0.0022
68	Toluene	108883	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0978144	I	Input	928.03	100	GALLONS	0.1054
70	Xylenes	1330207	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0393485	I	Input	928.03	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES35	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	31.089	I	Input	928.03	100	GALLONS	33.5
2	Benzene	71432	ES36	24	Underground Small storage tank - <10,000 gallons	Storage Tanks	P1	2.83548	I	Input	109.3935	51	1000 GALLONS	0.02592
4	Butadiene [1,3]	106990	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.110022	I	Input	506.08	100	GALLONS	0.2174
5	Cadmium	7440439	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00075912	I	Input	506.08	100	GALLONS	0.0015
12	Formaldehyde	50000	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.873545	I	Input	506.08	100	GALLONS	1.7261
2	Benzene	71432	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0942827	I	Input	506.08	100	GALLONS	0.1863
19	Naphthalene [PAH, POM]	91203	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00996978	I	Input	506.08	100	GALLONS	0.0197
32	Ammonia	7664417	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.46763	I	Input	506.08	100	GALLONS	2.9
14	Arsenic and Compounds (inorganic)	7440382	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00080972	I	Input	506.08	100	GALLONS	0.0016
19	PAHs [PAH, POM]	1151	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0183201	I	Input	506.08	100	GALLONS	0.0362
15	Lead compounds (inorganic)	7439921	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00420046	I	Input	506.08	100	GALLONS	0.0083
17	Nickel	7440020	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00197371	I	Input	506.08	100	GALLONS	0.0039
13	Chromium, hexavalent (and compounds)	18540299	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0000506	I	Input	506.08	100	GALLONS	0.0001
29	Acetaldehyde	75070	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.396412	I	Input	506.08	100	GALLONS	0.7833
30	Acrolein	107028	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0171561	I	Input	506.08	100	GALLONS	0.0339
36	Copper	7440508	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00207493	I	Input	506.08	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00551627	I	Input	506.08	100	GALLONS	0.0109
44	Hexane	110543	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0136136	I	Input	506.08	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0942827	I	Input	506.08	100	GALLONS	0.1863
49	Manganese	7439965	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00156885	I	Input	506.08	100	GALLONS	0.0031
50	Mercury	7439976	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00101216	I	Input	506.08	100	GALLONS	0.002
64	Selenium	7782492	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00111338	I	Input	506.08	100	GALLONS	0.0022
68	Toluene	108883	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0533408	I	Input	506.08	100	GALLONS	0.1054
70	Xylenes	1330207	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0214578	I	Input	506.08	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES37	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	16.9537	I	Input	506.08	100	GALLONS	33.5
12	Formaldehyde	50000	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.213432	I	Input	123.65	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00001236	I	Input	123.65	100	GALLONS	0.0001
4	Butadiene [1,3]	106990	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0268815	I	Input	123.65	100	GALLONS	0.2174
5	Cadmium	7440439	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00018547	I	Input	123.65	100	GALLONS	0.0015
14	Arsenic and Compounds (inorganic)	7440382	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00019784	I	Input	123.65	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0010263	I	Input	123.65	100	GALLONS	0.0083
2	Benzene	71432	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.023036	I	Input	123.65	100	GALLONS	0.1863
19	Naphthalene [PAH, POM]	91203	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0024359	I	Input	123.65	100	GALLONS	0.0197
32	Ammonia	7664417	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.358585	I	Input	123.65	100	GALLONS	2.9

17	Nickel	7440020	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00048223	I	Input	123.65	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00447613	I	Input	123.65	100	GALLONS	0.0362
29	Acetaldehyde	75070	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.096855	I	Input	123.65	100	GALLONS	0.7833
30	Acrolein	107028	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00419174	I	Input	123.65	100	GALLONS	0.0339
36	Copper	7440508	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00050696	I	Input	123.65	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00134778	I	Input	123.65	100	GALLONS	0.0109
44	Hexane	110543	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00332618	I	Input	123.65	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.023036	I	Input	123.65	100	GALLONS	0.1863
49	Manganese	7439965	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00038331	I	Input	123.65	100	GALLONS	0.0031
50	Mercury	7439976	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0002473	I	Input	123.65	100	GALLONS	0.002
64	Selenium	7782492	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00027203	I	Input	123.65	100	GALLONS	0.0022
68	Toluene	108883	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0130327	I	Input	123.65	100	GALLONS	0.1054
70	Xylenes	1330207	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00524276	I	Input	123.65	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES38	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	4.14227	I	Input	123.65	100	GALLONS	33.5
12	Formaldehyde	50000	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.00323	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.017
19	PAHs [PAH, POM]	1151	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.000019	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0001
2	Benzene	71432	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.00152	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.008
19	Naphthalene [PAH, POM]	91203	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.000057	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0003
32	Ammonia	7664417	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	3.42	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	18
29	Acetaldehyde	75070	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.000817	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0043
30	Acrolein	107028	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.000513	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0027
40	Ethyl benzene	100414	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.001805	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0095
44	Hexane	110543	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.001197	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0063
68	Toluene	108883	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.006954	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0366
70	Xylenes	1330207	ES40	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.005168	I	Input	0.19	38	MILLION STANDARD CUBIC FEET	0.0272
32	Ammonia	7664417	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	142.2	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	18
2	Benzene	71432	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.0632	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.008
12	Formaldehyde	50000	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.1343	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.017
19	PAHs [PAH, POM]	1151	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.00079	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0001
19	Naphthalene [PAH, POM]	91203	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.00237	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0003
29	Acetaldehyde	75070	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.03397	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0043
30	Acrolein	107028	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.02133	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0027
40	Ethyl benzene	100414	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.07505	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0095
44	Hexane	110543	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.04977	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0063
68	Toluene	108883	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.28914	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0366
70	Xylenes	1330207	ES41	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.21488	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0272
32	Ammonia	7664417	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	142.2	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	18
2	Benzene	71432	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.0632	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.008
12	Formaldehyde	50000	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.1343	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.017
19	PAHs [PAH, POM]	1151	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.00079	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0001
19	Naphthalene [PAH, POM]	91203	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.00237	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0003
29	Acetaldehyde	75070	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.03397	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0043
30	Acrolein	107028	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.02133	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0027
40	Ethyl benzene	100414	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.07505	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0095
44	Hexane	110543	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.04977	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0063
68	Toluene	108883	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.28914	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0366
70	Xylenes	1330207	ES42	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.21488	I	Input	7.9	38	MILLION STANDARD CUBIC FEET	0.0272
19	Naphthalene [PAH, POM]	91203	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.01689	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0003
12	Formaldehyde	50000	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.69249	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0123
19	PAHs [PAH, POM]	1151	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.00563	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0001
2	Benzene	71432	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.32654	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0058
32	Ammonia	7664417	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1013.4	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	18
29	Acetaldehyde	75070	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.17453	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0031
30	Acrolein	107028	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.15201	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0027
40	Ethyl benzene	100414	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.38847	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0069
44	Hexane	110543	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.25898	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0046
68	Toluene	108883	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1.49195	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0265
70	Xylenes	1330207	ES43	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1.10911	I	Input	56.3	38	MILLION STANDARD CUBIC FEET	0.0197
2	Benzene	71432	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.273818	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0058
12	Formaldehyde	50000	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.580683	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0123
19	Naphthalene [PAH, POM]	91203	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.014163	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0003
32	Ammonia	7664417	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	849.78	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	18
19	PAHs [PAH, POM]	1151	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.004721	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0001
29	Acetaldehyde	75070	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.146351	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0031
30	Acrolein	107028	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.127467	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0027
40	Ethyl benzene	100414	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.325749	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0069
44	Hexane	110543	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.217166	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0046
68	Toluene	108883	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1.25107	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0265
70	Xylenes	1330207	ES44	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.930037	I	Input	47.21	38	MILLION STANDARD CUBIC FEET	0.0197
2	Benzene	71432	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1.06331	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0058
32	Ammonia	7664417	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	3299.94	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	18
12	Formaldehyde	50000	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	2.25496	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0123
19	PAHs [PAH, POM]	1151	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.018333	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0001
19	Naphthalene [PAH, POM]	91203	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.054999	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0003
29	Acetaldehyde	75070	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.568323	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0031
30	Acrolein	107028	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.494991	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0027
40	Ethyl benzene	100414	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	1.26498	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0069
44	Hexane	110543	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	0.843318	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0046
68	Toluene	108883	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	4.85824	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0265
70	Xylenes	1330207	ES49	1b	Boiler 10-100 MMBTU/HR	External Combustion	P1	3.6116	I	Input	183.33	38	MILLION STANDARD CUBIC FEET	0.0197
17	Nickel	7440020	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00023103	I	Input	59.24	100	GALLONS	0.0039
4	Butadiene [1,3]	106990	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0128788	I	Input	59.24	100	GALLONS	0.2174
5	Cadmium	7440439	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00008886	I	Input	59.24	100	GALLONS	0.0015
2	Benzene	71432	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0110364	I	Input	59.24	100	GALLONS	0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00009478	I	Input	59.24	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00049169	I	Input	59.24	100	GALLONS	0.0083
19	PAHs [PAH, POM]	1151	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00214449	I	Input	59.24	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00116703	I	Input	59.24	100	GALLONS	0.0197
32	Ammonia	7664417	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.171796	I	Input	59.24	100	GALLONS	2.9
12	Formaldehyde	50000	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.102254	I	Input	59.24	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000592	I	Input	59.24	100	GALLONS	0.0001
29	Acetaldehyde	75070	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0464027	I	Input	59.24	100	GALLONS	0.7833
30	Acrolein	107028	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00200824	I	Input	59.24	100	GALLONS	0.0339
36	Copper	7440508	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00024288	I	Input	59.24	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00064571	I	Input	59.24	100	GALLONS	0.0109
44	Hexane	110543	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00159356	I	Input	59.24	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0110364	I	Input	59.24	100	GALLONS	0.1863
49	Manganese	7439965	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00018364	I	Input	59.24	100	GALLONS	0.0031
50	Mercury	7439976	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011848	I	Input	59.24	100	GALLONS	0.002
64	Selenium	7782492	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00013032	I	Input	59.24	100	GALLONS	0.0022
68	Toluene	108883	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0062439	I	Input	59.24	100	GALLONS	0.1054
70	Xylenes	1330207	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00251178	I	Input	59.24	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES51	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.98454	I	Input	59.24	100	GALLONS	33.5
32	Ammonia	7664417	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	206.46	I	Input	11.47	38	MILLION STANDARD CUBIC FEET	18
19	Naphthalene [PAH, POM]	91203	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.003441	I	Input	11.47	38	MILLION STANDARD CUBIC FEET	0.0003
12	Formaldehyde	50000	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.19499	I	Input	11.47	38	MILLION STANDARD CUBIC FEET	0.017
19	PAHs [PAH, POM]	1151	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.001147	I	Input	11.47	38	MILLION STANDARD CUBIC FEET	0.0001
2	Benzene	71432	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.09176	I	Input	11.47	38	MILLION STANDARD CUBIC FEET	0.008
29	Acetaldehyde	75070	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.049321	I	Input	11.47	38	MILLION STANDARD CUBIC FEET	0.0043
30	Acrolein	107028	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.030969	I	Input	11.47	38	MILLION STANDARD CUBIC FEET	0.0027

40	Ethyl benzene	100414	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.108965	I	Input	11.47	38	MILLION STANDARD CUBIC FEET		0.0095
44	Hexane	110543	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.072261	I	Input	11.47	38	MILLION STANDARD CUBIC FEET		0.0063
68	Toluene	108883	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.419802	I	Input	11.47	38	MILLION STANDARD CUBIC FEET		0.0366
70	Xylenes	1330207	ES52	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.311984	I	Input	11.47	38	MILLION STANDARD CUBIC FEET		0.0272
2	Benzene	71432	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0666637	I	Input	357.83	100	GALLONS		0.1863
14	Arsenic and Compounds (inorganic)	7440382	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00057252	I	Input	357.83	100	GALLONS		0.0016
15	Lead compounds (inorganic)	7439921	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00296999	I	Input	357.83	100	GALLONS		0.0083
4	Butadiene [1,3]	106990	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0777922	I	Input	357.83	100	GALLONS		0.2174
5	Cadmium	7440439	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00053674	I	Input	357.83	100	GALLONS		0.0015
19	PAHs [PAH, POM]	1151	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0129534	I	Input	357.83	100	GALLONS		0.0362
19	Naphthalene [PAH, POM]	91203	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00704925	I	Input	357.83	100	GALLONS		0.0197
32	Ammonia	7664417	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.03771	I	Input	357.83	100	GALLONS		2.9
13	Chromium, hexavalent (and compounds)	18540299	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00003578	I	Input	357.83	100	GALLONS		0.0001
12	Formaldehyde	50000	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.61765	I	Input	357.83	100	GALLONS		1.7261
17	Nickel	7440020	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00139554	I	Input	357.83	100	GALLONS		0.0039
29	Acetaldehyde	75070	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.280288	I	Input	357.83	100	GALLONS		0.7833
30	Acrolein	107028	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0121304	I	Input	357.83	100	GALLONS		0.0339
36	Copper	7440508	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0014671	I	Input	357.83	100	GALLONS		0.0041
40	Ethyl benzene	100414	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00390035	I	Input	357.83	100	GALLONS		0.0109
44	Hexane	110543	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00962563	I	Input	357.83	100	GALLONS		0.0269
46	Hydrochloric acid	7647010	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0666637	I	Input	357.83	100	GALLONS		0.1863
49	Manganese	7439965	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00110927	I	Input	357.83	100	GALLONS		0.0031
50	Mercury	7439976	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00071566	I	Input	357.83	100	GALLONS		0.002
64	Selenium	7782492	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00078722	I	Input	357.83	100	GALLONS		0.0022
68	Toluene	108883	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0377153	I	Input	357.83	100	GALLONS		0.1054
70	Xylenes	1330207	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.015172	I	Input	357.83	100	GALLONS		0.0424
72	Diesel exhaust particulates	9901	ES53	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	11.9873	I	Input	357.83	100	GALLONS		33.5
2	Benzene	71432	ES54	22	Storage tank and Dispensing	Storage Tanks	P1	0.0287122	I	Input	1.9939	51	1000 GALLONS		0.0144
2	Benzene	71432	ES55	22	Storage tank and Dispensing	Storage Tanks	P1	0.136011	I	Input	9.4452	51	1000 GALLONS		0.0144
19	PAHs [PAH, POM]	1151	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.000131	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0001
19	Naphthalene [PAH, POM]	91203	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.000393	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0003
12	Formaldehyde	50000	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.02227	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.017
2	Benzene	71432	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.01048	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.008
32	Ammonia	7664417	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	23.58	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		18
29	Acetaldehyde	75070	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.005633	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0043
30	Acrolein	107028	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.003537	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0027
40	Ethyl benzene	100414	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.012445	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0095
44	Hexane	110543	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.008253	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0063
68	Toluene	108883	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.047946	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0366
70	Xylenes	1330207	ES56	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.035632	I	Input	1.31	38	MILLION STANDARD CUBIC FEET		0.0272
12	Formaldehyde	50000	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.02244	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.017
19	PAHs [PAH, POM]	1151	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.000132	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0001
2	Benzene	71432	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.01056	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.008
32	Ammonia	7664417	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	23.76	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		18
19	Naphthalene [PAH, POM]	91203	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.000396	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0003
29	Acetaldehyde	75070	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.005676	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0043
30	Acrolein	107028	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.003564	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0027
40	Ethyl benzene	100414	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.01254	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0095
44	Hexane	110543	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.008316	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0063
68	Toluene	108883	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.048312	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0366
70	Xylenes	1330207	ES57	2a	Oven <10 MMBTU/HR	External Combustion	P1	0.035904	I	Input	1.32	38	MILLION STANDARD CUBIC FEET		0.0272
2	Benzene	71432	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.03456	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.008
32	Ammonia	7664417	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	77.76	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		18
19	PAHs [PAH, POM]	1151	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.000432	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0001
19	Naphthalene [PAH, POM]	91203	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.001296	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0003
12	Formaldehyde	50000	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.07344	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.017
29	Acetaldehyde	75070	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.018576	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0043
30	Acrolein	107028	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.011664	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0027
40	Ethyl benzene	100414	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.04104	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0095
44	Hexane	110543	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.027216	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0063
68	Toluene	108883	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.158112	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0366
70	Xylenes	1330207	ES58	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.117504	I	Input	4.32	38	MILLION STANDARD CUBIC FEET		0.0272
19	PAHs [PAH, POM]	1151	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.000207	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0001
19	Naphthalene [PAH, POM]	91203	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.000621	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0003
12	Formaldehyde	50000	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.03519	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.017
2	Benzene	71432	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.01656	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.008
32	Ammonia	7664417	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	37.26	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		18
29	Acetaldehyde	75070	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.008901	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0043
30	Acrolein	107028	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.005589	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0027
40	Ethyl benzene	100414	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.019665	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0095
44	Hexane	110543	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.013041	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0063
68	Toluene	108883	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.075762	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0366
70	Xylenes	1330207	ES59	1a	Boiler <10 MMBTU/HR	External Combustion	P1	0.056304	I	Input	2.07	38	MILLION STANDARD CUBIC FEET		0.0272
10	Ethylene dichloride {1,2-Dichloroethane}	107062	ES60	21	Other evaporative sources	Other Use of Organics.	P2	12.3342	I	Input	183	48	POUNDS		0.0674
8	1,4-Dioxane	123911	ES60	21	Other evaporative sources	Other Use of Organics.	P3	12.1994	I	Input	181	48	POUNDS		0.0674
12	Formaldehyde	50000	ES60	21	Other evaporative sources	Other Use of Organics.	P5	35.6546	I	Input	529	48	POUNDS		0.0674
6	Carbon tetrachloride	56235	ES60	21	Other evaporative sources	Other Use of Organics.	P6	8.762	I	Input	130	48	POUNDS		0.0674
2	Benzene	71432	ES60	21	Other evaporative sources	Other Use of Organics.	P7	15.3672	I	Input	228	48	POUNDS		0.0674
16	Methylene chloride {Dichloromethane}	75092	ES60	21	Other evaporative sources	Other Use of Organics.	P12	203.615	I	Input	3021	48	POUNDS		0.0674
11	Ethylene oxide	75218	ES60	21	Other evaporative sources	Other Use of Organics.	P13	0.10784	I	Input	1.6	48	POUNDS		0.0674
32	Ammonia	7664417	ES60	21	Other evaporative sources	Other Use of Organics.	P14	80.6778	I	Input	1197	48	POUNDS		0.0674
20	Trichloroethylene	79016	ES60	21	Other evaporative sources	Other Use of Organics.	P15	6.2682	I	Input	93	48	POUNDS		0.0674
19	Anthracene [PAH, POM]	120127	ES60	21	Other evaporative sources	Other Use of Organics.	P16	0.5392	I	Input	8	48	POUNDS		0.0674
19	Pyrene [PAH, POM]	129000	ES60	21	Other evaporative sources	Other Use of Organics.	P17	0.1685	I	Input	2.5	48	POUNDS		0.0674
19	Acenaphthene [PAH, POM]	83329	ES60	21	Other evaporative sources	Other Use of Organics.	P21	0.0674	I	Input	1	48	POUNDS		0.0674
19	Phenanthrene [PAH, POM]	85018	ES60	21	Other evaporative sources	Other Use of Organics.	P22	0.12806	I	Input	1.9	48	POUNDS		0.0674
19	Fluorene [PAH, POM]	86737	ES60	21	Other evaporative sources	Other Use of Organics.	P23	0.19546	I	Input	2.9	48	POUNDS		0.0674
19	Naphthalene [PAH, POM]	91203	ES60	21	Other evaporative sources	Other Use of Organics.	P24	2.37922	I	Input	35.3	48	POUNDS		0.0674
9	Ethylene dibromide {1,2-Dibromoethane}	106934	ES60	21	Other evaporative sources	Other Use of Organics.	P28	1.99504	I	Input	29.6	48	POUNDS		0.0674
5	Cadmium	7440439	ES60	21	Other evaporative sources	Other Use of Organics.	P44	0.256794	I	Input	3.81	48	POUNDS		0.0674
18	Perchloroethylene {Tetrachloroethene}	127184	ES60	21	Other evaporative sources	Other Use of Organics.	P73	0.8762	I	Input	13	48	POUNDS		0.0674
22	Trichlorofluoromethane {Freon 11}	75694	ES60	21	Other evaporative sources	Other Use of Organics.	P83	0.4044	I	Input	6	48	POUNDS		0.0674
22	Dichlorofluoromethane {Freon 12}	75718	ES60	21	Other evaporative sources	Other Use of Organics.	P84	0	I	Input	0	48	POUNDS		0.0674
22	Trichlorotrifluoroethane {CFC-113}	76131	ES60	21	Other evaporative sources	Other Use of Organics.	P85	0.8762	I	Input	13	48	POUNDS		0.0674
23	Methyl chloroform {1,1,1-Trichloroethane}	71556	ES60	21	Other evaporative sources	Other Use of Organics.	P86	0	I	Input	0	48	POUNDS		0.06744
14	Arsenic and Compounds (inorganic)	7440382	ES60	21	Other evaporative sources	Other Use of Organics.	P87	0	I	Input	0	48	POUNDS		0.0674
4	Butadiene [1,3]	106990	ES60	21	Other evaporative sources	Other Use of Organics.	P88	0.62008	I	Input	9.2	48	POUNDS		0.0674
15	Lead compounds (inorganic)	7439921	ES60	21	Other evaporative sources	Other Use of Organics.	P89	0.1685	I	Input	2.5	48	POUNDS		0.0674
21	Vinyl chloride	75014	ES60	21	Other evaporative sources	Other Use of Organics.	P90	0	I	Input	0	48	POUNDS		0.0674
3	Beryllium	7440417	ES60	21	Other evaporative sources	Other Use of Organics.	P91	0	I	Input	0	48	POUNDS	0	0.0674
22	Fluorocarbons (chlorinated)	1104	ES61	21	Other evaporative sources	Other Use of Organics.	P1	306.94	I	Input	306.94	48	POUNDS		1
22	Trichlorotrifluoroethane {CFC-113}	76131	ES61	21	Other evaporative sources	Other Use of Organics.	P4	0	I	Input	0	48	POUNDS		1
2	Benzene	71432	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.208295	I	Input	1118.06	100	GALLONS		0.1863
4	Butadiene [1,3]	106990	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.243066	I	Input	1118.06	100	GALLONS		0.2174
5	Cadmium	7440439	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00167709	I	Input	1118.06	100	GALLONS		0.0015
12	Formaldehyde	50000	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.92988	I	Input	1118.06	100	GALLONS		1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0001118	I	Input	1118.06	100	GALLONS		0.0001
17	Nickel	7440020	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00436043	I	Input	1118.06	100	GALLONS		0.0039
19	PAHs [PAH, POM]	1151	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0404738	I	Input	1118.06	100	GALLONS		0.0362
19	Naphthalene [PAH, POM]	91203	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0220258	I	Input	1118.06	100	GALLONS		0.0197

32	Ammonia	7664417	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	3.24237	I	Input	1118.06	100	GALLONS	2.9
14	Arsenic and Compounds (inorganic)	7440382	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0017889	I	Input	1118.06	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0092799	I	Input	1118.06	100	GALLONS	0.0083
29	Acetaldehyde	75070	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.875776	I	Input	1118.06	100	GALLONS	0.7833
30	Acrolein	107028	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0379022	I	Input	1118.06	100	GALLONS	0.0339
36	Copper	7440508	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00458405	I	Input	1118.06	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0121869	I	Input	1118.06	100	GALLONS	0.0109
44	Hexane	110543	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0300758	I	Input	1118.06	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.208295	I	Input	1118.06	100	GALLONS	0.1863
49	Manganese	7439965	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00346599	I	Input	1118.06	100	GALLONS	0.0031
50	Mercury	7439976	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00223612	I	Input	1118.06	100	GALLONS	0.002
64	Selenium	7782492	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00245973	I	Input	1118.06	100	GALLONS	0.0022
68	Toluene	108883	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.117844	I	Input	1118.06	100	GALLONS	0.1054
70	Xylenes	1330207	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0474057	I	Input	1118.06	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES47	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	37.455	I	Input	1118.06	100	GALLONS	33.5
19	PAHs [PAH, POM]	1151	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00129994	I	Input	35.91	100	GALLONS	0.0362
4	Butadiene [1,3]	106990	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00780683	I	Input	35.91	100	GALLONS	0.2174
2	Benzene	71432	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00669003	I	Input	35.91	100	GALLONS	0.1863
15	Lead compounds (inorganic)	7439921	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00029805	I	Input	35.91	100	GALLONS	0.0083
17	Nickel	7440020	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00014004	I	Input	35.91	100	GALLONS	0.0039
13	Chromium, hexavalent (and compounds)	18540299	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00000359	I	Input	35.91	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00005745	I	Input	35.91	100	GALLONS	0.0016
5	Cadmium	7440439	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00005386	I	Input	35.91	100	GALLONS	0.0015
12	Formaldehyde	50000	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0619843	I	Input	35.91	100	GALLONS	1.7261
19	Naphthalene [PAH, POM]	91203	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00070742	I	Input	35.91	100	GALLONS	0.0197
32	Ammonia	7664417	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.104139	I	Input	35.91	100	GALLONS	2.9
29	Acetaldehyde	75070	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0281283	I	Input	35.91	100	GALLONS	0.7833
30	Acrolein	107028	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00121735	I	Input	35.91	100	GALLONS	0.0339
36	Copper	7440508	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00014723	I	Input	35.91	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00039141	I	Input	35.91	100	GALLONS	0.0109
44	Hexane	110543	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00096597	I	Input	35.91	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00669003	I	Input	35.91	100	GALLONS	0.1863
49	Manganese	7439965	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011132	I	Input	35.91	100	GALLONS	0.0031
50	Mercury	7439976	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00007182	I	Input	35.91	100	GALLONS	0.002
64	Selenium	7782492	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.000079	I	Input	35.91	100	GALLONS	0.0022
68	Toluene	108883	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00378491	I	Input	35.91	100	GALLONS	0.1054
70	Xylenes	1330207	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00152258	I	Input	35.91	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES48	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.20298	I	Input	35.91	100	GALLONS	33.5
2	Benzene	71432	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.166345	I	Input	892.89	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.194114	I	Input	892.89	100	GALLONS	0.2174
5	Cadmium	7440439	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00133934	I	Input	892.89	100	GALLONS	0.0015
12	Formaldehyde	50000	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.54122	I	Input	892.89	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00008928	I	Input	892.89	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00142862	I	Input	892.89	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00741099	I	Input	892.89	100	GALLONS	0.0083
17	Nickel	7440020	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00348227	I	Input	892.89	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0323226	I	Input	892.89	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0175899	I	Input	892.89	100	GALLONS	0.0197
32	Ammonia	7664417	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	2.58938	I	Input	892.89	100	GALLONS	2.9
29	Acetaldehyde	75070	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.699401	I	Input	892.89	100	GALLONS	0.7833
30	Acrolein	107028	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.030269	I	Input	892.89	100	GALLONS	0.0339
36	Copper	7440508	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00366085	I	Input	892.89	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0097325	I	Input	892.89	100	GALLONS	0.0109
44	Hexane	110543	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0240187	I	Input	892.89	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.166345	I	Input	892.89	100	GALLONS	0.1863
49	Manganese	7439965	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00276796	I	Input	892.89	100	GALLONS	0.0031
50	Mercury	7439976	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00178578	I	Input	892.89	100	GALLONS	0.002
64	Selenium	7782492	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00196436	I	Input	892.89	100	GALLONS	0.0022
68	Toluene	108883	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0941106	I	Input	892.89	100	GALLONS	0.1054
70	Xylenes	1330207	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0378585	I	Input	892.89	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES65	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	29.9118	I	Input	892.89	100	GALLONS	33.5
2	Benzene	71432	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.214426	I	Input	1150.97	100	GALLONS	0.1863
4	Butadiene [1,3]	106990	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.250221	I	Input	1150.97	100	GALLONS	0.2174
5	Cadmium	7440439	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00172646	I	Input	1150.97	100	GALLONS	0.0015
12	Formaldehyde	50000	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	1.98669	I	Input	1150.97	100	GALLONS	1.7261
13	Chromium, hexavalent (and compounds)	18540299	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00011509	I	Input	1150.97	100	GALLONS	0.0001
14	Arsenic and Compounds (inorganic)	7440382	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00184155	I	Input	1150.97	100	GALLONS	0.0016
15	Lead compounds (inorganic)	7439921	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00955305	I	Input	1150.97	100	GALLONS	0.0083
17	Nickel	7440020	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00448878	I	Input	1150.97	100	GALLONS	0.0039
19	PAHs [PAH, POM]	1151	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0416651	I	Input	1150.97	100	GALLONS	0.0362
19	Naphthalene [PAH, POM]	91203	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0226741	I	Input	1150.97	100	GALLONS	0.0197
32	Ammonia	7664417	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	3.33781	I	Input	1150.97	100	GALLONS	2.9
29	Acetaldehyde	75070	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.901555	I	Input	1150.97	100	GALLONS	0.7833
30	Acrolein	107028	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0390179	I	Input	1150.97	100	GALLONS	0.0339
36	Copper	7440508	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00471898	I	Input	1150.97	100	GALLONS	0.0041
40	Ethyl benzene	100414	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0125456	I	Input	1150.97	100	GALLONS	0.0109
44	Hexane	110543	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0309611	I	Input	1150.97	100	GALLONS	0.0269
46	Hydrochloric acid	7647010	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.214426	I	Input	1150.97	100	GALLONS	0.1863
49	Manganese	7439965	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00356801	I	Input	1150.97	100	GALLONS	0.0031
50	Mercury	7439976	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00230194	I	Input	1150.97	100	GALLONS	0.002
64	Selenium	7782492	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.00253213	I	Input	1150.97	100	GALLONS	0.0022
68	Toluene	108883	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.121312	I	Input	1150.97	100	GALLONS	0.1054
70	Xylenes	1330207	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	0.0488011	I	Input	1150.97	100	GALLONS	0.0424
72	Diesel exhaust particulates	9901	ES66	11c	Stationary I.C. Engines, 4 Stroke-Lean Burn	Internal Combustion	P1	38.5575	I	Input	1150.97	100	GALLONS	33.5
19	2-Methyl naphthalene [PAH, POM]	91576	ES60	21	Other evaporative sources	Other Use of Organics.	P82	0.1348	I	Input	2	48	POUNDS	0.0674
69	Urethane {Ethyl carbamate}	51796	ES60	21	Other evaporative sources	Other Use of Organics.	P92	0.21568	I	Input	3.2	48	POUNDS	0.0674
43	Lindane {gamma-Hexachlorocyclohexane}	58899	ES60	21	Other evaporative sources	Other Use of Organics.	P93	0.01348	I	Input	0.2	48	POUNDS	0.0674
51	Methanol	67561	ES60	21	Other evaporative sources	Other Use of Organics.	P94	307.209	I	Input	4558	48	POUNDS	0.0674
35	Chloroform	67663	ES60	21	Other evaporative sources	Other Use of Organics.	P95	157.446	I	Input	2336	48	POUNDS	0.0674
62	Propylene oxide	75569	ES60	21	Other evaporative sources	Other Use of Organics.	P96	0.9436	I	Input	14	48	POUNDS	0.0674
25	1,1,2-Trichloroethane {Vinyl trichloride}	79005	ES60	21	Other evaporative sources	Other Use of Organics.	P97	0.2696	I	Input	4	48	POUNDS	0.0674
24	1,1,2,2-Tetrachloroethane	79345	ES60	21	Other evaporative sources	Other Use of Organics.	P98	0.5392	I	Input	8	48	POUNDS	0.0674
48	Methylene diphenyl diisocyanate {MDI} [POM]	101688	ES60	21	Other evaporative sources	Other Use of Organics.	P99	0.08088	I	Input	1.2	48	POUNDS	0.0674
61	4,4'-Methylenedianiline (and its dichloride) [POM]	101779	ES60	21	Other evaporative sources	Other Use of Organics.	P100	0.06066	I	Input	0.9	48	POUNDS	0.0674
57	p-Dichlorobenzene {1,4-Dichlorobenzene}	106467	ES60	21	Other evaporative sources	Other Use of Organics.	P101	0.4044	I	Input	6	48	POUNDS	0.0674
30	Acrolein	107028	ES60	21	Other evaporative sources	Other Use of Organics.	P102	0.345088	I	Input	5.12	48	POUNDS	0.0674
31	Acrylonitrile	107131	ES60	21	Other evaporative sources	Other Use of Organics.	P103	0.34374	I	Input	5.1	48	POUNDS	0.0674
54	Methyl isobutyl ketone {Hexone}	108101	ES60	21	Other evaporative sources	Other Use of Organics.	P104	3.9766	I	Input	59	48	POUNDS	0.0674
68	Toluene	108883	ES60	21	Other evaporative sources	Other Use of Organics.	P105	70.8374	I	Input	1051	48	POUNDS	0.0674
41	Ethylene glycol monomethyl ether	109864	ES60	21	Other evaporative sources	Other Use of Organics.	P106	1.011	I	Input	15	48	POUNDS	0.0674
44	Hexane	110543	ES60	21	Other evaporative sources	Other Use of Organics.	P107	103.055	I	Input	1529	48	POUNDS	0.0674
41	Ethylene glycol dimethyl ether	110714	ES60	21	Other evaporative sources	Other Use of Organics.	P108	6.74	I	Input	100	48	POUNDS	0.0674
41	Ethylene glycol monoethyl ether	110805	ES60	21	Other evaporative sources	Other Use of Organics.	P109	5.9312	I	Input	88	48	POUNDS	0.0674
41	Triethylene glycol dimethyl ether	112492	ES60	21	Other evaporative sources	Other Use of Organics.	P110	9.0316	I	Input	134	48	POUNDS	0.0674
42	Hexachlorobenzene	118741	ES60	21	Other evaporative sources	Other Use of Organics.	P111	0.02696	I	Input	0.4	48	POUNDS	0.0674
19	Acenaphthylene [PAH, POM]	208968	ES60	21	Other evaporative sources	Other Use of Organics.	P112	0.0337	I	Input	0.5	48	POUNDS	0.0674
45	Hydrazine	302012	ES60	21	Other evaporative sources	Other Use of Organics.	P113	0.196808	I	Input	2.92	48	POUNDS	0.0674
43	alpha-Hexachlorocyclohexane	319846	ES60	21	Other evaporative sources	Other Use of Organics.	P114	0.07414	I	Input	1.1	48	POUNDS	0.0674
48	Hexamethylene-1,6-diisocyanate	822060	ES60	21	Other evaporative sources	Other Use of Organics.	P115	0.004044	I	Input	0.06	48	POUNDS	0.0674
65	Sodium hydroxide	1310732	ES60	21	Other evaporative sources	Other Use of Organics.	P116	80.4756	I	Input	1194	48	POUNDS	0.0674

60	Phosphorus pentoxide	1314563	ES60	21	Other evaporative sources	Other Use of Organics.	P117	0	I	Input	0	48	POUNDS	0.0674
70	Xylenes	1330207	ES60	21	Other evaporative sources	Other Use of Organics.	P118	37.5418	I	Input	557	48	POUNDS	0.0674
49	Manganese	7439965	ES60	21	Other evaporative sources	Other Use of Organics.	P119	0.10784	I	Input	1.6	48	POUNDS	0.0674
50	Mercury	7439976	ES60	21	Other evaporative sources	Other Use of Organics.	P120	1.011	I	Input	15	48	POUNDS	0.0674
17	Nickel	7440020	ES60	21	Other evaporative sources	Other Use of Organics.	P121	0.06066	I	Input	0.9	48	POUNDS	0.0674
36	Copper	7440508	ES60	21	Other evaporative sources	Other Use of Organics.	P122	1.30756	I	Input	19.4	48	POUNDS	0.0674
50	Mercuric chloride	7487947	ES60	21	Other evaporative sources	Other Use of Organics.	P123	0.8088	I	Input	12	48	POUNDS	0.0674
37	Crystalline silica	7631869	ES60	21	Other evaporative sources	Other Use of Organics.	P124	0.39092	I	Input	5.8	48	POUNDS	0.0674
46	Hydrochloric acid	7647010	ES60	21	Other evaporative sources	Other Use of Organics.	P125	583.414	I	Input	8656	48	POUNDS	0.0674
60	Phosphoric acid	7664382	ES60	21	Other evaporative sources	Other Use of Organics.	P126	46.3038	I	Input	687	48	POUNDS	0.0674
73	Hydrogen fluoride (hydrofluoric acid)	7664393	ES60	21	Other evaporative sources	Other Use of Organics.	P127	10.11	I	Input	150	48	POUNDS	0.0674
67	Sulfuric acid	7664939	ES60	21	Other evaporative sources	Other Use of Organics.	P128	61.671	I	Input	915	48	POUNDS	0.0674
59	Phosphorus	7723140	ES60	21	Other evaporative sources	Other Use of Organics.	P129	0	I	Input	0	48	POUNDS	0.0674
64	Selenium	7782492	ES60	21	Other evaporative sources	Other Use of Organics.	P130	0.14828	I	Input	2.2	48	POUNDS	0.0674
34	Chlorine	7782505	ES60	21	Other evaporative sources	Other Use of Organics.	P131	0.0674	I	Input	1	48	POUNDS	0.0674
67	Oleum	8014957	ES60	21	Other evaporative sources	Other Use of Organics.	P132	0.96382	I	Input	14.3	48	POUNDS	0.0674
60	Phosphorus pentachloride	10026138	ES60	21	Other evaporative sources	Other Use of Organics.	P133	0	I	Input	0	48	POUNDS	0.0674

Appendix B

Baseline and Future Scenario Emissions Tables

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Table B-1 Emissions from Existing Campus Kitchens – Baseline Scenario

Pollutant	Emissions Annual (lbs/year)	Emissions Hourly (lbs/hour)[1]
Lothian Residence Hall		
Acetaldehyde	0.0056	1.29×10^{-6}
Acrolein	0.0035	8.08×10^{-7}
Ammonia	23.58	0.0054
Benzene	0.010	2.39×10^{-6}
Ethyl benzene	0.012	2.84×10^{-6}
Formaldehyde	0.022	5.08×10^{-6}
Hexane	0.0083	1.88×10^{-6}
Naphthalene	0.00039	8.97×10^{-8}
Polycyclic aromatic hydrocarbons (PAHs)	0.00013	2.99×10^{-8}
Toluene	0.048	1.09×10^{-5}
Xylenes	0.036	8.14×10^{-6}
Aberdeen-Inverness Residence Hall		
Acetaldehyde	0.0057	1.30×10^{-6}
Acrolein	0.0036	8.14×10^{-7}
Ammonia	23.76	0.0054
Benzene	0.011	2.41×10^{-6}
Ethyl benzene	0.013	2.86×10^{-6}
Formaldehyde	0.022	5.12×10^{-6}
Hexane	0.0083	1.90×10^{-6}
Naphthalene	0.00040	9.04×10^{-8}
Polycyclic aromatic hydrocarbons (PAHs)	0.00013	3.01×10^{-8}
Toluene	0.048	1.10×10^{-5}
Xylenes	0.036	8.20×10^{-6}

lbs = pounds

[1] Hourly emissions assume natural gas-fired kitchen equipment operates 12 hours per day, 365 days per year.

Table B-2 Emissions from New Campus Kitchens – Future Scenario

Pollutant	Emissions Annual (lbs/year)[2]	Hourly (lbs/hour)[3]
Glasgow Dining Hall[1]		
Acetaldehyde	0.0093	2.13×10^{-6}
Acrolein	0.0059	1.34×10^{-6}
Ammonia	39.11	0.0089
Benzene	0.017	3.97×10^{-6}
Ethyl benzene	0.021	4.71×10^{-6}
Formaldehyde	0.037	8.43×10^{-6}
Hexane	0.014	3.12×10^{-6}
Naphthalene	0.00065	1.49×10^{-7}
Polycyclic aromatic hydrocarbons (PAHs)	0.00022	4.96×10^{-8}
Toluene	0.080	1.82×10^{-5}
Xylenes	0.059	1.35×10^{-5}
The Barn[1]		
Acetaldehyde	0.0039	1.58×10^{-6}
Acrolein	0.0025	9.95×10^{-7}
Ammonia	16.38	0.0066
Benzene	0.0073	2.95×10^{-6}
Ethyl benzene	0.0086	3.50×10^{-6}
Formaldehyde	0.015	6.26×10^{-6}
Hexane	0.0057	2.32×10^{-6}
Naphthalene	0.00027	1.11×10^{-7}
Polycyclic aromatic hydrocarbons (PAHs)	9.10×10^{-5}	3.68×10^{-8}
Toluene	0.033	1.35×10^{-5}
Xylenes	0.025	1.00×10^{-5}

lbs = pounds

[1] Glasgow Dining Facility and The Barn are the only new kitchen sources included in the future scenario emissions and health risk modeling. Under the future scenario, Lothian Residence Hall Dining Facility emissions were assumed to remain the same, and Aberdeen-Inverness Residence Hall Dining Facility emissions were assumed to cease upon decommissioning of the kitchen.

[2] Annual emissions for Glasgow Dining Hall are based on baseline emissions from Aberdeen-Inverness Residence Hall Dining Facility, multiplied by a growth factor of 64.6 percent, commensurate with the overall anticipated increase in residential dining seats under the proposed 2021 Long Range Development Plan (1,172 seats in 2018 to 1,929 seats in 2035). Annual emissions from The Barn are based on the restaurant's estimated natural gas fuel consumption provided by the California Emissions Estimator Model (0.9099 million standard cubic feet per year), multiplied by emissions factors for natural gas combustion contained in the 2019 Annual Emissions Report.

[3] Hourly emissions for Glasgow Dining Facility assume natural gas-fired kitchen equipment operates 12 hours per day, 365 days per year. Hourly emissions for The Barn are based on current operating hours of 11:30 a.m. to 7:00 p.m., Monday through Friday, and assume kitchens may operate up to one hour before opening and after closing.

Table B-3 Diesel Emergency Generator Emissions – Baseline Scenario

Source[1]	Fuel Use (MGal/ year)	Acetaldehyde		Acrolein		Ammonia		Arsenic Compounds		Benzene		1,3-Butadiene		Cadmium		Chromium (VI)		Copper		Diesel PM		Ethylbenzene	
		A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H
Chemical Sciences	0.20	0.15	3.1 x 10^{-3}	6.7 x 10^{-3}	1.3 x 10^{-4}	0.57	1.1 x 10^{-2}	3.2 x 10^{-4}	6.3 x 10^{-6}	3.7 x 10^{-2}	7.3 x 10^{-4}	4.3 x 10^{-2}	8.6 x 10^{-4}	3.0 x 10^{-4}	5.9 x 10^{-6}	2.0 x 10^{-5}	3.9 x 10^{-7}	8.1 x 10^{-4}	1.6 x 10^{-5}	6.61	0.13	2.1 x 10^{-3}	4.3 x 10^{-5}
School of Medicine - Education	0.36	0.28	5.6 x 10^{-3}	1.2 x 10^{-2}	2.4 x 10^{-4}	1.04	2.1 x 10^{-2}	5.7 x 10^{-4}	1.1 x 10^{-5}	6.7 x 10^{-2}	1.3 x 10^{-3}	7.8 x 10^{-2}	1.6 x 10^{-3}	5.4 x 10^{-4}	1.1 x 10^{-5}	3.6 x 10^{-5}	7.2 x 10^{-7}	1.5 x 10^{-3}	2.9 x 10^{-5}	12.0	0.24	3.9 x 10^{-3}	7.8 x 10^{-5}
Campus Data Center	5.9 x 10^{-2}	4.6 x 10^{-2}	9.3 x 10^{-4}	2.0 x 10^{-3}	4.0 x 10^{-5}	0.17	3.4 x 10^{-3}	9.5 x 10^{-5}	1.9 x 10^{-6}	1.1 x 10^{-2}	2.2 x 10^{-4}	1.3 x 10^{-2}	2.6 x 10^{-4}	8.9 x 10^{-5}	1.8 x 10^{-6}	5.9 x 10^{-6}	1.2 x 10^{-7}	2.4 x 10^{-4}	4.9 x 10^{-6}	1.98	4.0 x 10^{-2}	6.5 x 10^{-4}	1.3 x 10^{-5}
Boyce Hall	0.27	2.1 x 10^{-2}	4.2 x 10^{-4}	9.1 x 10^{-4}	1.8 x 10^{-5}	7.8 x 10^{-2}	1.6 x 10^{-3}	4.3 x 10^{-5}	8.6 x 10^{-7}	5.0 x 10^{-3}	1.0 x 10^{-4}	5.9 x 10^{-3}	1.2 x 10^{-4}	4.0 x 10^{-5}	8.1 x 10^{-7}	2.7 x 10^{-6}	5.4 x 10^{-8}	1.1 x 10^{-4}	2.2 x 10^{-6}	0.90	1.8 x 10^{-2}	2.9 x 10^{-4}	5.9 x 10^{-6}
Biological Sciences	0.18	0.14	2.8 x 10^{-3}	6.0 x 10^{-3}	1.2 x 10^{-4}	0.51	1.0 x 10^{-2}	2.8 x 10^{-4}	5.7 x 10^{-6}	3.3 x 10^{-2}	6.6 x 10^{-4}	3.9 x 10^{-2}	7.7 x 10^{-4}	2.7 x 10^{-4}	5.3 x 10^{-6}	1.8 x 10^{-5}	3.6 x 10^{-7}	7.3 x 10^{-4}	1.5 x 10^{-5}	5.95	0.12	1.9 x 10^{-3}	3.9 x 10^{-5}
Rivera Library	0.32	0.25	8.3 x 10^{-3}	1.1 x 10^{-2}	3.6 x 10^{-4}	0.92	3.1 x 10^{-2}	5.1 x 10^{-4}	1.7 x 10^{-5}	5.9 x 10^{-2}	2.0 x 10^{-3}	6.9 x 10^{-2}	2.3 x 10^{-3}	4.8 x 10^{-4}	1.6 x 10^{-5}	3.2 x 10^{-5}	1.1 x 10^{-6}	1.3 x 10^{-3}	4.3 x 10^{-5}	10.6	0.35	3.5 x 10^{-3}	1.2 x 10^{-4}
Genomics East	7.0 x 10^{-2}	5.5 x 10^{-2}	1.1 x 10^{-3}	2.4 x 10^{-3}	4.7 x 10^{-5}	0.20	4.1 x 10^{-3}	1.1 x 10^{-4}	2.2 x 10^{-6}	1.3 x 10^{-2}	2.6 x 10^{-4}	1.5 x 10^{-2}	3.0 x 10^{-4}	1.0 x 10^{-4}	2.1 x 10^{-6}	7.0 x 10^{-6}	1.4 x 10^{-7}	2.9 x 10^{-4}	5.7 x 10^{-6}	2.34	4.7 x 10^{-2}	7.6 x 10^{-4}	1.5 x 10^{-5}
School of Medicine – Research	0.12	9.7 x 10^{-2}	1.9 x 10^{-3}	4.2 x 10^{-3}	8.4 x 10^{-5}	0.36	7.2 x 10^{-3}	2.0 x 10^{-4}	4.0 x 10^{-6}	2.3 x 10^{-2}	4.6 x 10^{-4}	2.7 x 10^{-2}	5.4 x 10^{-4}	1.9 x 10^{-4}	3.7 x 10^{-6}	1.2 x 10^{-5}	2.5 x 10^{-7}	5.1 x 10^{-4}	1.0 x 10^{-5}	4.14	8.3 x 10^{-2}	1.3 x 10^{-3}	2.7 x 10^{-5}
Psychology	4.3 x 10^{-2}	3.4 x 10^{-2}	6.7 x 10^{-4}	1.5 x 10^{-3}	2.9 x 10^{-5}	0.12	2.5 x 10^{-3}	6.8 x 10^{-5}	1.4 x 10^{-6}	8.0 x 10^{-3}	1.6 x 10^{-4}	9.3 x 10^{-3}	1.9 x 10^{-4}	6.4 x 10^{-5}	1.3 x 10^{-6}	4.3 x 10^{-6}	8.5 x 10^{-8}	1.8 x 10^{-4}	3.5 x 10^{-6}	1.43	2.9 x 10^{-2}	4.7 x 10^{-4}	9.3 x 10^{-6}
Hinderaker Hall	0.55	0.43	8.6 x 10^{-3}	1.9 x 10^{-2}	3.7 x 10^{-4}	1.60	3.2 x 10^{-2}	8.8 x 10^{-4}	1.8 x 10^{-5}	0.10	2.1 x 10^{-3}	0.12	2.4 x 10^{-3}	8.3 x 10^{-4}	1.7 x 10^{-5}	5.5 x 10^{-5}	1.1 x 10^{-6}	2.3 x 10^{-3}	4.5 x 10^{-5}	18.4	0.37	6.0 x 10^{-3}	1.2 x 10^{-4}
Telecommunications	0.12	9.3 x 10^{-2}	1.9 x 10^{-3}	4.0 x 10^{-3}	8.1 x 10^{-5}	0.34	6.9 x 10^{-3}	1.9 x 10^{-4}	3.8 x 10^{-6}	2.2 x 10^{-2}	4.4 x 10^{-4}	2.6 x 10^{-2}	5.2 x 10^{-4}	1.8 x 10^{-4}	3.6 x 10^{-6}	1.2 x 10^{-5}	2.4 x 10^{-7}	4.9 x 10^{-4}	9.7 x 10^{-6}	3.98	8.0 x 10^{-2}	1.3 x 10^{-3}	2.6 x 10^{-5}
Police Station	0.10	7.8 x 10^{-2}	3.9 x 10^{-3}	3.4 x 10^{-3}	1.7 x 10^{-4}	0.29	1.4 x 10^{-2}	1.6 x 10^{-4}	8.0 x 10^{-6}	1.9 x 10^{-2}	9.3 x 10^{-4}	2.2 x 10^{-2}	1.1 x 10^{-3}	1.5 x 10^{-4}	7.5 x 10^{-6}	1.0 x 10^{-5}	5.0 x 10^{-7}	4.1 x 10^{-4}	2.0 x 10^{-5}	3.34	0.17	1.1 x 10^{-3}	5.4 x 10^{-5}
Materials Science & Engineering	0.51	0.40	7.9 x 10^{-3}	1.7 x 10^{-2}	3.4 x 10^{-4}	1.47	2.9 x 10^{-2}	8.1 x 10^{-4}	1.6 x 10^{-5}	9.4 x 10^{-2}	1.9 x 10^{-3}	0.11	2.2 x 10^{-3}	7.6 x 10^{-4}	1.5 x 10^{-5}	5.1 x 10^{-5}	1.0 x 10^{-6}	2.1 x 10^{-3}	4.1 x 10^{-5}	17.0	0.34	5.5 x 10^{-3}	1.1 x 10^{-4}
Bourns Hall	1.71	1.34	2.7 x 10^{-2}	5.8 x 10^{-2}	1.2 x 10^{-3}	4.96	9.9 x 10^{-2}	2.7 x 10^{-3}	5.5 x 10^{-5}	0.32	6.4 x 10^{-3}	0.37	7.4 x 10^{-3}	2.6 x 10^{-3}	5.1 x 10^{-5}	1.7 x 10^{-4}	3.4 x 10^{-6}	7.0 x 10^{-3}	1.4 x 10^{-4}	57.3	1.15	1.9 x 10^{-2}	3.7 x 10^{-4}
Science Library W.	6.0 x 10^{-2}	4.7 x 10^{-2}	1.6 x 10^{-3}	2.0 x 10^{-3}	6.8 x 10^{-5}	0.17	5.8 x 10^{-3}	9.6 x 10^{-5}	3.2 x 10^{-6}	1.1 x 10^{-2}	3.7 x 10^{-4}	1.3 x 10^{-2}	4.3 x 10^{-4}	9.0 x 10^{-5}	3.0 x 10^{-6}	6.0 x 10^{-6}	2.0 x 10^{-7}	2.5 x 10^{-4}	8.2 x 10^{-6}	2.01	6.7 x 10^{-2}	6.5 x 10^{-4}	2.2 x 10^{-5}
Geology North	0.93	0.73	1.5 x 10^{-2}	3.1 x 10^{-2}	6.3 x 10^{-4}	2.69	5.4 x 10^{-2}	1.5 x 10^{-3}	3.0 x 10^{-5}	0.17	3.5 x 10^{-3}	0.20	4.0 x 10^{-3}	1.4 x 10^{-3}	2.8 x 10^{-5}	9.3 x 10^{-5}	1.9 x 10^{-6}	3.8 x 10^{-3}	7.6 x 10^{-5}	31.1	0.62	1.0 x 10^{-2}	2.0 x 10^{-4}
Pierce Hall	1.32	1.03	3.4 x 10^{-2}	4.5 x 10^{-2}	1.5 x 10^{-3}	3.83	0.13	2.1 x 10^{-3}	7.0 x 10^{-5}	0.25	8.2 x 10^{-3}	0.29	9.6 x 10^{-3}	2.0 x 10^{-3}	6.6 x 10^{-5}	1.3 x 10^{-4}	4.4 x 10^{-6}	5.4 x 10^{-3}	1.8 x 10^{-4}	44.2	1.47	1.4 x 10^{-2}	4.8 x 10^{-4}
Physical Plant Storehouse	0.37	0.29	5.8 x 10^{-3}	1.2 x 10^{-2}	2.5 x 10^{-4}	1.07	2.1 x 10^{-2}	5.9 x 10^{-4}	1.2 x 10^{-5}	6.8 x 10^{-2}	1.4 x 10^{-3}	8.0 x 10^{-2}	1.6 x 10^{-3}	5.5 x 10^{-4}	1.1 x 10^{-5}	3.7 x 10^{-5}	7.4 x 10^{-7}	1.5 x 10^{-3}	3.0 x 10^{-5}	12.3	2.5 x 10-1	4.0 x 10^{-3}	8.0 x 10^{-5}
Physical Plant Butler West	0.66	0.52	1.7 x 10^{-2}	2.2 x 10^{-2}	7.5 x 10^{-4}	1.91	6.4 x 10^{-2}	1.1 x 10^{-3}	3.5 x 10^{-5}	0.12	4.1 x 10^{-3}	0.14	4.8 x 10^{-3}	9.9 x 10^{-4}	3.3 x 10^{-5}	6.6 x 10^{-5}	2.2 x 10^{-6}	2.7 x 10^{-3}	9.0 x 10^{-5}	22.1	0.74	7.2 x 10^{-3}	2.4 x 10^{-4}
Fine Arts	8.0 x 10^{-2}	6.3 x 10^{-2}	1.3 x 10^{-3}	2.7 x 10^{-3}	5.4 x 10^{-5}	0.23	4.6 x 10^{-3}	1.3 x 10^{-4}	2.6 x 10^{-6}	1.5 x 10^{-2}	3.0 x 10^{-4}	1.7 x 10^{-2}	3.5 x 10^{-4}	1.2 x 10^{-4}	2.4 x 10^{-6}	8.0 x 10^{-6}	1.6 x 10^{-7}	3.3 x 10^{-4}	6.6 x 10^{-6}	2.68	5.4 x 10^{-2}	8.7 x 10^{-4}	1.7 x 10^{-5}
New Humanities and Social Sciences Bldg.	1.8 x 10^{-2}	1.4 x 10^{-2}	4.6 x 10^{-4}	6.0 x 10^{-4}	2.0 x 10^{-5}	5.1 x 10^{-2}	1.7 x 10^{-3}	2.8 x 10^{-5}	9.5 x 10^{-7}	3.3 x 10^{-3}	1.1 x 10^{-4}	3.9 x 10^{-3}	1.3 x 10^{-4}	2.7 x 10^{-5}	8.9 x 10^{-7}	1.8 x 10^{-6}	5.9 x 10^{-8}	7.3 x 10^{-5}	2.4 x 10^{-6}	0.59	2.0 x 10^{-2}	1.9 x 10^{-4}	6.4 x 10^{-6}
Env. Health & Safety South	8.7 x 10^{-3}	6.8 x 10^{-3}	3.4 x 10^{-4}	2.9 x 10^{-4}	1.5 x 10^{-5}	2.5 x 10^{-2}	1.3 x 10^{-3}	1.4 x 10^{-5}	6.9 x 10^{-7}	1.6 x 10^{-3}	8.1 x 10^{-5}	1.9 x 10^{-3}	9.4 x 10^{-5}	1.3 x 10^{-5}	6.5 x 10^{-7}	8.6 x 10^{-7}	4.3 x 10^{-8}	3.6 x 10^{-5}	1.8 x 10^{-6}	0.29	1.5 x 10^{-2}	9.5 x 10^{-5}	4.7 x 10^{-6}
I&Q	0.16	0.12	4.1 x 10^{-3}	5.3 x 10^{-3}	1.8 x 10^{-4}	0.45	1.5 x 10^{-2}	2.5 x 10^{-4}	8.3 x 10^{-6}	2.9 x 10^{-2}	9.7 x 10^{-4}	3.4 x 10^{-2}	1.1 x 10^{-3}	2.3 x 10^{-4}	7.8 x 10^{-6}	1.6 x 10^{-5}	5.2 x 10^{-7}	6.4 x 10^{-4}	2.1 x 10^{-5}	5.22	0.17	1.7 x 10^{-3}	5.7 x 10^{-5}
Vivarium	1.2 x 10^{-2}	9.1 x 10^{-3}	3.0 x 10^{-4}	3.9 x 10^{-4}	1.3 x 10^{-5}	3.4 x 10^{-2}	1.1 x 10^{-3}	1.9 x 10^{-5}	6.2 x 10^{-7}	2.2 x 10^{-3}	7.2 x 10^{-5}	2.5 x 10^{-3}	8.4 x 10^{-5}	1.7 x 10^{-5}	5.8 x 10^{-7}	1.2 x 10^{-6}	3.9 x 10^{-8}	4.8 x 10^{-5}	1.6 x 10^{-6}	0.39	1.3 x 10^{-2}	1.3 x 10^{-4}	4.2 x 10^{-6}
Entomology	7.8 x 10^{-2}	6.1 x 10^{-2}	2.0 x 10^{-3}	2.6 x 10^{-3}	8.8 x 10^{-5}	0.22	7.5 x 10^{-3}	1.2 x 10^{-4}	4.1 x 10^{-6}	1.4 x 10^{-2}	4.8 x 10^{-4}	1.7 x 10^{-2}	5.6 x 10^{-4}	1.2 x 10^{-4}	3.9 x 10^{-6}	7.8 x 10^{-6}	2.6 x 10^{-7}	3.2 x 10^{-4}	1.1 x 10^{-5}	2.60	8.7 x 10^{-2}	8.5 x 10^{-4}	2.8 x 10^{-5}
Steam Plant	7.8 x 10^{-2}	6.1 x 10^{-2}	2.0 x 10^{-3}	2.7 x 10^{-3}	8.9 x 10^{-5}	0.23	7.6 x 10^{-3}	1.3 x 10^{-4}	4.2 x 10^{-6}	1.5 x 10^{-2}	4.9 x 10^{-4}	1.7 x 10^{-2}	5.7 x 10^{-4}	1.2 x 10^{-4}	3.9 x 10^{-6}	7.8 x 10^{-6}	2.6 x 10^{-7}	3.2 x 10^{-4}	1.1 x 10^{-5}	2.63	8.8 x 10^{-2}	8.5 x 10^{-4}	2.8 x 10^{-5}
UCR Extension W.	0.26	2.0 x 10^{-2}	4.0 x 10^{-4}	8.7 x 10^{-4}	1.7 x 10^{-5}	7.4 x 10^{-2}	1.5 x 10^{-3}	4.1 x 10^{-5}	8.2 x 10^{-7}	4.8 x 10^{-3}	9.6 x 10^{-5}	5.6 x 10^{-3}	1.1 x 10^{-4}	3.8 x 10^{-5}	7.7 x 10^{-7}	2.6 x 10^{-6}	5.1 x 10^{-8}	1.1 x 10^{-4}	2.1 x 10^{-6}	0.86	1.7 x 10^{-2}	2.8 x 10^{-4}	5.6 x 10^{-6}
Physics	1.05	0.82	2.7 x 10^{-2}	3.6 x 10^{-2}	1.2 x 10^{-3}	3.05	0.10	1.7 x 10^{-3}	5.6 x 10^{-5}	0.20	6.5 x 10^{-3}	0.23	7.6 x 10^{-3}	1.6 x 10^{-3}	5.3 x 10^{-5}	1.1 x 10^{-4}	3.5 x 10^{-6}	4.3 x 10^{-3}	1.4 x 10^{-4}	35.2	1.2e+00	1.1 x 10^{-2}	3.8 x 10^{-4}
Glen Mor 1	1.12	0.88	1.8 x 10^{-2}	3.8 x 10^{-2}	7.6 x 10^{-4}	3.24	6.5 x 10^{-2}	1.8 x 10^{-3}	3.6 x 10^{-5}	0.21	4.2 x 10^{-3}	0.24	4.9 x 10^{-3}	1.7 x 10^{-3}	3.4 x 10^{-5}	1.1 x 10^{-4}	2.2 x 10^{-6}	4.6 x 10^{-3}	9.2 x 10^{-5}	37.5	0.75	1.2 x 10^{-2}	2.4 x 10^{-4}
Glen Mor 2	3.6 x 10^{-2}	2.8 x 10^{-2}	5.6 x 10^{-4}	1.2 x 10^{-3}	2.4 x 10^{-5}	0.10	2.1 x 10^{-3}	5.7 x 10^{-5}	1.1 x 10^{-6}	6.7 x 10^{-3}	1.3 x 10^{-4}	7.8 x 10^{-3}	1.6 x 10^{-4}	5.4 x 10^{-5}	1.1 x 10^{-6}	3.6 x 10^{-6}	7.2 x 10^{-8}	1.5 x 10^{-4}	2.9 x 10^{-6}	1.20	2.4 x 10^{-2}	3.9 x 10^{-4}	7.8 x 10^{-6}
Env. Health & Safety	0.89	0.70	1.4 x 10^{-2}	3.0 x 10^{-2}	6.1 x 10^{-4}	2.59	5.2 x 10^{-2}	1.4 x 10^{-3}	2.9 x 10^{-5}	0.17	3.3 x 10^{-3}	0.19	3.9 x 10^{-3}	1.3 x 10^{-3}	2.7 x 10^{-5}	8.9 x 10^{-5}	1.8 x 10^{-6}	3.7 x 10^{-3}	7.3 x 10^{-5}	29.9	0.60	9.7 x 10^{-3}	1.9 x 10^{-4}
MRB 1	1.15	0.90	1.8 x 10^{-2}	3.9 x 10^{-2}	7.8 x 10^{-4}	3.34	6.7 x 10^{-2}	1.8 x 10^{-3}	3.7 x 10^{-5}	0.21	4.3 x 10^{-3}	0.25	5.0 x 10^{-3}	1.7 x 10^{-3}	3.5 x 10^{-5}	1.2 x 10^{-4}	2.3 x 10^{-6}	4.7 x 10^{-3}	9.4 x 10^{-5}	38.6	0.77	1.3 x 10^{-2}	2.5 x 10^{-4}

	Formaldehyde		Hexane		Hydrochloric Acid		Lead Compounds		Manganese		Mercury		Naphthalene		Nickel		PAHs		Selenium		Toluene		Xylenes	
Source[1]	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Chemical Sciences	0.34	6.8×10^{-3}	5.3×10^{-3}	1.1×10^{-4}	3.7×10^{-2}	7.3×10^{-4}	1.6×10^{-3}	3.3×10^{-5}	6.1×10^{-4}	1.2×10^{-5}	3.9×10^{-4}	7.9×10^{-6}	3.9×10^{-3}	7.8×10^{-5}	7.7×10^{-4}	1.5×10^{-5}	7.1×10^{-3}	1.4×10^{-4}	4.3×10^{-4}	8.7×10^{-6}	2.1×10^{-2}	4.2×10^{-4}	8.4×10^{-3}	1.7×10^{-4}
School of Medicine – Education	0.62	1.2×10^{-2}	9.6×10^{-3}	1.9×10^{-4}	6.7×10^{-2}	1.3×10^{-3}	3.0×10^{-3}	5.9×10^{-5}	1.1×10^{-3}	2.2×10^{-5}	7.2×10^{-4}	1.4×10^{-5}	7.0×10^{-3}	1.4×10^{-4}	1.4×10^{-3}	2.8×10^{-5}	1.3×10^{-2}	2.6×10^{-4}	7.9×10^{-4}	1.6×10^{-5}	3.8×10^{-2}	7.5×10^{-4}	1.5×10^{-2}	3.0×10^{-4}
Campus Data Center	0.10	2.0×10^{-3}	1.6×10^{-3}	3.2×10^{-5}	1.1×10^{-2}	2.2×10^{-4}	4.9×10^{-4}	9.8×10^{-6}	1.8×10^{-4}	3.7×10^{-6}	1.2×10^{-4}	2.4×10^{-6}	1.2×10^{-3}	2.3×10^{-5}	2.3×10^{-4}	4.6×10^{-6}	2.1×10^{-3}	4.3×10^{-5}	1.3×10^{-4}	2.6×10^{-6}	6.2×10^{-3}	1.2×10^{-4}	2.5×10^{-3}	5.0×10^{-5}
Boyce Hall	4.7×10^{-2}	9.3×10^{-4}	7.2×10^{-4}	1.4×10^{-5}	5.0×10^{-3}	1.0×10^{-4}	2.2×10^{-4}	4.5×10^{-6}	8.4×10^{-5}	1.7×10^{-6}	5.4×10^{-5}	1.1×10^{-6}	5.3×10^{-4}	1.1×10^{-5}	1.1×10^{-4}	2.1×10^{-6}	9.8×10^{-4}	2.0×10^{-5}	5.9×10^{-5}	1.2×10^{-6}	2.8×10^{-3}	5.7×10^{-5}	1.1×10^{-3}	2.3×10^{-5}
Biological Sciences	0.31	6.1×10^{-3}	4.8×10^{-3}	9.5×10^{-5}	3.3×10^{-2}	6.6×10^{-4}	1.5×10^{-3}	2.9×10^{-5}	5.5×10^{-4}	1.1×10^{-5}	3.6×10^{-4}	7.1×10^{-6}	3.5×10^{-3}	7.0×10^{-5}	6.9×10^{-4}	1.4×10^{-5}	6.4×10^{-3}	1.3×10^{-4}	3.9×10^{-4}	7.8×10^{-6}	1.9×10^{-2}	3.7×10^{-4}	7.5×10^{-3}	1.5×10^{-4}
Rivera Library	0.55	1.8×10^{-2}	8.5×10^{-3}	2.8×10^{-4}	5.9×10^{-2}	2.0×10^{-3}	2.6×10^{-3}	8.8×10^{-5}	9.8×10^{-4}	3.3×10^{-5}	6.3×10^{-4}	2.1×10^{-5}	6.2×10^{-3}	2.1×10^{-4}	1.2×10^{-3}	4.1×10^{-5}	1.1×10^{-2}	3.8×10^{-4}	7.0×10^{-4}	2.3×10^{-5}	3.3×10^{-2}	1.1×10^{-3}	1.3×10^{-2}	4.5×10^{-4}
Genomics East	0.12	2.4×10^{-3}	1.9×10^{-3}	3.8×10^{-5}	1.3×10^{-2}	2.6×10^{-4}	5.8×10^{-4}	1.2×10^{-5}	2.2×10^{-4}	4.3×10^{-6}	1.4×10^{-4}	2.8×10^{-6}	1.4×10^{-3}	2.8×10^{-5}	2.7×10^{-4}	5.5×10^{-6}	2.5×10^{-3}	5.1×10^{-5}	1.5×10^{-4}	3.1×10^{-6}	7.4×10^{-3}	1.5×10^{-4}	3.0×10^{-3}	5.9×10^{-5}
School of Medicine – Research	0.21	4.3×10^{-3}	3.3×10^{-3}	6.7×10^{-5}	2.3×10^{-2}	4.6×10^{-4}	1.0×10^{-3}	2.1×10^{-5}	3.8×10^{-4}	7.7×10^{-6}	2.5×10^{-4}	4.9×10^{-6}	2.4×10^{-3}	4.9×10^{-5}	4.8×10^{-4}	9.6×10^{-6}	4.5×10^{-3}	9.0×10^{-5}	2.7×10^{-4}	5.4×10^{-6}	1.3×10^{-2}	2.6×10^{-4}	5.2×10^{-3}	1.0×10^{-4}
Psychology	7.4×10^{-2}	1.5×10^{-3}	1.2×10^{-3}	2.3×10^{-5}	8.0×10^{-3}	1.6×10^{-4}	3.6×10^{-4}	7.1×10^{-6}	1.3×10^{-4}	2.7×10^{-6}	8.6×10^{-5}	1.7×10^{-6}	8.4×10^{-4}	1.7×10^{-5}	1.7×10^{-4}	3.3×10^{-6}	1.5×10^{-3}	3.1×10^{-5}	9.4×10^{-5}	1.9×10^{-6}	4.5×10^{-3}	9.0×10^{-5}	1.8×10^{-3}	3.6×10^{-5}
Hinderaker Hall	0.95	1.9×10^{-2}	1.5×10^{-2}	3.0×10^{-4}	0.10	2.1×10^{-3}	4.6×10^{-3}	9.1×10^{-5}	1.7×10^{-3}	3.4×10^{-5}	1.1×10^{-3}	2.2×10^{-5}	1.1×10^{-2}	2.2×10^{-4}	2.1×10^{-3}	4.3×10^{-5}	2.0×10^{-2}	4.0×10^{-4}	1.2×10^{-3}	2.4×10^{-5}	5.8×10^{-2}	1.2×10^{-3}	2.3×10^{-2}	4.7×10^{-4}
Telecommunications	0.21	4.1×10^{-3}	3.2×10^{-3}	6.4×10^{-5}	2.2×10^{-2}	4.4×10^{-4}	9.9×10^{-4}	2.0×10^{-5}	3.7×10^{-4}	7.4×10^{-6}	2.4×10^{-4}	4.8×10^{-6}	2.3×10^{-3}	4.7×10^{-5}	4.6×10^{-4}	9.3×10^{-6}	4.3×10^{-3}	8.6×10^{-5}	2.6×10^{-4}	5.2×10^{-6}	1.3×10^{-2}	2.5×10^{-4}	5.0×10^{-3}	1.0×10^{-4}
Police Station	0.17	8.6×10^{-3}	2.7×10^{-3}	1.3×10^{-4}	1.9×10^{-2}	9.3×10^{-4}	8.3×10^{-4}	4.1×10^{-5}	3.1×10^{-4}	1.5×10^{-5}	2.0×10^{-4}	1.0×10^{-5}	2.0×10^{-3}	9.8×10^{-5}	3.9×10^{-4}	1.9×10^{-5}	3.6×10^{-3}	1.8×10^{-4}	2.2×10^{-4}	1.1×10^{-5}	1.1×10^{-2}	5.3×10^{-4}	4.2×10^{-3}	2.1×10^{-4}
Materials Science & Engineering	0.87	1.7×10^{-2}	1.4×10^{-2}	2.7×10^{-4}	9.4×10^{-2}	1.9×10^{-3}	4.2×10^{-3}	8.4×10^{-5}	1.6×10^{-3}	3.1×10^{-5}	1.0×10^{-3}	2.0×10^{-5}	1.0×10^{-2}	2.0×10^{-4}	2.0×10^{-3}	3.9×10^{-5}	1.8×10^{-2}	3.7×10^{-4}	1.1×10^{-3}	2.2×10^{-5}	5.3×10^{-2}	1.1×10^{-3}	2.1×10^{-2}	4.3×10^{-4}
Bourns Hall	2.95	5.9×10^{-2}	4.6×10^{-2}	9.2×10^{-4}	0.32	6.4×10^{-3}	1.4×10^{-2}	2.8×10^{-4}	5.3×10^{-3}	1.1×10^{-4}	3.4×10^{-3}	6.8×10^{-5}	3.4×10^{-2}	6.7×10^{-4}	6.7×10^{-3}	1.3×10^{-4}	6.2×10^{-2}	1.2×10^{-3}	3.8×10^{-3}	7.5×10^{-5}	0.18	3.6×10^{-3}	7.3×10^{-2}	1.5×10^{-3}
Science Library W.	0.10	3.5×10^{-3}	1.6×10^{-3}	5.4×10^{-5}	1.1×10^{-2}	3.7×10^{-4}	5.0×10^{-4}	1.7×10^{-5}	1.9×10^{-4}	6.2×10^{-6}	1.2×10^{-4}	4.0×10^{-6}	1.2×10^{-3}	3.9×10^{-5}	2.3×10^{-4}	7.8×10^{-6}	2.2×10^{-3}	7.2×10^{-5}	1.3×10^{-4}	4.4×10^{-6}	6.3×10^{-3}	2.1×10^{-4}	2.5×10^{-3}	8.5×10^{-5}
Geology North	1.60	3.2×10^{-2}	2.5×10^{-2}	5.0×10^{-4}	0.17	3.5×10^{-3}	7.7×10^{-3}	1.5×10^{-4}	2.9×10^{-3}	5.8×10^{-5}	1.9×10^{-3}	3.7×10^{-5}	1.8×10^{-2}	3.7×10^{-4}	3.6×10^{-3}	7.2×10^{-5}	3.4×10^{-2}	6.7×10^{-4}	2.0×10^{-3}	4.1×10^{-5}	9.8×10^{-2}	2.0×10^{-3}	3.9×10^{-2}	7.9×10^{-4}
Pierce Hall	2.28	7.6×10^{-2}	3.5×10^{-2}	1.2×10^{-3}	0.25	8.2×10^{-3}	1.1×10^{-2}	3.7×10^{-4}	4.1×10^{-3}	1.4×10^{-4}	2.6×10^{-3}	8.8×10^{-5}	2.6×10^{-2}	8.7×10^{-4}	5.1×10^{-3}	1.7×10^{-4}	4.8×10^{-2}	1.6×10^{-3}	2.9×10^{-3}	9.7×10^{-5}	0.14	4.6×10^{-3}	5.6×10^{-2}	1.9×10^{-3}
Physical Plant Storehouse	0.63	1.3×10^{-2}	9.9×10^{-3}	2.0×10^{-4}	6.8×10^{-2}	1.4×10^{-3}	3.1×10^{-3}	6.1×10^{-5}	1.1×10^{-3}	2.3×10^{-5}	7.4×10^{-4}	1.5×10^{-5}	7.2×10^{-3}	1.4×10^{-4}	1.4×10^{-3}	2.9×10^{-5}	1.3×10^{-2}	2.7×10^{-4}	8.1×10^{-4}	1.6×10^{-5}	3.9×10^{-2}	7.8×10^{-4}	1.6×10^{-2}	3.1×10^{-4}
Physical Plant Butler West	1.14	3.8×10^{-2}	1.8×10^{-2}	5.9×10^{-4}	0.12	4.1×10^{-3}	5.5×10^{-3}	1.8×10^{-4}	2.0×10^{-3}	6.8×10^{-5}	1.3×10^{-3}	4.4×10^{-5}	1.3×10^{-2}	4.3×10^{-4}	2.6×10^{-3}	8.6×10^{-5}	2.4×10^{-2}	8.0×10^{-4}	1.5×10^{-3}	4.8×10^{-5}	7.0×10^{-2}	2.3×10^{-3}	2.8×10^{-2}	9.3×10^{-4}
Fine Arts	0.14	2.8×10^{-3}	2.2×10^{-3}	4.3×10^{-5}	1.5×10^{-2}	3.0×10^{-4}	6.6×10^{-4}	1.3×10^{-5}	2.5×10^{-4}	5.0×10^{-6}	1.6×10^{-4}	3.2×10^{-6}	1.6×10^{-3}	3.2×10^{-5}	3.1×10^{-4}	6.2×10^{-6}	2.9×10^{-3}	5.8×10^{-5}	1.8×10^{-4}	3.5×10^{-6}	8.4×10^{-3}	1.7×10^{-4}	3.4×10^{-3}	6.8×10^{-5}
New Humanities and Social Sciences Bldg.	3.1×10^{-2}	1.0×10^{-3}	4.8×10^{-4}	1.6×10^{-5}	3.3×10^{-3}	1.1×10^{-4}	1.5×10^{-4}	4.9×10^{-6}	5.5×10^{-5}	1.8×10^{-6}	3.5×10^{-5}	1.2×10^{-6}	3.5×10^{-4}	1.2×10^{-5}	6.9×10^{-5}	2.3×10^{-6}	6.4×10^{-4}	2.1×10^{-5}	3.9×10^{-5}	1.3×10^{-6}	1.9×10^{-3}	6.2×10^{-5}	7.5×10^{-4}	2.5×10^{-5}
Env. H&S South	1.5×10^{-2}	7.5×10^{-4}	2.3×10^{-4}	1.2×10^{-5}	1.6×10^{-3}	8.1×10^{-5}	7.2×10^{-5}	3.6×10^{-6}	2.7×10^{-5}	1.3×10^{-6}	1.7×10^{-5}	8.7×10^{-7}	1.7×10^{-4}	8.5×10^{-6}	3.4×10^{-5}	1.7×10^{-6}	3.1×10^{-4}	1.6×10^{-5}	1.9×10^{-5}	9.5×10^{-7}	9.1×10^{-4}	4.6×10^{-5}	3.7×10^{-4}	1.8×10^{-5}
I&Q	0.27	9.0×10^{-3}	4.2×10^{-3}	1.4×10^{-4}	2.9×10^{-2}	9.7×10^{-4}	1.3×10^{-3}	4.3×10^{-5}	4.8×10^{-4}	1.6×10^{-5}	3.1×10^{-4}	1.0×10^{-5}	3.1×10^{-3}	1.0×10^{-4}	6.1×10^{-4}	2.0×10^{-5}	5.6×10^{-3}	1.9×10^{-4}	3.4×10^{-4}	1.1×10^{-5}	1.6×10^{-2}	5.5×10^{-4}	6.6×10^{-3}	2.2×10^{-4}
Vivarium	2.0×10^{-2}	6.7×10^{-4}	3.1×10^{-4}	1.0×10^{-5}	2.2×10^{-3}	7.2×10^{-5}	9.7×10^{-5}	3.2×10^{-6}	3.6×10^{-5}	1.2×10^{-6}	2.3×10^{-5}	7.8×10^{-7}	2.3×10^{-4}	7.6×10^{-6}	4.5×10^{-5}	1.5×10^{-6}	4.2×10^{-4}	1.4×10^{-5}	2.6×10^{-5}	8.5×10^{-7}	1.2×10^{-3}	4.1×10^{-5}	4.9×10^{-4}	1.6×10^{-5}
Entomology	0.13	4.5×10^{-3}	2.1×10^{-3}	7.0×10^{-5}	1.4×10^{-2}	4.8×10^{-4}	6.4×10^{-4}	2.1×10^{-5}	2.4×10^{-4}	8.0×10^{-6}	1.6×10^{-4}	5.2×10^{-6}	1.5×10^{-3}	5.1×10^{-5}	3.0×10^{-4}	1.0×10^{-5}	2.8×10^{-3}	9.4×10^{-5}	1.7×10^{-4}	5.7×10^{-6}	8.2×10^{-3}	2.7×10^{-4}	3.3×10^{-3}	1.1×10^{-4}
Steam Plant	0.14	4.5×10^{-3}	2.1×10^{-3}	7.0×10^{-5}	1.5×10^{-2}	4.9×10^{-4}	6.5×10^{-4}	2.2×10^{-5}	2.4×10^{-4}	8.1×10^{-6}	1.6×10^{-4}	5.2×10^{-6}	1.5×10^{-3}	5.1×10^{-5}	3.1×10^{-4}	1.0×10^{-5}	2.8×10^{-3}	9.5×10^{-5}	1.7×10^{-4}	5.7×10^{-6}	8.3×10^{-3}	2.8×10^{-4}	3.3×10^{-3}	1.1×10^{-4}
UCR Extension W.	4.4×10^{-2}	8.9×10^{-4}	6.9×10^{-4}	1.4×10^{-5}	4.8×10^{-3}	9.6×10^{-5}	2.1×10^{-4}	4.3×10^{-6}	8.0×10^{-5}	1.6×10^{-6}	5.1×10^{-5}	1.0×10^{-6}	5.1×10^{-4}	1.0×10^{-5}	1.0×10^{-4}	2.0×10^{-6}	9.3×10^{-4}	1.9×10^{-5}	5.6×10^{-5}	1.1×10^{-6}	2.7×10^{-3}	5.4×10^{-5}	1.1×10^{-3}	2.2×10^{-5}
Physics	1.81	6.0×10^{-2}	2.8×10^{-2}	9.4×10^{-4}	0.20	6.5×10^{-3}	8.7×10^{-3}	2.9×10^{-4}	3.3×10^{-3}	1.1×10^{-4}	2.1×10^{-3}	7.0×10^{-5}	2.1×10^{-2}	6.9×10^{-4}	4.1×10^{-3}	1.4×10^{-4}	3.8×10^{-2}	1.3×10^{-3}	2.3×10^{-3}	7.7×10^{-5}	0.11	3.7×10^{-3}	4.5×10^{-2}	1.5×10^{-3}
Glen Mor 1	1.93	3.9×10^{-2}	3.0×10^{-2}	6.0×10^{-4}	0.21	4.2×10^{-3}	9.3×10^{-3}	1.9×10^{-4}	3.5×10^{-3}	6.9×10^{-5}	2.2×10^{-3}	4.5×10^{-5}	2.2×10^{-2}	4.4×10^{-4}	4.4×10^{-3}	8.7×10^{-5}	4.0×10^{-2}	8.1×10^{-4}	2.5×10^{-3}	4.9×10^{-5}	0.12	2.4×10^{-3}	4.7×10^{-2}	9.5×10^{-4}
Glen Mor 2	6.2×10^{-2}	1.2×10^{-3}	9.7×10^{-4}	1.9×10^{-5}	6.7×10^{-3}	1.3×10^{-4}	3.0×10^{-4}	6.0×10^{-6}	1.1×10^{-4}	2.2×10^{-6}	7.2×10^{-5}	1.4×10^{-6}	7.1×10^{-4}	1.4×10^{-5}	1.4×10^{-4}	2.8×10^{-6}	1.3×10^{-3}	2.6×10^{-5}	7.9×10^{-5}	1.6×10^{-6}	3.8×10^{-3}	7.6×10^{-5}	1.5×10^{-3}	3.0×10^{-5}
Env. H&S	1.54	3.1×10^{-2}	2.4×10^{-2}	4.8×10^{-4}	0.17	3.3×10^{-3}	7.4×10^{-3}	1.5×10^{-4}	2.8×10^{-3}	5.5×10^{-5}	1.8×10^{-3}	3.6×10^{-5}	1.8×10^{-2}	3.5×10^{-4}	3.5×10^{-3}	7.0×10^{-5}	3.2×10^{-2}	6.5×10^{-4}	2.0×10^{-3}	3.9×10^{-5}	9.4×10^{-2}	1.9×10^{-3}	3.8×10^{-2}	7.6×10^{-4}
MRB 1	1.99	4.0×10^{-2}	3.1×10^{-2}	6.2×10^{-4}	0.21	4.3×10^{-3}	9.6×10^{-3}	1.9×10^{-4}	3.6×10^{-3}	7.1×10^{-5}	2.3×10^{-3}	4.6×10^{-5}	2.3×10^{-2}	4.5×10^{-4}	4.5×10^{-3}	9.0×10^{-5}	4.2×10^{-2}	8.3×10^{-4}	2.5×10^{-3}	5.1×10^{-5}	0.12	2.4×10^{-3}	4.9×10^{-2}	9.8×10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); MGal = thousand gallons; Diesel PM = Diesel exhaust particulate matter; PAHs = polycyclic aromatic hydrocarbons

[1] Four diesel generators were determined to be mobile generators stored at the Physical Plant, used on an as-needed basis. Emissions from such sources would be considered negligible and unpredictable. As such, these generators are not included in the health risk modeling.

Fuel use and annual emissions obtained from the 2019 Annual Emissions Report. Hourly emissions are based on reported/permitted testing hours for each source (20-50 hours per year).

Table B-4 Emissions from Natural Gas Emergency Generator – Baseline Scenario

	Emissions[1]	
Pollutant	**Annual (pounds/year)**	**Hourly (pounds/hour)**
1,1,2,2-Tetrachloroethane	1.9×10^{-4}	3.7×10^{-6}
1,1,2-Trichloroethane (Vinyl trichloride)	1.5×10^{-4}	2.9×10^{-6}
1,2,4-Trimethylbenzene	6.6×10^{-5}	1.3×10^{-6}
1,2-Dichloropropane (Propylene dichloride)	1.2×10^{-4}	2.5×10^{-6}
1,3-Dichloropropene	1.2×10^{-4}	2.4×10^{-6}
2-Methyl naphthalene	1.5×10^{-4}	3.1×10^{-6}
Acenaphthene	5.8×10^{-6}	1.2×10^{-7}
Acenaphthylene	2.6×10^{-5}	5.1×10^{-7}
Acetaldehyde	3.9×10^{-2}	7.7×10^{-4}
Acrolein	2.4×10^{-2}	4.8×10^{-4}
Ammonia	8.2×10^{-2}	1.6×10^{-3}
Benzene	2.0×10^{-3}	4.1×10^{-5}
Benzo[b]fluoranthene [PAH, POM]	7.6×10^{-7}	1.5×10^{-8}
Benzo[e]pyrene [PAH, POM]	1.9×10^{-6}	3.8×10^{-8}
Benzo[g,h,i]perylene [PAH, POM]	1.9×10^{-6}	3.8×10^{-8}
1,3-Butadiene	1.2×10^{-3}	2.5×10^{-5}
Carbon tetrachloride	1.7×10^{-4}	3.4×10^{-6}
Chloroform	1.3×10^{-4}	2.6×10^{-6}
Chrysene	3.2×10^{-6}	6.4×10^{-8}
Ethylbenzene	1.8×10^{-4}	3.7×10^{-6}
Ethylene dibromide (1,2-Dibromoethane)	2.0×10^{-4}	4.1×10^{-6}
Ethylene dichloride (1,2-Dichloroethane)	1.1×10^{-4}	2.2×10^{-6}
Fluoranthene	5.1×10^{-6}	1.0×10^{-7}
Fluorene	2.6×10^{-5}	5.2×10^{-7}
Formaldehyde	0.24	4.9×10^{-3}
Hexane	5.1×10^{-3}	1.0×10^{-4}
Methanol	1.2×10^{-2}	2.3×10^{-4}
Methylene chloride (Dichloromethane)	9.3×10^{-5}	1.9×10^{-6}
Naphthalene	3.4×10^{-4}	6.9×10^{-6}
Phenanthrene	4.8×10^{-5}	9.6×10^{-7}
Pyrene	6.3×10^{-6}	1.3×10^{-7}
Styrene	1.1×10^{-4}	2.2×10^{-6}
Toluene	1.9×10^{-3}	3.8×10^{-5}
Vinyl chloride	6.9×10^{-5}	1.4×10^{-6}
Xylenes	8.5×10^{-4}	1.7×10^{-5}

[1] Annual emissions based on values reported in the 2019 Annual Emissions Report. Hourly emissions based on 50 hours of testing per year. Natural gas generator is located at the Humanities 400/University Theatre building.

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Table B-5 Diesel Emergency Generator Emissions – Future Scenario

Source	Fuel Use (MGal/ year)[1]	Acetaldehyde		Acrolein		Ammonia		Arsenic Compounds		Benzene		1,3-Butadiene		Cadmium		Chromium (VI)		Copper		Diesel PM		Ethylbenzene	
		A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H
Pierce Hall (Replacement)[2]	0.33	0.26	5.2 x 10^{-3}	1.1 x 10^{-2}	2.2 x 10^{-4}	0.96	1.9 x 10^{-2}	5.3 x 10^{-4}	1.1 x 10^{-5}	6.2 x 10^{-2}	1.2 x 10^{-3}	7.2 x 10^{-2}	1.4 x 10^{-3}	5.0 x 10^{-4}	9.9 x 10^{-6}	3.3 x 10^{-5}	6.6 x 10^{-7}	1.4 x 10^{-3}	2.7 x 10^{-5}	11.1	2.2 x 10-1	3.6 x 10^{-3}	7.2 x 10^{-5}
Police Station[3]	0.26	0.20	4.1 x 10^{-3}	8.8 x 10^{-3}	1.8 x 10^{-4}	0.75	1.5 x 10^{-2}	4.2 x 10^{-4}	8.3 x 10^{-6}	4.8 x 10^{-2}	9.7 x 10^{-4}	5.7 x 10^{-2}	1.1 x 10^{-3}	3.9 x 10^{-4}	7.8 x 10^{-6}	2.6 x 10^{-5}	5.2 x 10^{-7}	1.1 x 10^{-3}	2.1 x 10^{-5}	8.71	1.7 x 10-1	2.8 x 10^{-3}	5.7 x 10^{-5}
Plant Growth Environment Facility[4]	0.29	0.22	4.5 x 10^{-3}	9.7 x 10^{-3}	1.9 x 10^{-4}	0.83	1.7 x 10^{-2}	4.6 x 10^{-4}	9.2 x 10^{-6}	5.3 x 10^{-2}	1.1 x 10^{-3}	6.2 x 10^{-2}	1.2 x 10^{-3}	4.3 x 10^{-4}	8.6 x 10^{-6}	2.9 x 10^{-5}	5.7 x 10^{-7}	1.2 x 10^{-3}	2.4 x 10^{-5}	9.60	1.9 x 10-1	3.1 x 10^{-3}	6.3 x 10^{-5}
Dundee-Glasgow (Future Generator 37)[5]	0.29	0.22	4.5 x 10^{-3}	9.7 x 10^{-3}	1.9 x 10^{-4}	0.83	1.7 x 10^{-2}	4.6 x 10^{-4}	9.2 x 10^{-6}	5.3 x 10^{-2}	1.1 x 10^{-3}	6.2 x 10^{-2}	1.2 x 10^{-3}	4.3 x 10^{-4}	8.6 x 10^{-6}	2.9 x 10^{-5}	5.7 x 10^{-7}	1.2 x 10^{-3}	2.4 x 10^{-5}	9.60	1.9 x 10-1	3.1 x 10^{-3}	6.3 x 10^{-5}
Future Generators 1-36[6]	0.30	0.23	4.7 x 10^{-3}	1.0 x 10^{-2}	2.0 x 10^{-4}	0.87	1.7 x 10^{-2}	4.8 x 10^{-4}	9.6 x 10^{-6}	5.6 x 10^{-2}	1.1 x 10^{-3}	6.5 x 10^{-2}	1.3 x 10^{-3}	4.5 x 10^{-4}	9.0 x 10^{-6}	3.0 x 10^{-5}	6.0 x 10^{-7}	1.2 x 10^{-3}	2.5 x 10^{-5}	10.0	2.0 x 10-1	3.3 x 10^{-3}	6.5 x 10^{-5}

Source	Formaldehyde		Hexane		Hydrochloric Acid		Lead Compounds		Manganese		Mercury		Naphthalene		Nickel		PAHs		Selenium		Toluene		Xylenes	
	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H
Pierce Hall (Replacement)[2]	0.57	1.1 x 10^{-2}	8.9 x 10^{-3}	1.8 x 10^{-4}	6.2 x 10^{-2}	1.2 x 10^{-3}	2.7 x 10^{-3}	5.5 x 10^{-5}	1.0 x 10^{-3}	2.1 x 10^{-5}	6.6 x 10^{-4}	1.3 x 10^{-5}	6.5 x 10^{-3}	1.3 x 10^{-4}	1.3 x 10^{-3}	2.6 x 10^{-5}	1.2 x 10^{-2}	2.4 x 10^{-4}	7.3 x 10^{-4}	1.5 x 10^{-5}	3.5 x 10^{-2}	7.0 x 10^{-4}	1.4 x 10^{-2}	2.8 x 10^{-4}
Police Station[3]	0.45	9.0 x 10^{-3}	7.0 x 10^{-3}	1.4 x 10^{-4}	4.8 x 10^{-2}	9.7 x 10^{-4}	2.2 x 10^{-3}	4.3 x 10^{-5}	8.1 x 10^{-4}	1.6 x 10^{-5}	5.2 x 10^{-4}	1.0 x 10^{-5}	5.1 x 10^{-3}	1.0 x 10^{-4}	1.0 x 10^{-3}	2.0 x 10^{-5}	9.4 x 10^{-3}	1.9 x 10^{-4}	5.7 x 10^{-4}	1.1 x 10^{-5}	2.7 x 10^{-2}	5.5 x 10^{-4}	1.1 x 10^{-2}	2.2 x 10^{-4}
Plant Growth Environment Facility[4]	0.49	9.9 x 10^{-3}	7.7 x 10^{-3}	1.5 x 10^{-4}	5.3 x 10^{-2}	1.1 x 10^{-3}	2.4 x 10^{-3}	4.8 x 10^{-5}	8.9 x 10^{-4}	1.8 x 10^{-5}	5.7 x 10^{-4}	1.1 x 10^{-5}	5.6 x 10^{-3}	1.1 x 10^{-4}	1.1 x 10^{-3}	2.2 x 10^{-5}	1.0 x 10^{-2}	2.1 x 10^{-4}	6.3 x 10^{-4}	1.3 x 10^{-5}	3.0 x 10^{-2}	6.0 x 10^{-4}	1.2 x 10^{-2}	2.4 x 10^{-4}
Dundee-Glasgow (Future Generator 37)[5]	0.49	9.9 x 10^{-3}	7.7 x 10^{-3}	1.5 x 10^{-4}	5.3 x 10^{-2}	1.1 x 10^{-3}	2.4 x 10^{-3}	4.8 x 10^{-5}	8.9 x 10^{-4}	1.8 x 10^{-5}	5.7 x 10^{-4}	1.1 x 10^{-5}	5.6 x 10^{-3}	1.1 x 10^{-4}	1.1 x 10^{-3}	2.2 x 10^{-5}	1.0 x 10^{-2}	2.1 x 10^{-4}	6.3 x 10^{-4}	1.3 x 10^{-5}	3.0 x 10^{-2}	6.0 x 10^{-4}	1.2 x 10^{-2}	2.4 x 10^{-4}
Future Generators 1-36[6]	0.52	1.0 x 10^{-2}	8.0 x 10^{-3}	1.6 x 10^{-4}	5.6 x 10^{-2}	1.1 x 10^{-3}	2.5 x 10^{-3}	5.0 x 10^{-5}	9.3 x 10^{-4}	1.9 x 10^{-5}	6.0 x 10^{-4}	1.2 x 10^{-5}	5.9 x 10^{-3}	1.2 x 10^{-4}	1.2 x 10^{-3}	2.3 x 10^{-5}	1.1 x 10^{-2}	2.2 x 10^{-4}	6.6 x 10^{-4}	1.3 x 10^{-5}	3.2 x 10^{-2}	6.3 x 10^{-4}	1.3 x 10^{-2}	2.5 x 10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); MGal = thousand gallons; Diesel PM = Diesel exhaust particulate matter; PAHs = polycyclic aromatic hydrocarbons

[1] Annual fuel consumption is not known for future generators and is estimated based on a linear regression model predicting annual fuel consumption (in MGal) as a function of capacity (in bhp) (Fuel consumption [in MGal] = 0.0001 x Capacity [in bhp] + 0.2404).

[2] 903 bhp generator, permitted August 23, 2019, replacing existing 190 bhp generator at Pierce Hall.

[3] 197 bhp generator, permitted December 7, 2019.

[4] 463 bhp generator, permitted December 31, 2019.

[5] 463 bhp generator with diesel particulate filter, permitted February 19, 2020.

[6] Assumes 587 bhp diesel generator, based on median generator capacity of existing generators on campus.

Table B-6 Boiler/Water Heater Emissions – Baseline and Future Scenario

	Steam Plant 1		Steam Plant 2		Steam Plant 3		Steam Plant 4		Lothian Basement 1		Lothian Basement 2		Aberdeen-Inverness 1		Aberdeen-Inverness 2		Pentland Hills Bldg F		Pentland Hills Bldg B		Pentland Hills Bldg I		Pentland Hills Bldg M	
Pollutant	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Acetaldehyde	0.18	2.0×10^{-5}	0.17	2.0×10^{-5}	0.15	1.7×10^{-5}	0.57	6.5×10^{-5}	0.05	5.6×10^{-6}	8.2×10^{-4}	9.3×10^{-8}	0.03	3.9×10^{-6}	0.03	3.9×10^{-6}	0.01	1.1×10^{-6}	0.01	1.1×10^{-6}	4.5×10^{-3}	5.1×10^{-7}	4.5×10^{-3}	5.1×10^{-7}
Acrolein	0.15	1.8×10^{-5}	0.15	1.7×10^{-5}	0.13	1.5×10^{-5}	0.49	5.7×10^{-5}	0.03	3.5×10^{-6}	5.1×10^{-4}	5.9×10^{-8}	0.02	2.4×10^{-6}	0.02	2.4×10^{-6}	0.01	6.7×10^{-7}	0.01	6.7×10^{-7}	2.8×10^{-3}	3.2×10^{-7}	2.8×10^{-3}	3.2×10^{-7}
Ammonia	1,028.52	0.12	1,013.4	0.12	849.78	0.10	3,299.94	0.38	206.46	0.02	3.42	3.9×10^{-4}	142.2	0.02	142.2	0.02	38.88	4.4×10^{-3}	38.88	4.4×10^{-3}	18.63	2.1×10^{-3}	18.63	2.1×10^{-3}
Benzene	0.33	3.8×10^{-5}	0.33	3.7×10^{-5}	0.27	3.1×10^{-5}	1.06	1.2×10^{-4}	0.09	1.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	0.06	7.2×10^{-6}	0.06	7.2×10^{-6}	0.02	2.0×10^{-6}	0.02	2.0×10^{-6}	0.01	9.5×10^{-7}	0.01	9.5×10^{-7}
Ethyl benzene	0.39	4.5×10^{-5}	0.39	4.4×10^{-5}	0.33	3.7×10^{-5}	1.26	1.4×10^{-4}	0.11	1.2×10^{-5}	1.8×10^{-3}	2.1×10^{-7}	0.08	8.6×10^{-6}	0.08	8.6×10^{-6}	0.02	2.3×10^{-6}	0.02	2.3×10^{-6}	0.01	1.1×10^{-6}	0.01	1.1×10^{-6}
Formaldehyde	0.70	8.0×10^{-5}	0.69	7.9×10^{-5}	0.58	6.6×10^{-5}	2.25	2.6×10^{-4}	0.19	2.2×10^{-5}	3.2×10^{-3}	3.7×10^{-7}	0.13	1.5×10^{-5}	0.13	1.5×10^{-5}	0.04	4.2×10^{-6}	0.04	4.2×10^{-6}	0.02	2.0×10^{-6}	0.02	2.0×10^{-6}
Hexane	0.26	3.0×10^{-5}	0.26	3.0×10^{-5}	0.22	2.5×10^{-5}	0.84	9.6×10^{-5}	0.07	8.2×10^{-6}	1.2×10^{-3}	1.4×10^{-7}	0.05	5.7×10^{-6}	0.05	5.7×10^{-6}	0.01	1.6×10^{-6}	0.01	1.6×10^{-6}	0.01	7.4×10^{-7}	0.01	7.4×10^{-7}
Naphthalene [PAH, POM]	0.02	2.0×10^{-6}	0.02	1.9×10^{-6}	0.01	1.6×10^{-6}	0.05	6.3×10^{-6}	3.4×10^{-3}	3.9×10^{-7}	5.7×10^{-5}	6.5×10^{-9}	2.4×10^{-3}	2.7×10^{-7}	2.4×10^{-3}	2.7×10^{-7}	6.5×10^{-4}	7.4×10^{-8}	6.5×10^{-4}	7.4×10^{-8}	3.1×10^{-4}	3.5×10^{-8}	3.1×10^{-4}	3.5×10^{-8}
PAHs [PAH, POM]	0.01	6.5×10^{-7}	0.01	6.4×10^{-7}	4.7×10^{-3}	5.4×10^{-7}	0.02	2.1×10^{-6}	1.2×10^{-3}	1.3×10^{-7}	1.9×10^{-5}	2.2×10^{-9}	7.9×10^{-4}	9.0×10^{-8}	7.9×10^{-4}	9.0×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	1.0×10^{-4}	1.2×10^{-8}	1.0×10^{-4}	1.2×10^{-8}
Toluene	1.51	1.7×10^{-4}	1.49	1.7×10^{-4}	1.25	1.4×10^{-4}	4.86	5.5×10^{-4}	0.42	4.8×10^{-5}	7.0×10^{-3}	7.9×10^{-7}	0.29	3.3×10^{-5}	0.29	3.3×10^{-5}	0.08	9.0×10^{-6}	0.079	9.0×10^{-6}	0.04	4.3×10^{-6}	0.04	4.3×10^{-6}
Xylenes	1.13	1.3×10^{-4}	1.11	1.3×10^{-4}	0.93	1.1×10^{-4}	3.61	4.1×10^{-4}	0.31	3.6×10^{-5}	5.2×10^{-3}	5.9×10^{-7}	0.21	2.5×10^{-5}	0.21	2.5×10^{-5}	0.06	6.7×10^{-6}	0.06	6.7×10^{-6}	0.03	3.2×10^{-6}	0.03	3.2×10^{-6}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

Table B-7 Gasoline Dispensing Facility Emissions – Baseline Scenario

Source[1]	Benzene[2]		Ethylbenzene[3]		Naphthalene[4]	
	Annual (lbs/year)	Hourly (lbs/hour)	Annual (lbs/year)	Hourly (lbs/hour)	Annual (lbs/year)	Hourly (lbs/hour)
Physical Plant (Fleet Services)						
Loading	0.57	6.7 x 10^{5}	0.03	3.9 x 10^{6}	1.3 x 10^{4}	1.5 x 10^{8}
Breathing	0.09	1.1 x 10^{5}	0.01	6.2 x 10^{7}	2.0 x 10^{5}	2.3 x 10^{9}
Refueling	1.22	1.4 x 10^{4}	0.07	8.3 x 10^{6}	2.7 x 10^{4}	3.1 x 10^{8}
Hose Permeation	0.03	3.9 x 10^{6}	2.0 x 10^{3}	2.3 x 10^{7}	7.6 x 10^{6}	8.7 x 10^{10}
Spillage	0.92	1.0 x 10^{4}	0.66	7.5 x 10^{5}	0.09	1.0 x 10^{5}
Grounds						
Loading	0.01	6.6 x 10^{7}	0.002	4.1 x 10^{8}	1.4 x 10^{6}	1.5 x 10^{10}
Breathing	9.3 x 10^{4}	1.1 x 10^{7}	5.8 x 10^{5}	6.6 x 10^{9}	2.2 x 10^{7}	2.5 x 10^{11}
Refueling	0.01	1.4 x 10^{6}	7.7 x 10^{4}	8.8 x 10^{8}	2.9 x 10^{6}	3.3 x 10^{10}
Hose Permeation	3.5 x 10^{4}	4.0 x 10^{8}	2.2 x 10^{5}	2.5 x 10^{9}	8.1 x 10^{8}	9.1 x 10^{12}
Spillage	0.01	1.1 x 10^{6}	0.01	8.0 x 10^{7}	9.4 x 10^{4}	1.1 x 10^{7}
Agricultural Operations						
Loading	0.03	3.1 x 10^{6}	1.7 x 10^{3}	2.0 x 10^{7}	6.4 x 10^{6}	7.3 x 10^{10}
Breathing	4.4 x 10^{3}	5.0 x 10^{7}	2.8 x 10^{4}	3.1 x 10^{8}	1.0 x 10^{6}	1.2 x 10^{10}
Refueling	0.06	6.7 x 10^{6}	3.7 x 10^{3}	4.2 x 10^{7}	1.4 x 10^{5}	1.6 x 10^{9}
Hose Permeation	1.6 x 10^{3}	1.9 x 10^{7}	1.0 x 10^{4}	1.2 x 10^{8}	3.9 x 10^{7}	4.4 x 10^{11}
Spillage	0.04	5.0 x 10^{6}	0.03	3.8 x 10^{6}	4.5 x 10^{3}	5.1 x 10^{7}

lbs = pounds

[1] Emissions distributed to loading, breathing, refueling, spillage, and hose permeation sources based on normalized reactive organic gas (ROG) emissions factors contained in South Coast Air Quality Management District (SCAQMD) Risk Assessment Procedures (SCAQMD 2017).

[2] Benzene emissions based on annual emissions reported in 2019 Annual Emissions Report for each facility. Hourly emissions assume 24-hour daily operation.

[3] Ethylbenzene emissions based on ROG speciation factors provided in SCAQMD Risk Assessment Procedures and annual ROG emissions reported from each facility in 2019 AER.

[4] Naphthalene emissions based on ROG speciation factors provided in SCAQMD Risk Assessment Procedures and annual ROG emissions reported from each facility in 2019 AER.

Source: Appendix A; SCAQMD 2017.

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Table B-8 Laboratory Fume Hood Emissions – Baseline Scenario

	1,1,2,2-Tetrachloroethane		1,1,2-Trichloroethane (Vinyl trichloride)		1,4-Dioxane		2-Methyl naphthalene [PAH, POM]		4,4-Methylenedianiline [POM]		Acenaphthene [PAH, POM]		Acenaphthylene [PAH, POM]		Acrolein		Acrylonitrile		alpha-Hexachlorocyclo-hexane beta		Ammonia	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	4.0 x 10^{-2}	4.6 x 10^{-6}	2.0 x 10^{-2}	2.3 x 10^{-6}	0.91	1.0 x 10^{-4}	1.0 x 10^{-2}	1.1 x 10^{-6}	4.5 x 10^{-3}	5.2 x 10^{-7}	5.0 x 10^{-3}	5.7 x 10^{-7}	2.5 x 10^{-3}	2.9 x 10^{-7}	2.6 x 10^{-2}	2.9 x 10^{-6}	2.6 x 10^{-2}	2.9 x 10^{-6}	5.5 x 10^{-3}	6.3 x 10^{-7}	6.01	6.9 x 10^{-4}
Biological Sciences	1.4 x 10^{-2}	1.6 x 10^{-6}	6.9 x 10^{-3}	7.9 x 10^{-7}	0.31	3.6 x 10^{-5}	3.4 x 10^{-3}	3.9 x 10^{-7}	1.6 x 10^{-3}	1.8 x 10^{-7}	1.7 x 10^{-3}	2.0 x 10^{-7}	8.6 x 10^{-4}	9.8 x 10^{-8}	8.8 x 10^{-3}	1.0 x 10^{-6}	8.8 x 10^{-3}	1.0 x 10^{-6}	1.9 x 10^{-3}	2.2 x 10^{-7}	2.06	2.4 x 10^{-4}
Bourns Hall	3.9 x 10^{-2}	4.4 x 10^{-6}	1.9 x 10^{-2}	2.2 x 10^{-6}	0.88	1.0 x 10^{-4}	9.7 x 10^{-3}	1.1 x 10^{-6}	4.4 x 10^{-3}	5.0 x 10^{-7}	4.9 x 10^{-3}	5.6 x 10^{-7}	2.4 x 10^{-3}	2.8 x 10^{-7}	2.5 x 10^{-2}	2.8 x 10^{-6}	2.5 x 10^{-2}	2.8 x 10^{-6}	5.4 x 10^{-3}	6.1 x 10^{-7}	5.83	6.7 x 10^{-4}
Boyce Hall	4.7 x 10^{-2}	5.3 x 10^{-6}	2.3 x 10^{-2}	2.7 x 10^{-6}	1.06	1.2 x 10^{-4}	1.2 x 10^{-2}	1.3 x 10^{-6}	5.3 x 10^{-3}	6.0 x 10^{-7}	5.8 x 10^{-3}	6.7 x 10^{-7}	2.9 x 10^{-3}	3.3 x 10^{-7}	3.0 x 10^{-2}	3.4 x 10^{-6}	3.0 x 10^{-2}	3.4 x 10^{-6}	6.4 x 10^{-3}	7.3 x 10^{-7}	6.99	8.0 x 10^{-4}
Boyden Lab	3.0 x 10^{-3}	3.4 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	6.8 x 10^{-2}	7.7 x 10^{-6}	7.5 x 10^{-4}	8.5 x 10^{-8}	3.4 x 10^{-4}	3.8 x 10^{-8}	3.7 x 10^{-4}	4.3 x 10^{-8}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.9 x 10^{-3}	2.2 x 10^{-7}	1.9 x 10^{-3}	2.2 x 10^{-7}	4.1 x 10^{-4}	4.7 x 10^{-8}	0.45	5.1 x 10^{-5}
Chapman Hall	7.8 x 10^{-3}	8.9 x 10^{-7}	3.9 x 10^{-3}	4.4 x 10^{-7}	0.18	2.0 x 10^{-5}	1.9 x 10^{-3}	2.2 x 10^{-7}	8.8 x 10^{-4}	1.0 x 10^{-7}	9.7 x 10^{-4}	1.1 x 10^{-7}	4.9 x 10^{-4}	5.6 x 10^{-8}	5.0 x 10^{-3}	5.7 x 10^{-7}	5.0 x 10^{-3}	5.7 x 10^{-7}	1.1 x 10^{-3}	1.2 x 10^{-7}	1.17	1.3 x 10^{-4}
Chemical Sciences	9.3 x 10^{-2}	1.1 x 10^{-5}	4.7 x 10^{-2}	5.3 x 10^{-6}	2.11	2.4 x 10^{-4}	2.3 x 10^{-2}	2.7 x 10^{-6}	1.1 x 10^{-2}	1.2 x 10^{-6}	1.2 x 10^{-2}	1.3 x 10^{-6}	5.8 x 10^{-3}	6.7 x 10^{-7}	6.0 x 10^{-2}	6.8 x 10^{-6}	6.0 x 10^{-2}	6.8 x 10^{-6}	1.3 x 10^{-2}	1.5 x 10^{-6}	13.98	1.6 x 10^{-3}
Entomology	1.7 x 10^{-2}	2.0 x 10^{-6}	8.7 x 10^{-3}	9.9 x 10^{-7}	0.39	4.5 x 10^{-5}	4.3 x 10^{-3}	5.0 x 10^{-7}	2.0 x 10^{-3}	2.2 x 10^{-7}	2.2 x 10^{-3}	2.5 x 10^{-7}	1.1 x 10^{-3}	1.2 x 10^{-7}	1.1 x 10^{-2}	1.3 x 10^{-6}	1.1 x 10^{-2}	1.3 x 10^{-6}	2.4 x 10^{-3}	2.7 x 10^{-7}	2.60	3.0 x 10^{-4}
Fawcett Lab	7.8 x 10^{-3}	8.9 x 10^{-7}	3.9 x 10^{-3}	4.4 x 10^{-7}	0.18	2.0 x 10^{-5}	1.9 x 10^{-3}	2.2 x 10^{-7}	8.8 x 10^{-4}	1.0 x 10^{-7}	9.7 x 10^{-4}	1.1 x 10^{-7}	4.9 x 10^{-4}	5.6 x 10^{-8}	5.0 x 10^{-3}	5.7 x 10^{-7}	5.0 x 10^{-3}	5.7 x 10^{-7}	1.1 x 10^{-3}	1.2 x 10^{-7}	1.17	1.3 x 10^{-4}
Genomics	1.9 x 10^{-2}	2.1 x 10^{-6}	9.3 x 10^{-3}	1.1 x 10^{-6}	0.42	4.8 x 10^{-5}	4.6 x 10^{-3}	5.3 x 10^{-7}	2.1 x 10^{-3}	2.4 x 10^{-7}	2.3 x 10^{-3}	2.7 x 10^{-7}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.2 x 10^{-2}	1.4 x 10^{-6}	1.2 x 10^{-2}	1.4 x 10^{-6}	2.6 x 10^{-3}	2.9 x 10^{-7}	2.78	3.2 x 10^{-4}
Geology	4.4 x 10^{-2}	5.1 x 10^{-6}	2.2 x 10^{-2}	2.5 x 10^{-6}	1.00	1.1 x 10^{-4}	1.1 x 10^{-2}	1.3 x 10^{-6}	5.0 x 10^{-3}	5.7 x 10^{-7}	5.5 x 10^{-3}	6.3 x 10^{-7}	2.8 x 10^{-3}	3.2 x 10^{-7}	2.8 x 10^{-2}	3.2 x 10^{-6}	2.8 x 10^{-2}	3.2 x 10^{-6}	6.1 x 10^{-3}	7.0 x 10^{-7}	6.63	7.6 x 10^{-4}
Greenhouse 1	1.2 x 10^{-3}	1.4 x 10^{-7}	6.0 x 10^{-4}	6.8 x 10^{-8}	2.7 x 10^{-2}	3.1 x 10^{-6}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.3 x 10^{-4}	1.5 x 10^{-8}	1.5 x 10^{-4}	1.7 x 10^{-8}	7.5 x 10^{-5}	8.5 x 10^{-9}	7.7 x 10^{-4}	8.8 x 10^{-8}	7.6 x 10^{-4}	8.7 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	0.18	2.0 x 10^{-5}
Greenhouse 2	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Greenhouse 3	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Greenhouse 6	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Greenhouse 7	1.8 x 10^{-3}	2.1 x 10^{-7}	9.0 x 10^{-4}	1.0 x 10^{-7}	4.1 x 10^{-2}	4.6 x 10^{-6}	4.5 x 10^{-4}	5.1 x 10^{-8}	2.0 x 10^{-4}	2.3 x 10^{-8}	2.2 x 10^{-4}	2.6 x 10^{-8}	1.1 x 10^{-4}	1.3 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	2.5 x 10^{-4}	2.8 x 10^{-8}	0.27	3.1 x 10^{-5}
Greenhouse 9	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Greenhouse 10	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Greenhouse 12	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Greenhouse 13	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Greenhouse 20	6.0 x 10^{-4}	6.8 x 10^{-8}	3.0 x 10^{-4}	3.4 x 10^{-8}	1.4 x 10^{-2}	1.5 x 10^{-6}	1.5 x 10^{-4}	1.7 x 10^{-8}	6.7 x 10^{-5}	7.7 x 10^{-9}	7.5 x 10^{-5}	8.5 x 10^{-9}	3.7 x 10^{-5}	4.3 x 10^{-9}	3.8 x 10^{-4}	4.4 x 10^{-8}	3.8 x 10^{-4}	4.4 x 10^{-8}	8.2 x 10^{-5}	9.4 x 10^{-9}	9.0 x 10^{-2}	1.0 x 10^{-5}
Materials Science & Engineering	1.1 x 10^{-2}	1.2 x 10^{-6}	5.4 x 10^{-3}	6.2 x 10^{-7}	0.24	2.8 x 10^{-5}	2.7 x 10^{-3}	3.1 x 10^{-7}	1.2 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-3}	1.5 x 10^{-7}	6.7 x 10^{-4}	7.7 x 10^{-8}	6.9 x 10^{-3}	7.9 x 10^{-7}	6.9 x 10^{-3}	7.8 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	1.61	1.8 x 10^{-4}
Physics	1.3 x 10^{-2}	1.5 x 10^{-6}	6.6 x 10^{-3}	7.5 x 10^{-7}	0.30	3.4 x 10^{-5}	3.3 x 10^{-3}	3.8 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	1.6 x 10^{-3}	1.9 x 10^{-7}	8.2 x 10^{-4}	9.4 x 10^{-8}	8.4 x 10^{-3}	9.6 x 10^{-7}	8.4 x 10^{-3}	9.6 x 10^{-7}	1.8 x 10^{-3}	2.1 x 10^{-7}	1.97	2.3 x 10^{-4}
Pierce Hall	7.8 x 10^{-2}	8.9 x 10^{-6}	3.9 x 10^{-2}	4.4 x 10^{-6}	1.76	2.0 x 10^{-4}	1.9 x 10^{-2}	2.2 x 10^{-6}	8.8 x 10^{-3}	1.0 x 10^{-6}	9.7 x 10^{-3}	1.1 x 10^{-6}	4.9 x 10^{-3}	5.6 x 10^{-7}	5.0 x 10^{-2}	5.7 x 10^{-6}	5.0 x 10^{-2}	5.7 x 10^{-6}	1.1 x 10^{-2}	1.2 x 10^{-6}	11.7	1.3 x 10^{-3}
Science Lab 1	4.4 x 10^{-2}	5.1 x 10^{-6}	2.2 x 10^{-2}	2.5 x 10^{-6}	1.00	1.1 x 10^{-4}	1.1 x 10^{-2}	1.3 x 10^{-6}	5.0 x 10^{-3}	5.7 x 10^{-7}	5.5 x 10^{-3}	6.3 x 10^{-7}	2.8 x 10^{-3}	3.2 x 10^{-7}	2.8 x 10^{-2}	3.2 x 10^{-6}	2.8 x 10^{-2}	3.2 x 10^{-6}	6.1 x 10^{-3}	7.0 x 10^{-7}	6.63	7.6 x 10^{-4}
School of Medicine – Research	3.0 x 10^{-3}	3.4 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	6.8 x 10^{-2}	7.7 x 10^{-6}	7.5 x 10^{-4}	8.5 x 10^{-8}	3.4 x 10^{-4}	3.8 x 10^{-8}	3.7 x 10^{-4}	4.3 x 10^{-8}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.9 x 10^{-3}	2.2 x 10^{-7}	1.9 x 10^{-3}	2.2 x 10^{-7}	4.1 x 10^{-4}	4.7 x 10^{-8}	0.45	5.1 x 10^{-5}
Spieth Hall	2.8 x 10^{-2}	3.2 x 10^{-6}	1.4 x 10^{-2}	1.6 x 10^{-6}	0.64	7.3 x 10^{-5}	7.0 x 10^{-3}	8.0 x 10^{-7}	3.2 x 10^{-3}	3.6 x 10^{-7}	3.5 x 10^{-3}	4.0 x 10^{-7}	1.8 x 10^{-3}	2.0 x 10^{-7}	1.8 x 10^{-2}	2.1 x 10^{-6}	1.8 x 10^{-2}	2.0 x 10^{-6}	3.9 x 10^{-3}	4.4 x 10^{-7}	4.21	4.8 x 10^{-4}
University Lab Building	4.2 x 10^{-3}	4.8 x 10^{-7}	2.1 x 10^{-3}	2.4 x 10^{-7}	9.5 x 10^{-2}	1.1 x 10^{-5}	1.0 x 10^{-3}	1.2 x 10^{-7}	4.7 x 10^{-4}	5.4 x 10^{-8}	5.2 x 10^{-4}	6.0 x 10^{-8}	2.6 x 10^{-4}	3.0 x 10^{-8}	2.7 x 10^{-3}	3.1 x 10^{-7}	2.7 x 10^{-3}	3.1 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	0.63	7.2 x 10^{-5}
Webber Hall	1.8 x 10^{-2}	2.1 x 10^{-6}	9.0 x 10^{-3}	1.0 x 10^{-6}	0.41	4.6 x 10^{-5}	4.5 x 10^{-3}	5.1 x 10^{-7}	2.0 x 10^{-3}	2.3 x 10^{-7}	2.2 x 10^{-3}	2.6 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	1.2 x 10^{-2}	1.3 x 10^{-6}	1.1 x 10^{-2}	1.3 x 10^{-6}	2.5 x 10^{-3}	2.8 x 10^{-7}	2.69	3.1 x 10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Anthracene [PAH, POM]		Benzene		1,3-Butadiene		Cadmium		Carbon tetrachloride		Chlorine		Chloroform		Copper		Crystalline silica		Ethylene dibromide (1,2-Dibromoethane)		Ethylene dichloride (1,2-Dichloroethane)	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	4.0×10^{-2}	4.6×10^{-6}	1.14	1.3×10^{-4}	4.6×10^{-2}	5.3×10^{-6}	1.9×10^{-2}	2.2×10^{-6}	0.65	7.4×10^{-5}	5.0×10^{-3}	5.7×10^{-7}	11.7	1.3×10^{-3}	9.7×10^{-2}	1.1×10^{-5}	2.9×10^{-2}	3.3×10^{-6}	0.15	1.7×10^{-5}	0.92	1.0×10^{-4}
Biological Sciences	1.4×10^{-2}	1.6×10^{-6}	0.39	4.5×10^{-5}	1.6×10^{-2}	1.8×10^{-6}	6.6×10^{-3}	7.5×10^{-7}	0.22	2.6×10^{-5}	1.7×10^{-3}	2.0×10^{-7}	4.02	4.6×10^{-4}	3.3×10^{-2}	3.8×10^{-6}	1.0×10^{-2}	1.1×10^{-6}	5.1×10^{-2}	5.8×10^{-6}	0.32	3.6×10^{-5}
Bourns Hall	3.9×10^{-2}	4.4×10^{-6}	1.11	1.3×10^{-4}	4.5×10^{-2}	5.1×10^{-6}	1.9×10^{-2}	2.1×10^{-6}	0.63	7.2×10^{-5}	4.9×10^{-3}	5.6×10^{-7}	11.4	1.3×10^{-3}	9.4×10^{-2}	1.1×10^{-5}	2.8×10^{-2}	3.2×10^{-6}	0.14	1.6×10^{-5}	0.89	1.0×10^{-4}
Boyce Hall	4.7×10^{-2}	5.3×10^{-6}	1.33	1.5×10^{-4}	5.4×10^{-2}	6.1×10^{-6}	2.2×10^{-2}	2.5×10^{-6}	0.76	8.7×10^{-5}	5.8×10^{-3}	6.7×10^{-7}	13.6	1.6×10^{-3}	0.11	1.3×10^{-5}	3.4×10^{-2}	3.9×10^{-6}	0.17	2.0×10^{-5}	1.07	1.2×10^{-4}
Boyden Lab	3.0×10^{-3}	3.4×10^{-7}	8.5×10^{-2}	9.7×10^{-6}	3.4×10^{-3}	3.9×10^{-7}	1.4×10^{-3}	1.6×10^{-7}	4.9×10^{-2}	5.6×10^{-6}	3.7×10^{-4}	4.3×10^{-8}	0.87	1.0×10^{-4}	7.3×10^{-3}	8.3×10^{-7}	2.2×10^{-3}	2.5×10^{-7}	1.1×10^{-2}	1.3×10^{-6}	6.9×10^{-2}	7.8×10^{-6}
Chapman Hall	7.8×10^{-3}	8.9×10^{-7}	0.22	2.5×10^{-5}	9.0×10^{-3}	1.0×10^{-6}	3.7×10^{-3}	4.2×10^{-7}	0.13	1.4×10^{-5}	9.7×10^{-4}	1.1×10^{-7}	2.27	2.6×10^{-4}	1.9×10^{-2}	2.2×10^{-6}	5.6×10^{-3}	6.4×10^{-7}	2.9×10^{-2}	3.3×10^{-6}	0.18	2.0×10^{-5}
Chemical Sciences	9.3×10^{-2}	1.1×10^{-5}	2.66	3.0×10^{-4}	1.1 x 10-1	1.2×10^{-5}	4.5×10^{-2}	5.1×10^{-6}	1.52	1.7×10^{-4}	1.2×10^{-2}	1.3×10^{-6}	27.3	3.1×10^{-3}	0.23	2.6×10^{-5}	6.8×10^{-2}	7.7×10^{-6}	0.35	3.9×10^{-5}	2.14	2.4×10^{-4}
Entomology	1.7×10^{-2}	2.0×10^{-6}	0.50	5.7×10^{-5}	2.0×10^{-2}	2.3×10^{-6}	8.3×10^{-3}	9.4×10^{-7}	0.28	3.2×10^{-5}	2.2×10^{-3}	2.5×10^{-7}	5.07	5.8×10^{-4}	4.2×10^{-2}	4.8×10^{-6}	1.3×10^{-2}	1.4×10^{-6}	6.4×10^{-2}	7.3×10^{-6}	4.0 x 10-1	4.5×10^{-5}
Fawcett Lab	7.8×10^{-3}	8.9×10^{-7}	0.22	2.5×10^{-5}	9.0×10^{-3}	1.0×10^{-6}	3.7×10^{-3}	4.2×10^{-7}	0.13	1.4×10^{-5}	9.7×10^{-4}	1.1×10^{-7}	2.27	2.6×10^{-4}	1.9×10^{-2}	2.2×10^{-6}	5.6×10^{-3}	6.4×10^{-7}	2.9×10^{-2}	3.3×10^{-6}	0.18	2.0×10^{-5}
Genomics	1.9×10^{-2}	2.1×10^{-6}	0.53	6.0×10^{-5}	2.1×10^{-2}	2.4×10^{-6}	8.8×10^{-3}	1.0×10^{-6}	0.30	3.4×10^{-5}	2.3×10^{-3}	2.7×10^{-7}	5.42	6.2×10^{-4}	4.5×10^{-2}	5.1×10^{-6}	1.3×10^{-2}	1.5×10^{-6}	6.9×10^{-2}	7.8×10^{-6}	0.42	4.8×10^{-5}
Geology	4.4×10^{-2}	5.1×10^{-6}	1.26	1.4×10^{-4}	5.1×10^{-2}	5.8×10^{-6}	2.1×10^{-2}	2.4×10^{-6}	0.72	8.2×10^{-5}	5.5×10^{-3}	6.3×10^{-7}	12.9	1.5×10^{-3}	0.11	1.2×10^{-5}	3.2×10^{-2}	3.7×10^{-6}	0.16	1.9×10^{-5}	1.01	1.2×10^{-4}
Greenhouse 1	1.2×10^{-3}	1.4×10^{-7}	3.4×10^{-2}	3.9×10^{-6}	1.4×10^{-3}	1.6×10^{-7}	5.7×10^{-4}	6.5×10^{-8}	1.9×10^{-2}	2.2×10^{-6}	1.5×10^{-4}	1.7×10^{-8}	0.35	4.0×10^{-5}	2.9×10^{-3}	3.3×10^{-7}	8.7×10^{-4}	9.9×10^{-8}	4.4×10^{-3}	5.1×10^{-7}	2.7×10^{-2}	3.1×10^{-6}
Greenhouse 2	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Greenhouse 3	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Greenhouse 6	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Greenhouse 7	1.8×10^{-3}	2.1×10^{-7}	5.1×10^{-2}	5.8×10^{-6}	2.1×10^{-3}	2.4×10^{-7}	8.6×10^{-4}	9.8×10^{-8}	2.9×10^{-2}	3.3×10^{-6}	2.2×10^{-4}	2.6×10^{-8}	0.52	6.0×10^{-5}	4.4×10^{-3}	5.0×10^{-7}	1.3×10^{-3}	1.5×10^{-7}	6.7×10^{-3}	7.6×10^{-7}	4.1×10^{-2}	4.7×10^{-6}
Greenhouse 9	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Greenhouse 10	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Greenhouse 12	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Greenhouse 13	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Greenhouse 20	6.0×10^{-4}	6.8×10^{-8}	1.7×10^{-2}	1.9×10^{-6}	6.9×10^{-4}	7.9×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	9.7×10^{-3}	1.1×10^{-6}	7.5×10^{-5}	8.5×10^{-9}	0.17	2.0×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.3×10^{-4}	5.0×10^{-8}	2.2×10^{-3}	2.5×10^{-7}	1.4×10^{-2}	1.6×10^{-6}
Materials Science & Engineering	1.1×10^{-2}	1.2×10^{-6}	0.31	3.5×10^{-5}	1.2×10^{-2}	1.4×10^{-6}	5.1×10^{-3}	5.9×10^{-7}	0.18	2.0×10^{-5}	1.3×10^{-3}	1.5×10^{-7}	3.15	3.6×10^{-4}	2.6×10^{-2}	3.0×10^{-6}	7.8×10^{-3}	8.9×10^{-7}	4.0×10^{-2}	4.6×10^{-6}	0.25	2.8×10^{-5}
Physics	1.3×10^{-2}	1.5×10^{-6}	0.38	4.3×10^{-5}	1.5×10^{-2}	1.7×10^{-6}	6.3×10^{-3}	7.2×10^{-7}	0.21	2.4×10^{-5}	1.6×10^{-3}	1.9×10^{-7}	3.85	4.4×10^{-4}	3.2×10^{-2}	3.6×10^{-6}	9.6×10^{-3}	1.1×10^{-6}	4.9×10^{-2}	5.6×10^{-6}	0.30	3.4×10^{-5}
Pierce Hall	7.8×10^{-2}	8.9×10^{-6}	2.22	2.5×10^{-4}	9.0×10^{-2}	1.0×10^{-5}	3.7×10^{-2}	4.2×10^{-6}	1.27	1.4×10^{-4}	9.7×10^{-3}	1.1×10^{-6}	22.7	2.6×10^{-3}	0.19	2.2×10^{-5}	5.6×10^{-2}	6.4×10^{-6}	0.29	3.3×10^{-5}	1.78	2.0×10^{-4}
Science Lab 1	4.4×10^{-2}	5.1×10^{-6}	1.26	1.4×10^{-4}	5.1×10^{-2}	5.8×10^{-6}	2.1×10^{-2}	2.4×10^{-6}	0.72	8.2×10^{-5}	5.5×10^{-3}	6.3×10^{-7}	12.9	1.5×10^{-3}	0.11	1.2×10^{-5}	3.2×10^{-2}	3.7×10^{-6}	0.16	1.9×10^{-5}	1.01	1.2×10^{-4}
School of Medicine – Research	3.0×10^{-3}	3.4×10^{-7}	8.5×10^{-2}	9.7×10^{-6}	3.4×10^{-3}	3.9×10^{-7}	1.4×10^{-3}	1.6×10^{-7}	4.9×10^{-2}	5.6×10^{-6}	3.7×10^{-4}	4.3×10^{-8}	0.87	1.0×10^{-4}	7.3×10^{-3}	8.3×10^{-7}	2.2×10^{-3}	2.5×10^{-7}	1.1×10^{-2}	1.3×10^{-6}	6.9×10^{-2}	7.8×10^{-6}
Spieth Hall	2.8×10^{-2}	3.2×10^{-6}	0.80	9.2×10^{-5}	3.2×10^{-2}	3.7×10^{-6}	1.3×10^{-2}	1.5×10^{-6}	0.46	5.2×10^{-5}	3.5×10^{-3}	4.0×10^{-7}	8.22	9.4×10^{-4}	6.8×10^{-2}	7.8×10^{-6}	2.0×10^{-2}	2.3×10^{-6}	0.10	1.2×10^{-5}	0.64	7.4×10^{-5}
University Lab Building	4.2×10^{-3}	4.8×10^{-7}	0.12	1.4×10^{-5}	4.8×10^{-3}	5.5×10^{-7}	2.0×10^{-3}	2.3×10^{-7}	6.8×10^{-2}	7.8×10^{-6}	5.2×10^{-4}	6.0×10^{-8}	1.22	1.4×10^{-4}	1.0×10^{-2}	1.2×10^{-6}	3.0×10^{-3}	3.5×10^{-7}	1.6×10^{-2}	1.8×10^{-6}	9.6×10^{-2}	1.1×10^{-5}
Webber Hall	1.8×10^{-2}	2.1×10^{-6}	0.51	5.8×10^{-5}	2.1×10^{-2}	2.4×10^{-6}	8.6×10^{-3}	9.8×10^{-7}	0.29	3.3×10^{-5}	2.2×10^{-3}	2.6×10^{-7}	5.25	6.0×10^{-4}	4.4×10^{-2}	5.0×10^{-6}	1.3×10^{-2}	1.5×10^{-6}	6.7×10^{-2}	7.6×10^{-6}	0.41	4.7×10^{-5}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Ethylene glycol monoethyl ether		Ethylene glycol monomethyl ether		Ethylene oxide		Fluorene [PAH, POM]		Formaldehyde		Hexachlorobenzene		Hexamethylene-1,6-diisocyanate		Hexane		Hydrazine		Hydrochloric acid		Hydrogen fluoride (hydrofluoric acid)	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	0.44	5.0×10^{-5}	7.5×10^{-2}	8.6×10^{-6}	8.0×10^{-3}	9.2×10^{-7}	1.5×10^{-2}	1.7×10^{-6}	2.65	3.0×10^{-4}	2.0×10^{-3}	2.3×10^{-7}	3.0×10^{-4}	3.4×10^{-8}	7.67	8.8×10^{-4}	1.5×10^{-2}	1.7×10^{-6}	43.4	5.0×10^{-3}	0.75	8.6×10^{-5}
Biological Sciences	0.15	1.7×10^{-5}	2.6×10^{-2}	2.9×10^{-6}	2.8×10^{-3}	3.1×10^{-7}	5.0×10^{-3}	5.7×10^{-7}	0.91	1.0×10^{-4}	6.9×10^{-4}	7.9×10^{-8}	1.0×10^{-4}	1.2×10^{-8}	2.63	3.0×10^{-4}	5.0×10^{-3}	5.7×10^{-7}	14.9	1.7×10^{-3}	0.26	2.9×10^{-5}
Bourns Hall	0.43	4.9×10^{-5}	7.3×10^{-2}	8.3×10^{-6}	7.8×10^{-3}	8.9×10^{-7}	1.4×10^{-2}	1.6×10^{-6}	2.58	2.9×10^{-4}	1.9×10^{-3}	2.2×10^{-7}	2.9×10^{-4}	3.3×10^{-8}	7.44	8.5×10^{-4}	1.4×10^{-2}	1.6×10^{-6}	42.1	4.8×10^{-3}	0.73	8.3×10^{-5}
Boyce Hall	0.51	5.9×10^{-5}	8.8×10^{-2}	1.0×10^{-5}	9.3×10^{-3}	1.1×10^{-6}	1.7×10^{-2}	1.9×10^{-6}	3.09	3.5×10^{-4}	2.3×10^{-3}	2.7×10^{-7}	3.5×10^{-4}	4.0×10^{-8}	8.93	1.0×10^{-3}	1.7×10^{-2}	1.9×10^{-6}	50.6	5.8×10^{-3}	0.88	1.0×10^{-4}
Boyden Lab	3.3×10^{-2}	3.8×10^{-6}	5.6×10^{-3}	6.4×10^{-7}	6.0×10^{-4}	6.8×10^{-8}	1.1×10^{-3}	1.2×10^{-7}	0.20	2.3×10^{-5}	1.5×10^{-4}	1.7×10^{-8}	2.2×10^{-5}	2.6×10^{-9}	0.57	6.5×10^{-5}	1.1×10^{-3}	1.2×10^{-7}	3.24	3.7×10^{-4}	5.6×10^{-2}	6.4×10^{-6}
Chapman Hall	8.6×10^{-2}	9.8×10^{-6}	1.5×10^{-2}	1.7×10^{-6}	1.6×10^{-3}	1.8×10^{-7}	2.8×10^{-3}	3.2×10^{-7}	0.52	5.9×10^{-5}	3.9×10^{-4}	4.4×10^{-8}	5.8×10^{-5}	6.7×10^{-9}	1.49	1.7×10^{-4}	2.8×10^{-3}	3.2×10^{-7}	8.43	9.6×10^{-4}	0.15	1.7×10^{-5}
Chemical Sciences	1.03	1.2×10^{-4}	1.8 x 10-1	2.0×10^{-5}	1.9×10^{-2}	2.1×10^{-6}	3.4×10^{-2}	3.9×10^{-6}	6.18	7.1×10^{-4}	4.7×10^{-3}	5.3×10^{-7}	7.0×10^{-4}	8.0×10^{-8}	17.9	2.0×10^{-3}	3.4×10^{-2}	3.9×10^{-6}	101	1.2×10^{-2}	1.75	2.0×10^{-4}
Entomology	0.19	2.2×10^{-5}	3.3×10^{-2}	3.7×10^{-6}	3.5×10^{-3}	4.0×10^{-7}	6.3×10^{-3}	7.2×10^{-7}	1.15	1.3×10^{-4}	8.7×10^{-4}	9.9×10^{-8}	1.3×10^{-4}	1.5×10^{-8}	3.32	3.8×10^{-4}	6.3×10^{-3}	7.2×10^{-7}	18.8	2.1×10^{-3}	0.33	3.7×10^{-5}
Fawcett Lab	8.6×10^{-2}	9.8×10^{-6}	1.5×10^{-2}	1.7×10^{-6}	1.6×10^{-3}	1.8×10^{-7}	2.8×10^{-3}	3.2×10^{-7}	0.52	5.9×10^{-5}	3.9×10^{-4}	4.4×10^{-8}	5.8×10^{-5}	6.7×10^{-9}	1.49	1.7×10^{-4}	2.8×10^{-3}	3.2×10^{-7}	8.43	9.6×10^{-4}	0.15	1.7×10^{-5}
Genomics	0.20	2.3×10^{-5}	3.5×10^{-2}	4.0×10^{-6}	3.7×10^{-3}	4.2×10^{-7}	6.7×10^{-3}	7.7×10^{-7}	1.23	1.4×10^{-4}	9.3×10^{-4}	1.1×10^{-7}	1.4×10^{-4}	1.6×10^{-8}	3.55	4.1×10^{-4}	6.8×10^{-3}	7.7×10^{-7}	20.1	2.3×10^{-3}	0.35	4.0×10^{-5}
Geology	0.49	5.6×10^{-5}	8.3×10^{-2}	9.5×10^{-6}	8.9×10^{-3}	1.0×10^{-6}	1.6×10^{-2}	1.8×10^{-6}	2.93	3.3×10^{-4}	2.2×10^{-3}	2.5×10^{-7}	3.3×10^{-4}	3.8×10^{-8}	8.47	9.7×10^{-4}	1.6×10^{-2}	1.8×10^{-6}	48.0	5.5×10^{-3}	0.83	9.5×10^{-5}
Greenhouse 1	1.3×10^{-2}	1.5×10^{-6}	2.2×10^{-3}	2.6×10^{-7}	2.4×10^{-4}	2.7×10^{-8}	4.3×10^{-4}	5.0×10^{-8}	7.9×10^{-2}	9.0×10^{-6}	6.0×10^{-5}	6.8×10^{-9}	9.0×10^{-6}	1.0×10^{-9}	0.23	2.6×10^{-5}	4.4×10^{-4}	5.0×10^{-8}	1.30	1.5×10^{-4}	2.2×10^{-2}	2.6×10^{-6}
Greenhouse 2	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Greenhouse 3	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Greenhouse 6	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Greenhouse 7	2.0×10^{-2}	2.3×10^{-6}	3.4×10^{-3}	3.8×10^{-7}	3.6×10^{-4}	4.1×10^{-8}	6.5×10^{-4}	7.4×10^{-8}	0.12	1.4×10^{-5}	9.0×10^{-5}	1.0×10^{-8}	1.3×10^{-5}	1.5×10^{-9}	0.34	3.9×10^{-5}	6.6×10^{-4}	7.5×10^{-8}	1.94	2.2×10^{-4}	3.4×10^{-2}	3.8×10^{-6}
Greenhouse 9	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Greenhouse 10	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Greenhouse 12	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Greenhouse 13	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Greenhouse 20	6.6×10^{-3}	7.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.2×10^{-4}	1.4×10^{-8}	2.2×10^{-4}	2.5×10^{-8}	4.0×10^{-2}	4.5×10^{-6}	3.0×10^{-5}	3.4×10^{-9}	4.5×10^{-6}	5.1×10^{-10}	0.11	1.3×10^{-5}	2.2×10^{-4}	2.5×10^{-8}	0.65	7.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}
Materials Science & Engineering	0.12	1.4×10^{-5}	2.0×10^{-2}	2.3×10^{-6}	2.2×10^{-3}	2.5×10^{-7}	3.9×10^{-3}	4.5×10^{-7}	0.71	8.1×10^{-5}	5.4×10^{-4}	6.2×10^{-8}	8.1×10^{-5}	9.2×10^{-9}	2.06	2.4×10^{-4}	3.9×10^{-3}	4.5×10^{-7}	11.7	1.3×10^{-3}	0.20	2.3×10^{-5}
Physics	0.14	1.7×10^{-5}	2.5×10^{-2}	2.8×10^{-6}	2.6×10^{-3}	3.0×10^{-7}	4.8×10^{-3}	5.5×10^{-7}	0.87	9.9×10^{-5}	6.6×10^{-4}	7.5×10^{-8}	9.9×10^{-5}	1.1×10^{-8}	2.52	2.9×10^{-4}	4.8×10^{-3}	5.5×10^{-7}	14.3	1.6×10^{-3}	0.25	2.8×10^{-5}
Pierce Hall	0.86	9.8×10^{-5}	1.5 x 10-1	1.7×10^{-5}	1.6×10^{-2}	1.8×10^{-6}	2.8×10^{-2}	3.2×10^{-6}	5.15	5.9×10^{-4}	3.9×10^{-3}	4.4×10^{-7}	5.8×10^{-4}	6.7×10^{-8}	14.9	1.7×10^{-3}	2.8×10^{-2}	3.2×10^{-6}	84.3	9.6×10^{-3}	1.46	1.7×10^{-4}
Science Lab 1	0.49	5.6×10^{-5}	8.3×10^{-2}	9.5×10^{-6}	8.9×10^{-3}	1.0×10^{-6}	1.6×10^{-2}	1.8×10^{-6}	2.93	3.3×10^{-4}	2.2×10^{-3}	2.5×10^{-7}	3.3×10^{-4}	3.8×10^{-8}	8.47	9.7×10^{-4}	1.6×10^{-2}	1.8×10^{-6}	48.0	5.5×10^{-3}	0.83	9.5×10^{-5}
School of Medicine – Research	3.3×10^{-2}	3.8×10^{-6}	5.6×10^{-3}	6.4×10^{-7}	6.0×10^{-4}	6.8×10^{-8}	1.1×10^{-3}	1.2×10^{-7}	0.20	2.3×10^{-5}	1.5×10^{-4}	1.7×10^{-8}	2.2×10^{-5}	2.6×10^{-9}	0.57	6.5×10^{-5}	1.1×10^{-3}	1.2×10^{-7}	3.24	3.7×10^{-4}	5.6×10^{-2}	6.4×10^{-6}
Spieth Hall	0.31	3.5×10^{-5}	5.3×10^{-2}	6.0×10^{-6}	5.6×10^{-3}	6.4×10^{-7}	1.0×10^{-2}	1.2×10^{-6}	1.86	2.1×10^{-4}	1.4×10^{-3}	1.6×10^{-7}	2.1×10^{-4}	2.4×10^{-8}	5.38	6.1×10^{-4}	1.0×10^{-2}	1.2×10^{-6}	30.5	3.5×10^{-3}	0.53	6.0×10^{-5}
University Lab Building	4.6×10^{-2}	5.3×10^{-6}	7.9×10^{-3}	9.0×10^{-7}	8.4×10^{-4}	9.6×10^{-8}	1.5×10^{-3}	1.7×10^{-7}	0.28	3.2×10^{-5}	2.1×10^{-4}	2.4×10^{-8}	3.1×10^{-5}	3.6×10^{-9}	0.80	9.1×10^{-5}	1.5×10^{-3}	1.7×10^{-7}	4.54	5.2×10^{-4}	7.9×10^{-2}	9.0×10^{-6}
Webber Hall	0.20	2.3×10^{-5}	3.4×10^{-2}	3.8×10^{-6}	3.6×10^{-3}	4.1×10^{-7}	6.5×10^{-3}	7.4×10^{-7}	1.19	1.4×10^{-4}	9.0×10^{-4}	1.0×10^{-7}	1.3×10^{-4}	1.5×10^{-8}	3.44	3.9×10^{-4}	6.6×10^{-3}	7.5×10^{-7}	19.4	2.2×10^{-3}	3.4 x 10-1	3.8×10^{-5}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Lead compounds (inorganic)		Lindane (gamma-Hexa-chlorocyclohexane)		Manganese		Mercuric chloride		Mercury		Methanol		Methyl isobutyl ketone (Hexone)		Methylene chloride (Dichloromethane)		Methylene diphenyl diisocyanate [MDI] [POM]		Naphthalene [PAH, POM]		Nickel	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	1.3 x 10^{-2}	1.4 x 10^{-6}	1.0 x 10^{-3}	1.1 x 10^{-7}	8.0 x 10^{-3}	9.2 x 10^{-7}	6.0 x 10^{-2}	6.9 x 10^{-6}	7.5 x 10^{-2}	8.6 x 10^{-6}	22.9	2.6 x 10^{-3}	0.30	3.4 x 10^{-5}	15.2	1.7 x 10^{-3}	6.0 x 10^{-3}	6.9 x 10^{-7}	0.18	2.0 x 10^{-5}	4.5 x 10^{-3}	5.2 x 10^{-7}
Biological Sciences	4.3 x 10^{-3}	4.9 x 10^{-7}	3.4 x 10^{-4}	3.9 x 10^{-8}	2.8 x 10^{-3}	3.1 x 10^{-7}	2.1 x 10^{-2}	2.4 x 10^{-6}	2.6 x 10^{-2}	2.9 x 10^{-6}	7.85	9.0 x 10^{-4}	0.10	1.2 x 10^{-5}	5.20	5.9 x 10^{-4}	2.1 x 10^{-3}	2.4 x 10^{-7}	6.1 x 10^{-2}	6.9 x 10^{-6}	1.6 x 10^{-3}	1.8 x 10^{-7}
Bourns Hall	1.2 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-4}	1.1 x 10^{-7}	7.8 x 10^{-3}	8.9 x 10^{-7}	5.8 x 10^{-2}	6.7 x 10^{-6}	7.3 x 10^{-2}	8.3 x 10^{-6}	22.2	2.5 x 10^{-3}	0.29	3.3 x 10^{-5}	14.7	1.7 x 10^{-3}	5.8 x 10^{-3}	6.7 x 10^{-7}	0.17	2.0 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}
Boyce Hall	1.5 x 10^{-2}	1.7 x 10^{-6}	1.2 x 10^{-3}	1.3 x 10^{-7}	9.3 x 10^{-3}	1.1 x 10^{-6}	7.0 x 10^{-2}	8.0 x 10^{-6}	8.8 x 10^{-2}	1.0 x 10^{-5}	26.6	3.0 x 10^{-3}	0.34	3.9 x 10^{-5}	17.6	2.0 x 10^{-3}	7.0 x 10^{-3}	8.0 x 10^{-7}	0.21	2.4 x 10^{-5}	5.3 x 10^{-3}	6.0 x 10^{-7}
Boyden Lab	9.4 x 10^{-4}	1.1 x 10^{-7}	7.5 x 10^{-5}	8.5 x 10^{-9}	6.0 x 10^{-4}	6.8 x 10^{-8}	4.5 x 10^{-3}	5.1 x 10^{-7}	5.6 x 10^{-3}	6.4 x 10^{-7}	1.71	1.9 x 10^{-4}	2.2 x 10^{-2}	2.5 x 10^{-6}	1.13	1.3 x 10^{-4}	4.5 x 10^{-4}	5.1 x 10^{-8}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.4 x 10^{-4}	3.8 x 10^{-8}
Chapman Hall	2.4 x 10^{-3}	2.8 x 10^{-7}	1.9 x 10^{-4}	2.2 x 10^{-8}	1.6 x 10^{-3}	1.8 x 10^{-7}	1.2 x 10^{-2}	1.3 x 10^{-6}	1.5 x 10^{-2}	1.7 x 10^{-6}	4.44	5.1 x 10^{-4}	5.7 x 10^{-2}	6.6 x 10^{-6}	2.94	3.4 x 10^{-4}	1.2 x 10^{-3}	1.3 x 10^{-7}	3.4 x 10^{-2}	3.9 x 10^{-6}	8.8 x 10^{-4}	1.0 x 10^{-7}
Chemical Sciences	2.9 x 10^{-2}	3.3 x 10^{-6}	2.3 x 10^{-3}	2.7 x 10^{-7}	1.9 x 10^{-2}	2.1 x 10^{-6}	0.14	1.6 x 10^{-5}	0.18	2.0 x 10^{-5}	53.2	6.1 x 10^{-3}	0.69	7.9 x 10^{-5}	35.3	4.0 x 10^{-3}	1.4 x 10^{-2}	1.6 x 10^{-6}	0.41	4.7 x 10^{-5}	1.1 x 10^{-2}	1.2 x 10^{-6}
Entomology	5.4 x 10^{-3}	6.2 x 10^{-7}	4.3 x 10^{-4}	5.0 x 10^{-8}	3.5 x 10^{-3}	4.0 x 10^{-7}	2.6 x 10^{-2}	3.0 x 10^{-6}	3.3 x 10^{-2}	3.7 x 10^{-6}	9.90	1.1 x 10^{-3}	0.13	1.5 x 10^{-5}	6.56	7.5 x 10^{-4}	2.6 x 10^{-3}	3.0 x 10^{-7}	7.7 x 10^{-2}	8.8 x 10^{-6}	2.0 x 10^{-3}	2.2 x 10^{-7}
Fawcett Lab	2.4 x 10^{-3}	2.8 x 10^{-7}	1.9 x 10^{-4}	2.2 x 10^{-8}	1.6 x 10^{-3}	1.8 x 10^{-7}	1.2 x 10^{-2}	1.3 x 10^{-6}	1.5 x 10^{-2}	1.7 x 10^{-6}	4.44	5.1 x 10^{-4}	5.7 x 10^{-2}	6.6 x 10^{-6}	2.94	3.4 x 10^{-4}	1.2 x 10^{-3}	1.3 x 10^{-7}	3.4 x 10^{-2}	3.9 x 10^{-6}	8.8 x 10^{-4}	1.0 x 10^{-7}
Genomics	5.8 x 10^{-3}	6.6 x 10^{-7}	4.6 x 10^{-4}	5.3 x 10^{-8}	3.7 x 10^{-3}	4.2 x 10^{-7}	2.8 x 10^{-2}	3.2 x 10^{-6}	3.5 x 10^{-2}	4.0 x 10^{-6}	10.6	1.2 x 10^{-3}	0.14	1.6 x 10^{-5}	7.01	8.0 x 10^{-4}	2.8 x 10^{-3}	3.2 x 10^{-7}	8.2 x 10^{-2}	9.4 x 10^{-6}	2.1 x 10^{-3}	2.4 x 10^{-7}
Geology	1.4 x 10^{-2}	1.6 x 10^{-6}	1.1 x 10^{-3}	1.3 x 10^{-7}	8.9 x 10^{-3}	1.0 x 10^{-6}	6.7 x 10^{-2}	7.6 x 10^{-6}	8.3 x 10^{-2}	9.5 x 10^{-6}	25.3	2.9 x 10^{-3}	0.33	3.7 x 10^{-5}	16.7	1.9 x 10^{-3}	6.7 x 10^{-3}	7.6 x 10^{-7}	0.20	2.2 x 10^{-5}	5.0 x 10^{-3}	5.7 x 10^{-7}
Greenhouse 1	3.7 x 10^{-4}	4.3 x 10^{-8}	3.0 x 10^{-5}	3.4 x 10^{-9}	2.4 x 10^{-4}	2.7 x 10^{-8}	1.8 x 10^{-3}	2.1 x 10^{-7}	2.2 x 10^{-3}	2.6 x 10^{-7}	0.68	7.8 x 10^{-5}	8.8 x 10^{-3}	1.0 x 10^{-6}	0.45	5.2 x 10^{-5}	1.8 x 10^{-4}	2.1 x 10^{-8}	5.3 x 10^{-3}	6.0 x 10^{-7}	1.3 x 10^{-4}	1.5 x 10^{-8}
Greenhouse 2	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Greenhouse 3	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Greenhouse 6	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Greenhouse 7	5.6 x 10^{-4}	6.4 x 10^{-8}	4.5 x 10^{-5}	5.1 x 10^{-9}	3.6 x 10^{-4}	4.1 x 10^{-8}	2.7 x 10^{-3}	3.1 x 10^{-7}	3.4 x 10^{-3}	3.8 x 10^{-7}	1.02	1.2 x 10^{-4}	1.3 x 10^{-2}	1.5 x 10^{-6}	0.68	7.7 x 10^{-5}	2.7 x 10^{-4}	3.1 x 10^{-8}	7.9 x 10^{-3}	9.1 x 10^{-7}	2.0 x 10^{-4}	2.3 x 10^{-8}
Greenhouse 9	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Greenhouse 10	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Greenhouse 12	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Greenhouse 13	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Greenhouse 20	1.9 x 10^{-4}	2.1 x 10^{-8}	1.5 x 10^{-5}	1.7 x 10^{-9}	1.2 x 10^{-4}	1.4 x 10^{-8}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	0.34	3.9 x 10^{-5}	4.4 x 10^{-3}	5.0 x 10^{-7}	0.23	2.6 x 10^{-5}	9.0 x 10^{-5}	1.0 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	6.7 x 10^{-5}	7.7 x 10^{-9}
Materials Science & Engineering	3.4 x 10^{-3}	3.8 x 10^{-7}	2.7 x 10^{-4}	3.1 x 10^{-8}	2.2 x 10^{-3}	2.5 x 10^{-7}	1.6 x 10^{-2}	1.8 x 10^{-6}	2.0 x 10^{-2}	2.3 x 10^{-6}	6.14	7.0 x 10^{-4}	8.0 x 10^{-2}	9.1 x 10^{-6}	4.07	4.6 x 10^{-4}	1.6 x 10^{-3}	1.8 x 10^{-7}	4.8 x 10^{-2}	5.4 x 10^{-6}	1.2 x 10^{-3}	1.4 x 10^{-7}
Physics	4.1 x 10^{-3}	4.7 x 10^{-7}	3.3 x 10^{-4}	3.8 x 10^{-8}	2.6 x 10^{-3}	3.0 x 10^{-7}	2.0 x 10^{-2}	2.3 x 10^{-6}	2.5 x 10^{-2}	2.8 x 10^{-6}	7.51	8.6 x 10^{-4}	9.7 x 10^{-2}	1.1 x 10^{-5}	4.98	5.7 x 10^{-4}	2.0 x 10^{-3}	2.3 x 10^{-7}	5.8 x 10^{-2}	6.6 x 10^{-6}	1.5 x 10^{-3}	1.7 x 10^{-7}
Pierce Hall	2.4 x 10^{-2}	2.8 x 10^{-6}	1.9 x 10^{-3}	2.2 x 10^{-7}	1.6 x 10^{-2}	1.8 x 10^{-6}	0.12	1.3 x 10^{-5}	0.15	1.7 x 10^{-5}	44.4	5.1 x 10^{-3}	0.57	6.6 x 10^{-5}	29.4	3.4 x 10^{-3}	1.2 x 10^{-2}	1.3 x 10^{-6}	0.34	3.9 x 10^{-5}	8.8 x 10^{-3}	1.0 x 10^{-6}
Science Lab 1	1.4 x 10^{-2}	1.6 x 10^{-6}	1.1 x 10^{-3}	1.3 x 10^{-7}	8.9 x 10^{-3}	1.0 x 10^{-6}	6.7 x 10^{-2}	7.6 x 10^{-6}	8.3 x 10^{-2}	9.5 x 10^{-6}	25.3	2.9 x 10^{-3}	0.33	3.7 x 10^{-5}	16.7	1.9 x 10^{-3}	6.7 x 10^{-3}	7.6 x 10^{-7}	0.20	2.2 x 10^{-5}	5.0 x 10^{-3}	5.7 x 10^{-7}
School of Medicine – Research	9.4 x 10^{-4}	1.1 x 10^{-7}	7.5 x 10^{-5}	8.5 x 10^{-9}	6.0 x 10^{-4}	6.8 x 10^{-8}	4.5 x 10^{-3}	5.1 x 10^{-7}	5.6 x 10^{-3}	6.4 x 10^{-7}	1.71	1.9 x 10^{-4}	2.2 x 10^{-2}	2.5 x 10^{-6}	1.13	1.3 x 10^{-4}	4.5 x 10^{-4}	5.1 x 10^{-8}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.4 x 10^{-4}	3.8 x 10^{-8}
Spieth Hall	8.8 x 10^{-3}	1.0 x 10^{-6}	7.0 x 10^{-4}	8.0 x 10^{-8}	5.6 x 10^{-3}	6.4 x 10^{-7}	4.2 x 10^{-2}	4.8 x 10^{-6}	5.3 x 10^{-2}	6.0 x 10^{-6}	16.0	1.8 x 10^{-3}	0.21	2.4 x 10^{-5}	10.6	1.2 x 10^{-3}	4.2 x 10^{-3}	4.8 x 10^{-7}	0.12	1.4 x 10^{-5}	3.2 x 10^{-3}	3.6 x 10^{-7}
University Lab Building	1.3 x 10^{-3}	1.5 x 10^{-7}	1.0 x 10^{-4}	1.2 x 10^{-8}	8.4 x 10^{-4}	9.6 x 10^{-8}	6.3 x 10^{-3}	7.2 x 10^{-7}	7.9 x 10^{-3}	9.0 x 10^{-7}	2.39	2.7 x 10^{-4}	3.1 x 10^{-2}	3.5 x 10^{-6}	1.58	1.8 x 10^{-4}	6.3 x 10^{-4}	7.2 x 10^{-8}	1.9 x 10^{-2}	2.1 x 10^{-6}	4.7 x 10^{-4}	5.4 x 10^{-8}
Webber Hall	5.6 x 10^{-3}	6.4 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	3.6 x 10^{-3}	4.1 x 10^{-7}	2.7 x 10^{-2}	3.1 x 10^{-6}	3.4 x 10^{-2}	3.8 x 10^{-6}	10.2	1.2 x 10^{-3}	0.13	1.5 x 10^{-5}	6.79	7.7 x 10^{-4}	2.7 x 10^{-3}	3.1 x 10^{-7}	7.9 x 10^{-2}	9.1 x 10^{-6}	2.0 x 10^{-3}	2.3 x 10^{-7}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Oleum		p-Dichlorobenzene (1,4-Dichlorobenzene)		Perchloroethylene (Tetrachloro-ethene)		Phenanthrene [PAH, POM]		Phosphoric acid		Propylene oxide		Pyrene [PAH, POM]		Selenium		Sodium hydroxide		Sulfuric acid		Toluene	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	7.2 x 10^{-2}	8.2 x 10^{-6}	3.0 x 10^{-2}	3.4 x 10^{-6}	6.5 x 10^{-2}	7.4 x 10^{-6}	9.5 x 10^{-3}	1.1 x 10^{-6}	3.45	3.9 x 10^{-4}	7.0 x 10^{-2}	8.0 x 10^{-6}	1.3 x 10^{-2}	1.4 x 10^{-6}	1.1 x 10^{-2}	1.3 x 10^{-6}	5.99	6.8 x 10^{-4}	4.59	5.2 x 10^{-4}	5.27	6.0 x 10^{-4}
Biological Sciences	2.5 x 10^{-2}	2.8 x 10^{-6}	1.0 x 10^{-2}	1.2 x 10^{-6}	2.2 x 10^{-2}	2.6 x 10^{-6}	3.3 x 10^{-3}	3.7 x 10^{-7}	1.18	1.4 x 10^{-4}	2.4 x 10^{-2}	2.8 x 10^{-6}	4.3 x 10^{-3}	4.9 x 10^{-7}	3.8 x 10^{-3}	4.3 x 10^{-7}	2.06	2.3 x 10^{-4}	1.58	1.8 x 10^{-4}	1.81	2.1 x 10^{-4}
Bourns Hall	7.0 x 10^{-2}	7.9 x 10^{-6}	2.9 x 10^{-2}	3.3 x 10^{-6}	6.3 x 10^{-2}	7.2 x 10^{-6}	9.2 x 10^{-3}	1.1 x 10^{-6}	3.34	3.8 x 10^{-4}	6.8 x 10^{-2}	7.8 x 10^{-6}	1.2 x 10^{-2}	1.4 x 10^{-6}	1.1 x 10^{-2}	1.2 x 10^{-6}	5.81	6.6 x 10^{-4}	4.45	5.1 x 10^{-4}	5.12	5.8 x 10^{-4}
Boyce Hall	8.4 x 10^{-2}	9.5 x 10^{-6}	3.5 x 10^{-2}	4.0 x 10^{-6}	7.6 x 10^{-2}	8.7 x 10^{-6}	1.1 x 10^{-2}	1.3 x 10^{-6}	4.01	4.6 x 10^{-4}	8.2 x 10^{-2}	9.3 x 10^{-6}	1.5 x 10^{-2}	1.7 x 10^{-6}	1.3 x 10^{-2}	1.5 x 10^{-6}	6.97	8.0 x 10^{-4}	5.34	6.1 x 10^{-4}	6.14	7.0 x 10^{-4}
Boyden Lab	5.4 x 10^{-3}	6.1 x 10^{-7}	2.2 x 10^{-3}	2.6 x 10^{-7}	4.9 x 10^{-3}	5.6 x 10^{-7}	7.1 x 10^{-4}	8.1 x 10^{-8}	0.26	2.9 x 10^{-5}	5.2 x 10^{-3}	6.0 x 10^{-7}	9.4 x 10^{-4}	1.1 x 10^{-7}	8.2 x 10^{-4}	9.4 x 10^{-8}	0.45	5.1 x 10^{-5}	0.34	3.9 x 10^{-5}	0.39	4.5 x 10^{-5}
Chapman Hall	1.4 x 10^{-2}	1.6 x 10^{-6}	5.8 x 10^{-3}	6.7 x 10^{-7}	1.3 x 10^{-2}	1.4 x 10^{-6}	1.8 x 10^{-3}	2.1 x 10^{-7}	0.67	7.6 x 10^{-5}	1.4 x 10^{-2}	1.6 x 10^{-6}	2.4 x 10^{-3}	2.8 x 10^{-7}	2.1 x 10^{-3}	2.4 x 10^{-7}	1.16	1.3 x 10^{-4}	0.89	1.0 x 10^{-4}	1.02	1.2 x 10^{-4}
Chemical Sciences	1.7 x 10-1	1.9 x 10^{-5}	7.0 x 10^{-2}	8.0 x 10^{-6}	1.5 x 10-1	1.7 x 10^{-5}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.03	9.2 x 10^{-4}	0.16	1.9 x 10^{-5}	2.9 x 10^{-2}	3.3 x 10^{-6}	2.6 x 10^{-2}	2.9 x 10^{-6}	13.9	1.6 x 10^{-3}	10.7	1.2 x 10^{-3}	12.3	1.4 x 10^{-3}
Entomology	3.1 x 10^{-2}	3.5 x 10^{-6}	1.3 x 10^{-2}	1.5 x 10^{-6}	2.8 x 10^{-2}	3.2 x 10^{-6}	4.1 x 10^{-3}	4.7 x 10^{-7}	1.49	1.7 x 10^{-4}	3.0 x 10^{-2}	3.5 x 10^{-6}	5.4 x 10^{-3}	6.2 x 10^{-7}	4.8 x 10^{-3}	5.5 x 10^{-7}	2.59	3.0 x 10^{-4}	1.99	2.3 x 10^{-4}	2.28	2.6 x 10^{-4}
Fawcett Lab	1.4 x 10^{-2}	1.6 x 10^{-6}	5.8 x 10^{-3}	6.7 x 10^{-7}	1.3 x 10^{-2}	1.4 x 10^{-6}	1.8 x 10^{-3}	2.1 x 10^{-7}	0.67	7.6 x 10^{-5}	1.4 x 10^{-2}	1.6 x 10^{-6}	2.4 x 10^{-3}	2.8 x 10^{-7}	2.1 x 10^{-3}	2.4 x 10^{-7}	1.16	1.3 x 10^{-4}	0.89	1.0 x 10^{-4}	1.02	1.2 x 10^{-4}
Genomics	3.3 x 10^{-2}	3.8 x 10^{-6}	1.4 x 10^{-2}	1.6 x 10^{-6}	3.0 x 10^{-2}	3.4 x 10^{-6}	4.4 x 10^{-3}	5.0 x 10^{-7}	1.59	1.8 x 10^{-4}	3.3 x 10^{-2}	3.7 x 10^{-6}	5.8 x 10^{-3}	6.6 x 10^{-7}	5.1 x 10^{-3}	5.8 x 10^{-7}	2.77	3.2 x 10^{-4}	2.12	2.4 x 10^{-4}	2.44	2.8 x 10^{-4}
Geology	7.9 x 10^{-2}	9.0 x 10^{-6}	3.3 x 10^{-2}	3.8 x 10^{-6}	7.2 x 10^{-2}	8.2 x 10^{-6}	1.1 x 10^{-2}	1.2 x 10^{-6}	3.81	4.3 x 10^{-4}	7.8 x 10^{-2}	8.9 x 10^{-6}	1.4 x 10^{-2}	1.6 x 10^{-6}	1.2 x 10^{-2}	1.4 x 10^{-6}	6.62	7.6 x 10^{-4}	5.07	5.8 x 10^{-4}	5.82	6.6 x 10^{-4}
Greenhouse 1	2.1 x 10^{-3}	2.4 x 10^{-7}	9.0 x 10^{-4}	1.0 x 10^{-7}	1.9 x 10^{-3}	2.2 x 10^{-7}	2.8 x 10^{-4}	3.2 x 10^{-8}	0.10	1.2 x 10^{-5}	2.1 x 10^{-3}	2.4 x 10^{-7}	3.7 x 10^{-4}	4.3 x 10^{-8}	3.3 x 10^{-4}	3.8 x 10^{-8}	0.18	2.0 x 10^{-5}	0.14	1.6 x 10^{-5}	0.16	1.8 x 10^{-5}
Greenhouse 2	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Greenhouse 3	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Greenhouse 6	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Greenhouse 7	3.2 x 10^{-3}	3.7 x 10^{-7}	1.3 x 10^{-3}	1.5 x 10^{-7}	2.9 x 10^{-3}	3.3 x 10^{-7}	4.3 x 10^{-4}	4.9 x 10^{-8}	0.15	1.8 x 10^{-5}	3.1 x 10^{-3}	3.6 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	4.9 x 10^{-4}	5.6 x 10^{-8}	0.27	3.1 x 10^{-5}	0.21	2.3 x 10^{-5}	0.24	2.7 x 10^{-5}
Greenhouse 9	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Greenhouse 10	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Greenhouse 12	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Greenhouse 13	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Greenhouse 20	1.1 x 10^{-3}	1.2 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	9.7 x 10^{-4}	1.1 x 10^{-7}	1.4 x 10^{-4}	1.6 x 10^{-8}	5.1 x 10^{-2}	5.9 x 10^{-6}	1.0 x 10^{-3}	1.2 x 10^{-7}	1.9 x 10^{-4}	2.1 x 10^{-8}	1.6 x 10^{-4}	1.9 x 10^{-8}	8.9 x 10^{-2}	1.0 x 10^{-5}	6.9 x 10^{-2}	7.8 x 10^{-6}	7.9 x 10^{-2}	9.0 x 10^{-6}
Materials Science & Engineering	1.9 x 10^{-2}	2.2 x 10^{-6}	8.1 x 10^{-3}	9.2 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}	2.6 x 10^{-3}	2.9 x 10^{-7}	0.93	1.1 x 10^{-4}	1.9 x 10^{-2}	2.2 x 10^{-6}	3.4 x 10^{-3}	3.8 x 10^{-7}	3.0 x 10^{-3}	3.4 x 10^{-7}	1.61	1.8 x 10^{-4}	1.23	1.4 x 10^{-4}	1.42	1.6 x 10^{-4}
Physics	2.4 x 10^{-2}	2.7 x 10^{-6}	9.9 x 10^{-3}	1.1 x 10^{-6}	2.1 x 10^{-2}	2.4 x 10^{-6}	3.1 x 10^{-3}	3.6 x 10^{-7}	1.13	1.3 x 10^{-4}	2.3 x 10^{-2}	2.6 x 10^{-6}	4.1 x 10^{-3}	4.7 x 10^{-7}	3.6 x 10^{-3}	4.1 x 10^{-7}	1.97	2.2 x 10^{-4}	1.51	1.7 x 10^{-4}	1.73	2.0 x 10^{-4}
Pierce Hall	1.4 x 10-1	1.6 x 10^{-5}	5.8 x 10^{-2}	6.7 x 10^{-6}	1.3 x 10-1	1.4 x 10^{-5}	1.8 x 10^{-2}	2.1 x 10^{-6}	6.69	7.6 x 10^{-4}	0.14	1.6 x 10^{-5}	2.4 x 10^{-2}	2.8 x 10^{-6}	2.1 x 10^{-2}	2.4 x 10^{-6}	11.62	1.3 x 10^{-3}	8.91	1.0 x 10^{-3}	10.2	1.2 x 10^{-3}
Science Lab 1	7.9 x 10^{-2}	9.0 x 10^{-6}	3.3 x 10^{-2}	3.8 x 10^{-6}	7.2 x 10^{-2}	8.2 x 10^{-6}	1.1 x 10^{-2}	1.2 x 10^{-6}	3.81	4.3 x 10^{-4}	7.8 x 10^{-2}	8.9 x 10^{-6}	1.4 x 10^{-2}	1.6 x 10^{-6}	1.2 x 10^{-2}	1.4 x 10^{-6}	6.62	7.6 x 10^{-4}	5.07	5.8 x 10^{-4}	5.82	6.6 x 10^{-4}
School of Medicine – Research	5.4 x 10^{-3}	6.1 x 10^{-7}	2.2 x 10^{-3}	2.6 x 10^{-7}	4.9 x 10^{-3}	5.6 x 10^{-7}	7.1 x 10^{-4}	8.1 x 10^{-8}	0.26	2.9 x 10^{-5}	5.2 x 10^{-3}	6.0 x 10^{-7}	9.4 x 10^{-4}	1.1 x 10^{-7}	8.2 x 10^{-4}	9.4 x 10^{-8}	0.45	5.1 x 10^{-5}	0.34	3.9 x 10^{-5}	0.39	4.5 x 10^{-5}
Spieth Hall	5.0 x 10^{-2}	5.7 x 10^{-6}	2.1 x 10^{-2}	2.4 x 10^{-6}	4.6 x 10^{-2}	5.2 x 10^{-6}	6.7 x 10^{-3}	7.6 x 10^{-7}	2.42	2.8 x 10^{-4}	4.9 x 10^{-2}	5.6 x 10^{-6}	8.8 x 10^{-3}	1.0 x 10^{-6}	7.7 x 10^{-3}	8.8 x 10^{-7}	4.20	4.8 x 10^{-4}	3.22	3.7 x 10^{-4}	3.70	4.2 x 10^{-4}
University Lab Building	7.5 x 10^{-3}	8.6 x 10^{-7}	3.1 x 10^{-3}	3.6 x 10^{-7}	6.8 x 10^{-3}	7.8 x 10^{-7}	1.0 x 10^{-3}	1.1 x 10^{-7}	0.36	4.1 x 10^{-5}	7.3 x 10^{-3}	8.4 x 10^{-7}	1.3 x 10^{-3}	1.5 x 10^{-7}	1.2 x 10^{-3}	1.3 x 10^{-7}	0.63	7.1 x 10^{-5}	0.48	5.5 x 10^{-5}	0.55	6.3 x 10^{-5}
Webber Hall	3.2 x 10^{-2}	3.7 x 10^{-6}	1.3 x 10^{-2}	1.5 x 10^{-6}	2.9 x 10^{-2}	3.3 x 10^{-6}	4.3 x 10^{-3}	4.9 x 10^{-7}	1.54	1.8 x 10^{-4}	3.1 x 10^{-2}	3.6 x 10^{-6}	5.6 x 10^{-3}	6.4 x 10^{-7}	4.9 x 10^{-3}	5.6 x 10^{-7}	2.68	3.1 x 10^{-4}	2.06	2.3 x 10^{-4}	2.36	2.7 x 10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Trichloroethylene		Trichlorofluoromethane (Freon 11)		Trichlorotrifluoro-ethane (CFC^{-11}3)		Triethylene glycol dimethyl ether		Urethane (Ethyl carbamate)		Xylenes	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	0.47	5.3×10^{-5}	3.0×10^{-2}	3.4×10^{-6}	6.5×10^{-2}	7.4×10^{-6}	0.67	7.7×10^{-5}	1.6×10^{-2}	1.8×10^{-6}	2.79	3.2×10^{-4}
Biological Sciences	0.16	1.8×10^{-5}	1.0×10^{-2}	1.2×10^{-6}	2.2×10^{-2}	2.6×10^{-6}	0.23	2.6×10^{-5}	5.5×10^{-3}	6.3×10^{-7}	0.96	1.1×10^{-4}
Bourns Hall	0.45	5.2×10^{-5}	2.9×10^{-2}	3.3×10^{-6}	6.3×10^{-2}	7.2×10^{-6}	0.65	7.4×10^{-5}	1.6×10^{-2}	1.8×10^{-6}	2.71	3.1×10^{-4}
Boyce Hall	0.54	6.2×10^{-5}	3.5×10^{-2}	4.0×10^{-6}	7.6×10^{-2}	8.7×10^{-6}	0.78	8.9×10^{-5}	1.9×10^{-2}	2.1×10^{-6}	3.25	3.7×10^{-4}
Boyden Lab	3.5×10^{-2}	4.0×10^{-6}	2.2×10^{-3}	2.6×10^{-7}	4.9×10^{-3}	5.6×10^{-7}	5.0×10^{-2}	5.7×10^{-6}	1.2×10^{-3}	1.4×10^{-7}	0.21	2.4×10^{-5}
Chapman Hall	9.1×10^{-2}	1.0×10^{-5}	5.8×10^{-3}	6.7×10^{-7}	1.3×10^{-2}	1.4×10^{-6}	0.13	1.5×10^{-5}	3.1×10^{-3}	3.6×10^{-7}	0.54	6.2×10^{-5}
Chemical Sciences	1.09	1.2×10^{-4}	7.0×10^{-2}	8.0×10^{-6}	0.15	1.7×10^{-5}	1.57	1.8×10^{-4}	3.7×10^{-2}	4.3×10^{-6}	6.51	7.4×10^{-4}
Entomology	0.20	2.3×10^{-5}	1.3×10^{-2}	1.5×10^{-6}	2.8×10^{-2}	3.2×10^{-6}	0.29	3.3×10^{-5}	6.9×10^{-3}	7.9×10^{-7}	1.21	1.4×10^{-4}
Fawcett Lab	9.1×10^{-2}	1.0×10^{-5}	5.8×10^{-3}	6.7×10^{-7}	1.3×10^{-2}	1.4×10^{-6}	0.13	1.5×10^{-5}	3.1×10^{-3}	3.6×10^{-7}	0.54	6.2×10^{-5}
Genomics	0.22	2.5×10^{-5}	1.4×10^{-2}	1.6×10^{-6}	3.0×10^{-2}	3.4×10^{-6}	0.31	3.6×10^{-5}	7.4×10^{-3}	8.5×10^{-7}	1.29	1.5×10^{-4}
Geology	0.52	5.9×10^{-5}	3.3×10^{-2}	3.8×10^{-6}	7.2×10^{-2}	8.2×10^{-6}	0.74	8.5×10^{-5}	1.8×10^{-2}	2.0×10^{-6}	3.09	3.5×10^{-4}
Greenhouse 1	1.4×10^{-2}	1.6×10^{-6}	9.0×10^{-4}	1.0×10^{-7}	1.9×10^{-3}	2.2×10^{-7}	2.0×10^{-2}	2.3×10^{-6}	4.8×10^{-4}	5.5×10^{-8}	8.3×10^{-2}	9.5×10^{-6}
Greenhouse 2	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Greenhouse 3	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Greenhouse 6	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Greenhouse 7	2.1×10^{-2}	2.4×10^{-6}	1.3×10^{-3}	1.5×10^{-7}	2.9×10^{-3}	3.3×10^{-7}	3.0×10^{-2}	3.4×10^{-6}	7.2×10^{-4}	8.2×10^{-8}	1.3 x 10-1	1.4×10^{-5}
Greenhouse 9	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Greenhouse 10	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Greenhouse 12	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Greenhouse 13	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Greenhouse 20	7.0×10^{-3}	8.0×10^{-7}	4.5×10^{-4}	5.1×10^{-8}	9.7×10^{-4}	1.1×10^{-7}	1.0×10^{-2}	1.1×10^{-6}	2.4×10^{-4}	2.7×10^{-8}	4.2×10^{-2}	4.8×10^{-6}
Materials Science & Engineering	0.13	1.4×10^{-5}	8.1×10^{-3}	9.2×10^{-7}	1.8×10^{-2}	2.0×10^{-6}	0.18	2.1×10^{-5}	4.3×10^{-3}	4.9×10^{-7}	0.75	8.6×10^{-5}
Physics	0.15	1.7×10^{-5}	9.9×10^{-3}	1.1×10^{-6}	2.1×10^{-2}	2.4×10^{-6}	0.22	2.5×10^{-5}	5.3×10^{-3}	6.0×10^{-7}	0.92	1.0×10^{-4}
Pierce Hall	0.91	1.0×10^{-4}	5.8×10^{-2}	6.7×10^{-6}	0.13	1.4×10^{-5}	1.3e+00	1.5×10^{-4}	3.1×10^{-2}	3.6×10^{-6}	5.42	6.2×10^{-4}
Science Lab 1	0.52	5.9×10^{-5}	3.3×10^{-2}	3.8×10^{-6}	7.2×10^{-2}	8.2×10^{-6}	0.74	8.5×10^{-5}	1.8×10^{-2}	2.0×10^{-6}	3.09	3.5×10^{-4}
School of Medicine – Research	3.5×10^{-2}	4.0×10^{-6}	2.2×10^{-3}	2.6×10^{-7}	4.9×10^{-3}	5.6×10^{-7}	5.0×10^{-2}	5.7×10^{-6}	1.2×10^{-3}	1.4×10^{-7}	0.21	2.4×10^{-5}
Spieth Hall	0.33	3.7×10^{-5}	2.1×10^{-2}	2.4×10^{-6}	4.6×10^{-2}	5.2×10^{-6}	0.47	5.4×10^{-5}	1.1×10^{-2}	1.3×10^{-6}	1.96	2.2×10^{-4}
University Lab Building	4.9×10^{-2}	5.6×10^{-6}	3.1×10^{-3}	3.6×10^{-7}	6.8×10^{-3}	7.8×10^{-7}	7.0×10^{-2}	8.0×10^{-6}	1.7×10^{-3}	1.9×10^{-7}	0.29	3.3×10^{-5}
Webber Hall	0.21	2.4×10^{-5}	1.3×10^{-2}	1.5×10^{-6}	2.9×10^{-2}	3.3×10^{-6}	0.30	3.4×10^{-5}	7.2×10^{-3}	8.2×10^{-7}	1.25	1.4×10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

Table B-9 Laboratory Fume Hood Emissions – Future Scenario

	1,1,2,2-Tetrachloroethane		1,1,2-Trichloroethane (Vinyl trichloride)		1,4-Dioxane		2-Methyl naphthalene [PAH, POM]		4,4-Methylenedianiline [POM]		Acenaphthene [PAH, POM]		Acenaphthylene [PAH, POM]		Acrolein		Acrylonitrile		alpha-Hexachlorocyclo-hexane beta		Ammonia	
Source	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H	A	H
Batchelor Hall	5.2×10^{-2}	5.9×10^{-6}	2.6×10^{-2}	3.0×10^{-6}	1.17	1.3×10^{-4}	1.3×10^{-2}	1.5×10^{-6}	5.8×10^{-3}	6.7×10^{-7}	6.5×10^{-3}	7.4×10^{-7}	3.2×10^{-3}	3.7×10^{-7}	3.3×10^{-2}	3.8×10^{-6}	3.3×10^{-2}	3.8×10^{-6}	7.1×10^{-3}	8.2×10^{-7}	7.77	8.9×10^{-4}
Biological Sciences	1.8×10^{-2}	2.0×10^{-6}	8.9×10^{-3}	1.0×10^{-6}	0.40	4.6×10^{-5}	4.5×10^{-3}	5.1×10^{-7}	2.0×10^{-3}	2.3×10^{-7}	2.2×10^{-3}	2.5×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.1×10^{-2}	1.3×10^{-6}	1.1×10^{-2}	1.3×10^{-6}	2.5×10^{-3}	2.8×10^{-7}	2.67	3.0×10^{-4}
Bourns Hall	5.0×10^{-2}	5.8×10^{-6}	2.5×10^{-2}	2.9×10^{-6}	1.14	1.3×10^{-4}	1.3×10^{-2}	1.4×10^{-6}	5.7×10^{-3}	6.5×10^{-7}	6.3×10^{-3}	7.2×10^{-7}	3.1×10^{-3}	3.6×10^{-7}	3.2×10^{-2}	3.7×10^{-6}	3.2×10^{-2}	3.7×10^{-6}	6.9×10^{-3}	7.9×10^{-7}	7.54	8.6×10^{-4}
Boyce Hall	6.0×10^{-2}	6.9×10^{-6}	3.0×10^{-2}	3.5×10^{-6}	1.37	1.6×10^{-4}	1.5×10^{-2}	1.7×10^{-6}	6.8×10^{-3}	7.8×10^{-7}	7.6×10^{-3}	8.6×10^{-7}	3.8×10^{-3}	4.3×10^{-7}	3.9×10^{-2}	4.4×10^{-6}	3.9×10^{-2}	4.4×10^{-6}	8.3×10^{-3}	9.5×10^{-7}	9.05	1.0×10^{-3}
Boyden Lab	3.9×10^{-3}	4.4×10^{-7}	1.9×10^{-3}	2.2×10^{-7}	8.8×10^{-2}	1.0×10^{-5}	9.7×10^{-4}	1.1×10^{-7}	4.4×10^{-4}	5.0×10^{-8}	4.8×10^{-4}	5.5×10^{-8}	2.4×10^{-4}	2.8×10^{-8}	2.5×10^{-3}	2.8×10^{-7}	2.5×10^{-3}	2.8×10^{-7}	5.3×10^{-4}	6.1×10^{-8}	0.58	6.6×10^{-5}
Chapman Hall	1.0×10^{-2}	1.2×10^{-6}	5.0×10^{-3}	5.8×10^{-7}	0.23	2.6×10^{-5}	2.5×10^{-3}	2.9×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.3×10^{-3}	1.4×10^{-7}	6.3×10^{-4}	7.2×10^{-8}	6.4×10^{-3}	7.4×10^{-7}	6.4×10^{-3}	7.3×10^{-7}	1.4×10^{-3}	1.6×10^{-7}	1.51	1.7×10^{-4}
Chemical Sciences	0.12	1.4×10^{-5}	6.0×10^{-2}	6.9×10^{-6}	2.74	3.1×10^{-4}	3.0×10^{-2}	3.5×10^{-6}	1.4×10^{-2}	1.6×10^{-6}	1.5×10^{-2}	1.7×10^{-6}	7.6×10^{-3}	8.6×10^{-7}	7.7×10^{-2}	8.8×10^{-6}	7.7×10^{-2}	8.8×10^{-6}	1.7×10^{-2}	1.9×10^{-6}	18.1	2.1×10^{-3}
Entomology	2.2×10^{-2}	2.6×10^{-6}	1.1×10^{-2}	1.3×10^{-6}	0.51	5.8×10^{-5}	5.6×10^{-3}	6.4×10^{-7}	2.5×10^{-3}	2.9×10^{-7}	2.8×10^{-3}	3.2×10^{-7}	1.4×10^{-3}	1.6×10^{-7}	1.4×10^{-2}	1.6×10^{-6}	1.4×10^{-2}	1.6×10^{-6}	3.1×10^{-3}	3.5×10^{-7}	3.36	3.8×10^{-4}
Fawcett Lab	1.0×10^{-2}	1.2×10^{-6}	5.0×10^{-3}	5.8×10^{-7}	0.23	2.6×10^{-5}	2.5×10^{-3}	2.9×10^{-7}	1.1×10^{-3}	1.3×10^{-7}	1.3×10^{-3}	1.4×10^{-7}	6.3×10^{-4}	7.2×10^{-8}	6.4×10^{-3}	7.4×10^{-7}	6.4×10^{-3}	7.3×10^{-7}	1.4×10^{-3}	1.6×10^{-7}	1.51	1.7×10^{-4}
Genomics	2.4×10^{-2}	2.7×10^{-6}	1.2×10^{-2}	1.4×10^{-6}	0.54	6.2×10^{-5}	6.0×10^{-3}	6.9×10^{-7}	2.7×10^{-3}	3.1×10^{-7}	3.0×10^{-3}	3.4×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.5×10^{-2}	1.8×10^{-6}	1.5×10^{-2}	1.7×10^{-6}	3.3×10^{-3}	3.8×10^{-7}	3.60	4.1×10^{-4}
Geology	5.7×10^{-2}	6.5×10^{-6}	2.9×10^{-2}	3.3×10^{-6}	1.30	1.5×10^{-4}	1.4×10^{-2}	1.6×10^{-6}	6.5×10^{-3}	7.4×10^{-7}	7.2×10^{-3}	8.2×10^{-7}	3.6×10^{-3}	4.1×10^{-7}	3.7×10^{-2}	4.2×10^{-6}	3.7×10^{-2}	4.2×10^{-6}	7.9×10^{-3}	9.0×10^{-7}	8.58	9.8×10^{-4}
Greenhouse 1	1.6×10^{-3}	1.8×10^{-7}	7.8×10^{-4}	8.8×10^{-8}	3.5×10^{-2}	4.0×10^{-6}	3.9×10^{-4}	4.4×10^{-8}	1.7×10^{-4}	2.0×10^{-8}	1.9×10^{-4}	2.2×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	9.9×10^{-4}	1.1×10^{-7}	9.9×10^{-4}	1.1×10^{-7}	2.1×10^{-4}	2.4×10^{-8}	0.23	2.6×10^{-5}
Greenhouse 2	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Greenhouse 3	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Greenhouse 6	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Greenhouse 7	2.3×10^{-3}	2.7×10^{-7}	1.2×10^{-3}	1.3×10^{-7}	5.3×10^{-2}	6.0×10^{-6}	5.8×10^{-4}	6.6×10^{-8}	2.6×10^{-4}	3.0×10^{-8}	2.9×10^{-4}	3.3×10^{-8}	1.5×10^{-4}	1.7×10^{-8}	1.5×10^{-3}	1.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	3.2×10^{-4}	3.6×10^{-8}	0.35	4.0×10^{-5}
Greenhouse 9	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Greenhouse 10	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Greenhouse 12	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Greenhouse 13	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Greenhouse 20	7.8×10^{-4}	8.8×10^{-8}	3.9×10^{-4}	4.4×10^{-8}	1.8×10^{-2}	2.0×10^{-6}	1.9×10^{-4}	2.2×10^{-8}	8.7×10^{-5}	1.0×10^{-8}	9.7×10^{-5}	1.1×10^{-8}	4.8×10^{-5}	5.5×10^{-9}	5.0×10^{-4}	5.7×10^{-8}	4.9×10^{-4}	5.6×10^{-8}	1.1×10^{-4}	1.2×10^{-8}	0.12	1.3×10^{-5}
Materials Science & Engineering	1.4×10^{-2}	1.6×10^{-6}	7.0×10^{-3}	8.0×10^{-7}	0.32	3.6×10^{-5}	3.5×10^{-3}	4.0×10^{-7}	1.6×10^{-3}	1.8×10^{-7}	1.7×10^{-3}	2.0×10^{-7}	8.7×10^{-4}	1.0×10^{-7}	8.9×10^{-3}	1.0×10^{-6}	8.9×10^{-3}	1.0×10^{-6}	1.9×10^{-3}	2.2×10^{-7}	2.09	2.4×10^{-4}
Physics	1.7×10^{-2}	1.9×10^{-6}	8.5×10^{-3}	9.7×10^{-7}	0.39	4.4×10^{-5}	4.3×10^{-3}	4.9×10^{-7}	1.9×10^{-3}	2.2×10^{-7}	2.1×10^{-3}	2.4×10^{-7}	1.1×10^{-3}	1.2×10^{-7}	1.1×10^{-2}	1.2×10^{-6}	1.1×10^{-2}	1.2×10^{-6}	2.3×10^{-3}	2.7×10^{-7}	2.55	2.9×10^{-4}
Pierce Hall	0.10	1.2×10^{-5}	5.0×10^{-2}	5.8×10^{-6}	2.28	2.6×10^{-4}	2.5×10^{-2}	2.9×10^{-6}	1.1×10^{-2}	1.3×10^{-6}	1.3×10^{-2}	1.4×10^{-6}	6.3×10^{-3}	7.2×10^{-7}	6.4×10^{-2}	7.4×10^{-6}	6.4×10^{-2}	7.3×10^{-6}	1.4×10^{-2}	1.6×10^{-6}	15.1	1.7×10^{-3}
Science Lab 1	5.7×10^{-2}	6.5×10^{-6}	2.9×10^{-2}	3.3×10^{-6}	1.30	1.5×10^{-4}	1.4×10^{-2}	1.6×10^{-6}	6.5×10^{-3}	7.4×10^{-7}	7.2×10^{-3}	8.2×10^{-7}	3.6×10^{-3}	4.1×10^{-7}	3.7×10^{-2}	4.2×10^{-6}	3.7×10^{-2}	4.2×10^{-6}	7.9×10^{-3}	9.0×10^{-7}	8.58	9.8×10^{-4}
School of Medicine – Research	3.9×10^{-3}	4.4×10^{-7}	1.9×10^{-3}	2.2×10^{-7}	8.8×10^{-2}	1.0×10^{-5}	9.7×10^{-4}	1.1×10^{-7}	4.4×10^{-4}	5.0×10^{-8}	4.8×10^{-4}	5.5×10^{-8}	2.4×10^{-4}	2.8×10^{-8}	2.5×10^{-3}	2.8×10^{-7}	2.5×10^{-3}	2.8×10^{-7}	5.3×10^{-4}	6.1×10^{-8}	0.58	6.6×10^{-5}
Spieth Hall	3.6×10^{-2}	4.2×10^{-6}	1.8×10^{-2}	2.1×10^{-6}	0.82	9.4×10^{-5}	9.1×10^{-3}	1.0×10^{-6}	4.1×10^{-3}	4.7×10^{-7}	4.6×10^{-3}	5.2×10^{-7}	2.3×10^{-3}	2.6×10^{-7}	2.3×10^{-2}	2.7×10^{-6}	2.3×10^{-2}	2.7×10^{-6}	5.0×10^{-3}	5.7×10^{-7}	5.45	6.2×10^{-4}
University Lab Building	5.4×10^{-3}	6.2×10^{-7}	2.7×10^{-3}	3.1×10^{-7}	0.12	1.4×10^{-5}	1.4×10^{-3}	1.5×10^{-7}	6.1×10^{-4}	7.0×10^{-8}	6.8×10^{-4}	7.7×10^{-8}	3.4×10^{-4}	3.9×10^{-8}	3.5×10^{-3}	4.0×10^{-7}	3.5×10^{-3}	3.9×10^{-7}	7.5×10^{-4}	8.5×10^{-8}	0.81	9.3×10^{-5}
Webber Hall	2.3×10^{-2}	2.7×10^{-6}	1.2×10^{-2}	1.3×10^{-6}	0.53	6.0×10^{-5}	5.8×10^{-3}	6.6×10^{-7}	2.6×10^{-3}	3.0×10^{-7}	2.9×10^{-3}	3.3×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.5×10^{-2}	1.7×10^{-6}	1.5×10^{-2}	1.7×10^{-6}	3.2×10^{-3}	3.6×10^{-7}	3.48	4.0×10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Anthracene [PAH, POM]		Benzene		1,3-Butadiene		Cadmium		Carbon tetrachloride		Chlorine		Chloroform		Copper		Crystalline silica		Ethylene dibromide (1,2-Dibromoethane)		Ethylene dichloride (1,2-Dichloroethane)	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	5.2 x 10^{-2}	5.9 x 10^{-6}	1.48	1.7 x 10^{-4}	6.0 x 10^{-2}	6.8 x 10^{-6}	2.5 x 10^{-2}	2.8 x 10^{-6}	0.84	9.6 x 10^{-5}	6.5 x 10^{-3}	7.4 x 10^{-7}	15.2	1.7 x 10^{-3}	0.13	1.4 x 10^{-5}	3.8 x 10^{-2}	4.3 x 10^{-6}	0.19	2.2 x 10^{-5}	1.19	1.4 x 10^{-4}
Biological Sciences	1.8 x 10^{-2}	2.0 x 10^{-6}	0.51	5.8 x 10^{-5}	2.1 x 10^{-2}	2.3 x 10^{-6}	8.5 x 10^{-3}	9.7 x 10^{-7}	0.29	3.3 x 10^{-5}	2.2 x 10^{-3}	2.5 x 10^{-7}	5.21	5.9 x 10^{-4}	4.3 x 10^{-2}	4.9 x 10^{-6}	1.3 x 10^{-2}	1.5 x 10^{-6}	6.6 x 10^{-2}	7.5 x 10^{-6}	0.41	4.7 x 10^{-5}
Bourns Hall	5.0 x 10^{-2}	5.8 x 10^{-6}	1.44	1.6 x 10^{-4}	5.8 x 10^{-2}	6.6 x 10^{-6}	2.4 x 10^{-2}	2.7 x 10^{-6}	0.82	9.3 x 10^{-5}	6.3 x 10^{-3}	7.2 x 10^{-7}	14.7	1.7 x 10^{-3}	0.12	1.4 x 10^{-5}	3.7 x 10^{-2}	4.2 x 10^{-6}	0.19	2.1 x 10^{-5}	1.15	1.3 x 10^{-4}
Boyce Hall	6.0 x 10^{-2}	6.9 x 10^{-6}	1.72	2.0 x 10^{-4}	7.0 x 10^{-2}	7.9 x 10^{-6}	2.9 x 10^{-2}	3.3 x 10^{-6}	0.98	1.1 x 10^{-4}	7.6 x 10^{-3}	8.6 x 10^{-7}	17.7	2.0 x 10^{-3}	0.15	1.7 x 10^{-5}	4.4 x 10^{-2}	5.0 x 10^{-6}	0.22	2.6 x 10^{-5}	1.38	1.6 x 10^{-4}
Boyden Lab	3.9 x 10^{-3}	4.4 x 10^{-7}	0.11	1.3 x 10^{-5}	4.5 x 10^{-3}	5.1 x 10^{-7}	1.8 x 10^{-3}	2.1 x 10^{-7}	6.3 x 10^{-2}	7.2 x 10^{-6}	4.8 x 10^{-4}	5.5 x 10^{-8}	1.13	1.3 x 10^{-4}	9.4 x 10^{-3}	1.1 x 10^{-6}	2.8 x 10^{-3}	3.2 x 10^{-7}	1.4 x 10^{-2}	1.6 x 10^{-6}	8.9 x 10^{-2}	1.0 x 10^{-5}
Chapman Hall	1.0 x 10^{-2}	1.2 x 10^{-6}	0.29	3.3 x 10^{-5}	1.2 x 10^{-2}	1.3 x 10^{-6}	4.8 x 10^{-3}	5.5 x 10^{-7}	0.16	1.9 x 10^{-5}	1.3 x 10^{-3}	1.4 x 10^{-7}	2.94	3.4 x 10^{-4}	2.4 x 10^{-2}	2.8 x 10^{-6}	7.3 x 10^{-3}	8.3 x 10^{-7}	3.7 x 10^{-2}	4.3 x 10^{-6}	0.23	2.6 x 10^{-5}
Chemical Sciences	0.12	1.4 x 10^{-5}	3.45	3.9 x 10^{-4}	0.14	1.6 x 10^{-5}	5.8 x 10^{-2}	6.6 x 10^{-6}	2.0e+00	2.2 x 10^{-4}	1.5 x 10^{-2}	1.7 x 10^{-6}	35.3	4.0 x 10^{-3}	0.29	3.3 x 10^{-5}	8.8 x 10^{-2}	1.0 x 10^{-5}	0.45	5.1 x 10^{-5}	2.77	3.2 x 10^{-4}
Entomology	2.2 x 10^{-2}	2.6 x 10^{-6}	0.64	7.3 x 10^{-5}	2.6 x 10^{-2}	3.0 x 10^{-6}	1.1 x 10^{-2}	1.2 x 10^{-6}	0.37	4.2 x 10^{-5}	2.8 x 10^{-3}	3.2 x 10^{-7}	6.56	7.5 x 10^{-4}	5.5 x 10^{-2}	6.2 x 10^{-6}	1.6 x 10^{-2}	1.9 x 10^{-6}	8.3 x 10^{-2}	9.5 x 10^{-6}	0.51	5.9 x 10^{-5}
Fawcett Lab	1.0 x 10^{-2}	1.2 x 10^{-6}	0.29	3.3 x 10^{-5}	1.2 x 10^{-2}	1.3 x 10^{-6}	4.8 x 10^{-3}	5.5 x 10^{-7}	0.16	1.9 x 10^{-5}	1.3 x 10^{-3}	1.4 x 10^{-7}	2.94	3.4 x 10^{-4}	2.4 x 10^{-2}	2.8 x 10^{-6}	7.3 x 10^{-3}	8.3 x 10^{-7}	3.7 x 10^{-2}	4.3 x 10^{-6}	0.23	2.6 x 10^{-5}
Genomics	2.4 x 10^{-2}	2.7 x 10^{-6}	0.68	7.8 x 10^{-5}	2.8 x 10^{-2}	3.2 x 10^{-6}	1.1 x 10^{-2}	1.3 x 10^{-6}	0.39	4.5 x 10^{-5}	3.0 x 10^{-3}	3.4 x 10^{-7}	7.02	8.0 x 10^{-4}	5.8 x 10^{-2}	6.7 x 10^{-6}	1.7 x 10^{-2}	2.0 x 10^{-6}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.55	6.3 x 10^{-5}
Geology	5.7 x 10^{-2}	6.5 x 10^{-6}	1.63	1.9 x 10^{-4}	6.6 x 10^{-2}	7.5 x 10^{-6}	2.7 x 10^{-2}	3.1 x 10^{-6}	0.93	1.1 x 10^{-4}	7.2 x 10^{-3}	8.2 x 10^{-7}	16.7	1.9 x 10^{-3}	0.14	1.6 x 10^{-5}	4.2 x 10^{-2}	4.7 x 10^{-6}	0.21	2.4 x 10^{-5}	1.31	1.5 x 10^{-4}
Greenhouse 1	1.6 x 10^{-3}	1.8 x 10^{-7}	4.4 x 10^{-2}	5.0 x 10^{-6}	1.8 x 10^{-3}	2.0 x 10^{-7}	7.4 x 10^{-4}	8.4 x 10^{-8}	2.5 x 10^{-2}	2.9 x 10^{-6}	1.9 x 10^{-4}	2.2 x 10^{-8}	0.45	5.2 x 10^{-5}	3.8 x 10^{-3}	4.3 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	5.7 x 10^{-3}	6.5 x 10^{-7}	3.5 x 10^{-2}	4.0 x 10^{-6}
Greenhouse 2	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Greenhouse 3	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Greenhouse 6	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Greenhouse 7	2.3 x 10^{-3}	2.7 x 10^{-7}	6.6 x 10^{-2}	7.6 x 10^{-6}	2.7 x 10^{-3}	3.1 x 10^{-7}	1.1 x 10^{-3}	1.3 x 10^{-7}	3.8 x 10^{-2}	4.3 x 10^{-6}	2.9 x 10^{-4}	3.3 x 10^{-8}	0.68	7.8 x 10^{-5}	5.6 x 10^{-3}	6.4 x 10^{-7}	1.7 x 10^{-3}	1.9 x 10^{-7}	8.6 x 10^{-3}	9.8 x 10^{-7}	5.3 x 10^{-2}	6.1 x 10^{-6}
Greenhouse 9	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Greenhouse 10	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Greenhouse 12	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Greenhouse 13	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Greenhouse 20	7.8 x 10^{-4}	8.8 x 10^{-8}	2.2 x 10^{-2}	2.5 x 10^{-6}	8.9 x 10^{-4}	1.0 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	1.3 x 10^{-2}	1.4 x 10^{-6}	9.7 x 10^{-5}	1.1 x 10^{-8}	0.23	2.6 x 10^{-5}	1.9 x 10^{-3}	2.1 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	2.9 x 10^{-3}	3.3 x 10^{-7}	1.8 x 10^{-2}	2.0 x 10^{-6}
Materials Science & Engineering	1.4 x 10^{-2}	1.6 x 10^{-6}	0.40	4.5 x 10^{-5}	1.6 x 10^{-2}	1.8 x 10^{-6}	6.6 x 10^{-3}	7.6 x 10^{-7}	0.23	2.6 x 10^{-5}	1.7 x 10^{-3}	2.0 x 10^{-7}	4.07	4.7 x 10^{-4}	3.4 x 10^{-2}	3.9 x 10^{-6}	1.0 x 10^{-2}	1.2 x 10^{-6}	5.2 x 10^{-2}	5.9 x 10^{-6}	0.32	3.6 x 10^{-5}
Physics	1.7 x 10^{-2}	1.9 x 10^{-6}	0.49	5.5 x 10^{-5}	2.0 x 10^{-2}	2.2 x 10^{-6}	8.1 x 10^{-3}	9.3 x 10^{-7}	0.28	3.2 x 10^{-5}	2.1 x 10^{-3}	2.4 x 10^{-7}	4.98	5.7 x 10^{-4}	4.1 x 10^{-2}	4.7 x 10^{-6}	1.2 x 10^{-2}	1.4 x 10^{-6}	6.3 x 10^{-2}	7.2 x 10^{-6}	0.39	4.5 x 10^{-5}
Pierce Hall	0.10	1.2 x 10^{-5}	2.87	3.3 x 10^{-4}	0.12	1.3 x 10^{-5}	4.8 x 10^{-2}	5.5 x 10^{-6}	1.64	1.9 x 10^{-4}	1.3 x 10^{-2}	1.4 x 10^{-6}	29.4	3.4 x 10^{-3}	0.24	2.8 x 10^{-5}	7.3 x 10^{-2}	8.3 x 10^{-6}	0.37	4.3 x 10^{-5}	2.30	2.6 x 10^{-4}
Science Lab 1	5.7 x 10^{-2}	6.5 x 10^{-6}	1.63	1.9 x 10^{-4}	6.6 x 10^{-2}	7.5 x 10^{-6}	2.7 x 10^{-2}	3.1 x 10^{-6}	0.93	1.1 x 10^{-4}	7.2 x 10^{-3}	8.2 x 10^{-7}	16.7	1.9 x 10^{-3}	0.14	1.6 x 10^{-5}	4.2 x 10^{-2}	4.7 x 10^{-6}	0.21	2.4 x 10^{-5}	1.31	1.5 x 10^{-4}
School of Medicine – Research	3.9 x 10^{-3}	4.4 x 10^{-7}	0.11	1.3 x 10^{-5}	4.5 x 10^{-3}	5.1 x 10^{-7}	1.8 x 10^{-3}	2.1 x 10^{-7}	6.3 x 10^{-2}	7.2 x 10^{-6}	4.8 x 10^{-4}	5.5 x 10^{-8}	1.13	1.3 x 10^{-4}	9.4 x 10^{-3}	1.1 x 10^{-6}	2.8 x 10^{-3}	3.2 x 10^{-7}	1.4 x 10^{-2}	1.6 x 10^{-6}	8.9 x 10^{-2}	1.0 x 10^{-5}
Spieth Hall	3.6 x 10^{-2}	4.2 x 10^{-6}	1.04	1.2 x 10^{-4}	4.2 x 10^{-2}	4.8 x 10^{-6}	1.7 x 10^{-2}	2.0 x 10^{-6}	0.59	6.8 x 10^{-5}	4.6 x 10^{-3}	5.2 x 10^{-7}	10.6	1.2 x 10^{-3}	8.8 x 10^{-2}	1.0 x 10^{-5}	2.6 x 10^{-2}	3.0 x 10^{-6}	0.13	1.5 x 10^{-5}	0.83	9.5 x 10^{-5}
University Lab Building	5.4 x 10^{-3}	6.2 x 10^{-7}	0.15	1.8 x 10^{-5}	6.2 x 10^{-3}	7.1 x 10^{-7}	2.6 x 10^{-3}	2.9 x 10^{-7}	8.8 x 10^{-2}	1.0 x 10^{-5}	6.8 x 10^{-4}	7.7 x 10^{-8}	1.58	1.8 x 10^{-4}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.9 x 10^{-3}	4.5 x 10^{-7}	2.0 x 10^{-2}	2.3 x 10^{-6}	0.12	1.4 x 10^{-5}
Webber Hall	2.3 x 10^{-2}	2.7 x 10^{-6}	0.66	7.6 x 10^{-5}	2.7 x 10^{-2}	3.1 x 10^{-6}	1.1 x 10^{-2}	1.3 x 10^{-6}	0.38	4.3 x 10^{-5}	2.9 x 10^{-3}	3.3 x 10^{-7}	6.79	7.8 x 10^{-4}	5.6 x 10^{-2}	6.4 x 10^{-6}	1.7 x 10^{-2}	1.9 x 10^{-6}	8.6 x 10^{-2}	9.8 x 10^{-6}	0.53	6.1 x 10^{-5}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Ethylene glycol monoethyl ether		Ethylene glycol monomethyl ether		Ethylene oxide		Fluorene [PAH, POM]		Formaldehyde		Hexachlorobenzene		Hexamethylene-1,6-diisocyanate		Hexane		Hydrazine		Hydrochloric acid		Hydrogen fluoride (hydrofluoric acid)	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	0.57	6.5×10^{-5}	9.7×10^{-2}	1.1×10^{-5}	1.0×10^{-2}	1.2×10^{-6}	1.9×10^{-2}	2.1×10^{-6}	3.43	3.9×10^{-4}	2.6×10^{-3}	3.0×10^{-7}	3.9×10^{-4}	4.4×10^{-8}	9.93	1.1×10^{-3}	1.9×10^{-2}	2.2×10^{-6}	56.2	6.4×10^{-3}	0.97	1.1×10^{-4}
Biological Sciences	0.20	2.2×10^{-5}	3.3×10^{-2}	3.8×10^{-6}	3.6×10^{-3}	4.1×10^{-7}	6.5×10^{-3}	7.4×10^{-7}	1.18	1.3×10^{-4}	8.9×10^{-4}	1.0×10^{-7}	1.3×10^{-4}	1.5×10^{-8}	3.41	3.9×10^{-4}	6.5×10^{-3}	7.4×10^{-7}	19.3	2.2×10^{-3}	0.33	3.8×10^{-5}
Bourns Hall	0.55	6.3×10^{-5}	9.4×10^{-2}	1.1×10^{-5}	1.0×10^{-2}	1.2×10^{-6}	1.8×10^{-2}	2.1×10^{-6}	3.33	3.8×10^{-4}	2.5×10^{-3}	2.9×10^{-7}	3.8×10^{-4}	4.3×10^{-8}	9.63	1.1×10^{-3}	1.8×10^{-2}	2.1×10^{-6}	54.5	6.2×10^{-3}	0.94	1.1×10^{-4}
Boyce Hall	0.67	7.6×10^{-5}	0.11	1.3×10^{-5}	1.2×10^{-2}	1.4×10^{-6}	2.2×10^{-2}	2.5×10^{-6}	4.00	4.6×10^{-4}	3.0×10^{-3}	3.5×10^{-7}	4.5×10^{-4}	5.2×10^{-8}	11.6	1.3×10^{-3}	2.2×10^{-2}	2.5×10^{-6}	65.4	7.5×10^{-3}	1.13	1.3×10^{-4}
Boyden Lab	4.3×10^{-2}	4.9×10^{-6}	7.3×10^{-3}	8.3×10^{-7}	7.8×10^{-4}	8.8×10^{-8}	1.4×10^{-3}	1.6×10^{-7}	0.26	2.9×10^{-5}	1.9×10^{-4}	2.2×10^{-8}	2.9×10^{-5}	3.3×10^{-9}	0.74	8.5×10^{-5}	1.4×10^{-3}	1.6×10^{-7}	4.19	4.8×10^{-4}	7.3×10^{-2}	8.3×10^{-6}
Chapman Hall	0.11	1.3×10^{-5}	1.9×10^{-2}	2.2×10^{-6}	2.0×10^{-3}	2.3×10^{-7}	3.7×10^{-3}	4.2×10^{-7}	0.67	7.6×10^{-5}	5.0×10^{-4}	5.8×10^{-8}	7.6×10^{-5}	8.6×10^{-9}	1.93	2.2×10^{-4}	3.7×10^{-3}	4.2×10^{-7}	10.9	1.2×10^{-3}	0.19	2.2×10^{-5}
Chemical Sciences	1.33	1.5×10^{-4}	0.23	2.6×10^{-5}	2.4×10^{-2}	2.8×10^{-6}	4.4×10^{-2}	5.0×10^{-6}	8.00	9.1×10^{-4}	6.0×10^{-3}	6.9×10^{-7}	9.1×10^{-4}	1.0×10^{-7}	23.1	2.6×10^{-3}	4.4×10^{-2}	5.0×10^{-6}	131	1.5×10^{-2}	2.27	2.6×10^{-4}
Entomology	0.25	2.8×10^{-5}	4.2×10^{-2}	4.8×10^{-6}	4.5×10^{-3}	5.1×10^{-7}	8.1×10^{-3}	9.3×10^{-7}	1.49	1.7×10^{-4}	1.1×10^{-3}	1.3×10^{-7}	1.7×10^{-4}	1.9×10^{-8}	4.30	4.9×10^{-4}	8.2×10^{-3}	9.4×10^{-7}	24.3	2.8×10^{-3}	0.42	4.8×10^{-5}
Fawcett Lab	0.11	1.3×10^{-5}	1.9×10^{-2}	2.2×10^{-6}	2.0×10^{-3}	2.3×10^{-7}	3.7×10^{-3}	4.2×10^{-7}	0.67	7.6×10^{-5}	5.0×10^{-4}	5.8×10^{-8}	7.6×10^{-5}	8.6×10^{-9}	1.93	2.2×10^{-4}	3.7×10^{-3}	4.2×10^{-7}	10.9	1.2×10^{-3}	0.19	2.2×10^{-5}
Genomics	0.26	3.0×10^{-5}	4.5×10^{-2}	5.1×10^{-6}	4.8×10^{-3}	5.5×10^{-7}	8.7×10^{-3}	9.9×10^{-7}	1.59	1.8×10^{-4}	1.2×10^{-3}	1.4×10^{-7}	1.8×10^{-4}	2.1×10^{-8}	4.59	5.2×10^{-4}	8.8×10^{-3}	1.0×10^{-6}	26.0	3.0×10^{-3}	0.45	5.1×10^{-5}
Geology	0.63	7.2×10^{-5}	0.11	1.2×10^{-5}	1.1×10^{-2}	1.3×10^{-6}	2.1×10^{-2}	2.4×10^{-6}	3.79	4.3×10^{-4}	2.9×10^{-3}	3.3×10^{-7}	4.3×10^{-4}	4.9×10^{-8}	11.0	1.3×10^{-3}	2.1×10^{-2}	2.4×10^{-6}	62.1	7.1×10^{-3}	1.08	1.2×10^{-4}
Greenhouse 1	1.7×10^{-2}	1.9×10^{-6}	2.9×10^{-3}	3.3×10^{-7}	3.1×10^{-4}	3.5×10^{-8}	5.6×10^{-4}	6.4×10^{-8}	0.10	1.2×10^{-5}	7.8×10^{-5}	8.8×10^{-9}	1.2×10^{-5}	1.3×10^{-9}	0.30	3.4×10^{-5}	5.7×10^{-4}	6.5×10^{-8}	1.68	1.9×10^{-4}	2.9×10^{-2}	3.3×10^{-6}
Greenhouse 2	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Greenhouse 3	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Greenhouse 6	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Greenhouse 7	2.6×10^{-2}	2.9×10^{-6}	4.4×10^{-3}	5.0×10^{-7}	4.7×10^{-4}	5.3×10^{-8}	8.4×10^{-4}	9.6×10^{-8}	0.15	1.8×10^{-5}	1.2×10^{-4}	1.3×10^{-8}	1.7×10^{-5}	2.0×10^{-9}	0.44	5.1×10^{-5}	8.5×10^{-4}	9.7×10^{-8}	2.52	2.9×10^{-4}	4.4×10^{-2}	5.0×10^{-6}
Greenhouse 9	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Greenhouse 10	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Greenhouse 12	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Greenhouse 13	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Greenhouse 20	8.5×10^{-3}	9.7×10^{-7}	1.5×10^{-3}	1.7×10^{-7}	1.6×10^{-4}	1.8×10^{-8}	2.8×10^{-4}	3.2×10^{-8}	5.1×10^{-2}	5.9×10^{-6}	3.9×10^{-5}	4.4×10^{-9}	5.8×10^{-6}	6.6×10^{-10}	0.15	1.7×10^{-5}	2.8×10^{-4}	3.2×10^{-8}	0.84	9.6×10^{-5}	1.5×10^{-2}	1.7×10^{-6}
Materials Science & Engineering	0.15	1.8×10^{-5}	2.6×10^{-2}	3.0×10^{-6}	2.8×10^{-3}	3.2×10^{-7}	5.1×10^{-3}	5.8×10^{-7}	0.92	1.1×10^{-4}	7.0×10^{-4}	8.0×10^{-8}	1.0×10^{-4}	1.2×10^{-8}	2.67	3.0×10^{-4}	5.1×10^{-3}	5.8×10^{-7}	15.1	1.7×10^{-3}	0.26	3.0×10^{-5}
Physics	0.19	2.1×10^{-5}	3.2×10^{-2}	3.6×10^{-6}	3.4×10^{-3}	3.9×10^{-7}	6.2×10^{-3}	7.1×10^{-7}	1.13	1.3×10^{-4}	8.5×10^{-4}	9.7×10^{-8}	1.3×10^{-4}	1.5×10^{-8}	3.26	3.7×10^{-4}	6.2×10^{-3}	7.1×10^{-7}	18.4	2.1×10^{-3}	0.32	3.6×10^{-5}
Pierce Hall	1.11	1.3×10^{-4}	0.19	2.2×10^{-5}	2.0×10^{-2}	2.3×10^{-6}	3.7×10^{-2}	4.2×10^{-6}	6.66	7.6×10^{-4}	5.0×10^{-3}	5.8×10^{-7}	7.6×10^{-4}	8.6×10^{-8}	19.3	2.2×10^{-3}	3.7×10^{-2}	4.2×10^{-6}	109	1.2×10^{-2}	1.89	2.2×10^{-4}
Science Lab 1	0.63	7.2×10^{-5}	0.11	1.2×10^{-5}	1.1×10^{-2}	1.3×10^{-6}	2.1×10^{-2}	2.4×10^{-6}	3.79	4.3×10^{-4}	2.9×10^{-3}	3.3×10^{-7}	4.3×10^{-4}	4.9×10^{-8}	11.0	1.3×10^{-3}	2.1×10^{-2}	2.4×10^{-6}	62.1	7.1×10^{-3}	1.08	1.2×10^{-4}
School of Medicine – Research	4.3×10^{-2}	4.9×10^{-6}	7.3×10^{-3}	8.3×10^{-7}	7.8×10^{-4}	8.8×10^{-8}	1.4×10^{-3}	1.6×10^{-7}	0.26	2.9×10^{-5}	1.9×10^{-4}	2.2×10^{-8}	2.9×10^{-5}	3.3×10^{-9}	0.74	8.5×10^{-5}	1.4×10^{-3}	1.6×10^{-7}	4.19	4.8×10^{-4}	7.3×10^{-2}	8.3×10^{-6}
Spieth Hall	0.40	4.6×10^{-5}	6.8×10^{-2}	7.8×10^{-6}	7.3×10^{-3}	8.3×10^{-7}	1.3×10^{-2}	1.5×10^{-6}	2.41	2.7×10^{-4}	1.8×10^{-3}	2.1×10^{-7}	2.7×10^{-4}	3.1×10^{-8}	6.96	7.9×10^{-4}	1.3×10^{-2}	1.5×10^{-6}	39.4	4.5×10^{-3}	0.68	7.8×10^{-5}
University Lab Building	6.0×10^{-2}	6.8×10^{-6}	1.0×10^{-2}	1.2×10^{-6}	1.1×10^{-3}	1.2×10^{-7}	2.0×10^{-3}	2.2×10^{-7}	0.36	4.1×10^{-5}	2.7×10^{-4}	3.1×10^{-8}	4.1×10^{-5}	4.6×10^{-9}	1.04	1.2×10^{-4}	2.0×10^{-3}	2.3×10^{-7}	5.87	6.7×10^{-4}	0.10	1.2×10^{-5}
Webber Hall	0.26	2.9×10^{-5}	4.4×10^{-2}	5.0×10^{-6}	4.7×10^{-3}	5.3×10^{-7}	8.4×10^{-3}	9.6×10^{-7}	1.54	1.8×10^{-4}	1.2×10^{-3}	1.3×10^{-7}	1.7×10^{-4}	2.0×10^{-8}	4.44	5.1×10^{-4}	8.5×10^{-3}	9.7×10^{-7}	25.2	2.9×10^{-3}	0.44	5.0×10^{-5}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Lead compounds (inorganic)		Lindane (gamma-Hexa-chlorocyclohexane)		Manganese		Mercuric chloride		Mercury		Methanol		Methyl isobutyl ketone (Hexone)		Methylene chloride (Dichloromethane)		Methylene diphenyl diisocyanate [MDI] [POM]		Naphthalene [PAH, POM]		Nickel	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	1.6 x 10^{-2}	1.9 x 10^{-6}	1.3 x 10^{-3}	1.5 x 10^{-7}	1.0 x 10^{-2}	1.2 x 10^{-6}	7.8 x 10^{-2}	8.9 x 10^{-6}	9.7 x 10^{-2}	1.1 x 10^{-5}	29.6	3.4 x 10^{-3}	0.38	4.4 x 10^{-5}	19.6	2.2 x 10^{-3}	7.8 x 10^{-3}	8.9 x 10^{-7}	0.23	2.6 x 10^{-5}	5.8 x 10^{-3}	6.7 x 10^{-7}
Biological Sciences	5.6 x 10^{-3}	6.4 x 10^{-7}	4.5 x 10^{-4}	5.1 x 10^{-8}	3.6 x 10^{-3}	4.1 x 10^{-7}	2.7 x 10^{-2}	3.1 x 10^{-6}	3.3 x 10^{-2}	3.8 x 10^{-6}	10.2	1.2 x 10^{-3}	0.13	1.5 x 10^{-5}	6.73	7.7 x 10^{-4}	2.7 x 10^{-3}	3.1 x 10^{-7}	7.9 x 10^{-2}	9.0 x 10^{-6}	2.0 x 10^{-3}	2.3 x 10^{-7}
Bourns Hall	1.6 x 10^{-2}	1.8 x 10^{-6}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.0 x 10^{-2}	1.2 x 10^{-6}	7.6 x 10^{-2}	8.6 x 10^{-6}	9.4 x 10^{-2}	1.1 x 10^{-5}	28.7	3.3 x 10^{-3}	0.37	4.2 x 10^{-5}	19.0	2.2 x 10^{-3}	7.6 x 10^{-3}	8.6 x 10^{-7}	0.22	2.5 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}
Boyce Hall	1.9 x 10^{-2}	2.2 x 10^{-6}	1.5 x 10^{-3}	1.7 x 10^{-7}	1.2 x 10^{-2}	1.4 x 10^{-6}	9.1 x 10^{-2}	1.0 x 10^{-5}	0.11	1.3 x 10^{-5}	34.4	3.9 x 10^{-3}	0.45	5.1 x 10^{-5}	22.8	2.6 x 10^{-3}	9.1 x 10^{-3}	1.0 x 10^{-6}	0.27	3.0 x 10^{-5}	6.8 x 10^{-3}	7.8 x 10^{-7}
Boyden Lab	1.2 x 10^{-3}	1.4 x 10^{-7}	9.7 x 10^{-5}	1.1 x 10^{-8}	7.8 x 10^{-4}	8.8 x 10^{-8}	5.8 x 10^{-3}	6.6 x 10^{-7}	7.3 x 10^{-3}	8.3 x 10^{-7}	2.21	2.5 x 10^{-4}	2.9 x 10^{-2}	3.3 x 10^{-6}	1.46	1.7 x 10^{-4}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.7 x 10^{-2}	2.0 x 10^{-6}	4.4 x 10^{-4}	5.0 x 10^{-8}
Chapman Hall	3.1 x 10^{-3}	3.6 x 10^{-7}	2.5 x 10^{-4}	2.9 x 10^{-8}	2.0 x 10^{-3}	2.3 x 10^{-7}	1.5 x 10^{-2}	1.7 x 10^{-6}	1.9 x 10^{-2}	2.2 x 10^{-6}	5.74	6.6 x 10^{-4}	7.4 x 10^{-2}	8.5 x 10^{-6}	3.80	4.3 x 10^{-4}	1.5 x 10^{-3}	1.7 x 10^{-7}	4.4 x 10^{-2}	5.1 x 10^{-6}	1.1 x 10^{-3}	1.3 x 10^{-7}
Chemical Sciences	3.8 x 10^{-2}	4.3 x 10^{-6}	3.0 x 10^{-3}	3.5 x 10^{-7}	2.4 x 10^{-2}	2.8 x 10^{-6}	0.18	2.1 x 10^{-5}	0.23	2.6 x 10^{-5}	68.9	7.9 x 10^{-3}	0.89	1.0 x 10^{-4}	45.7	5.2 x 10^{-3}	1.8 x 10^{-2}	2.1 x 10^{-6}	0.53	6.1 x 10^{-5}	1.4 x 10^{-2}	1.6 x 10^{-6}
Entomology	7.0 x 10^{-3}	8.0 x 10^{-7}	5.6 x 10^{-4}	6.4 x 10^{-8}	4.5 x 10^{-3}	5.1 x 10^{-7}	3.4 x 10^{-2}	3.8 x 10^{-6}	4.2 x 10^{-2}	4.8 x 10^{-6}	12.8	1.5 x 10^{-3}	0.17	1.9 x 10^{-5}	8.49	9.7 x 10^{-4}	3.4 x 10^{-3}	3.8 x 10^{-7}	9.9 x 10^{-2}	1.1 x 10^{-5}	2.5 x 10^{-3}	2.9 x 10^{-7}
Fawcett Lab	3.1 x 10^{-3}	3.6 x 10^{-7}	2.5 x 10^{-4}	2.9 x 10^{-8}	2.0 x 10^{-3}	2.3 x 10^{-7}	1.5 x 10^{-2}	1.7 x 10^{-6}	1.9 x 10^{-2}	2.2 x 10^{-6}	5.74	6.6 x 10^{-4}	7.4 x 10^{-2}	8.5 x 10^{-6}	3.80	4.3 x 10^{-4}	1.5 x 10^{-3}	1.7 x 10^{-7}	4.4 x 10^{-2}	5.1 x 10^{-6}	1.1 x 10^{-3}	1.3 x 10^{-7}
Genomics	7.5 x 10^{-3}	8.6 x 10^{-7}	6.0 x 10^{-4}	6.9 x 10^{-8}	4.8 x 10^{-3}	5.5 x 10^{-7}	3.6 x 10^{-2}	4.1 x 10^{-6}	4.5 x 10^{-2}	5.1 x 10^{-6}	13.7	1.6 x 10^{-3}	0.18	2.0 x 10^{-5}	9.07	1.0 x 10^{-3}	3.6 x 10^{-3}	4.1 x 10^{-7}	0.11	1.2 x 10^{-5}	2.7 x 10^{-3}	3.1 x 10^{-7}
Geology	1.8 x 10^{-2}	2.0 x 10^{-6}	1.4 x 10^{-3}	1.6 x 10^{-7}	1.1 x 10^{-2}	1.3 x 10^{-6}	8.6 x 10^{-2}	9.8 x 10^{-6}	0.11	1.2 x 10^{-5}	32.7	3.7 x 10^{-3}	0.42	4.8 x 10^{-5}	21.7	2.5 x 10^{-3}	8.6 x 10^{-3}	9.8 x 10^{-7}	0.25	2.9 x 10^{-5}	6.5 x 10^{-3}	7.4 x 10^{-7}
Greenhouse 1	4.8 x 10^{-4}	5.5 x 10^{-8}	3.9 x 10^{-5}	4.4 x 10^{-9}	3.1 x 10^{-4}	3.5 x 10^{-8}	2.3 x 10^{-3}	2.7 x 10^{-7}	2.9 x 10^{-3}	3.3 x 10^{-7}	0.88	1.0 x 10^{-4}	1.1 x 10^{-2}	1.3 x 10^{-6}	0.59	6.7 x 10^{-5}	2.3 x 10^{-4}	2.7 x 10^{-8}	6.8 x 10^{-3}	7.8 x 10^{-7}	1.7 x 10^{-4}	2.0 x 10^{-8}
Greenhouse 2	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Greenhouse 3	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Greenhouse 6	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Greenhouse 7	7.3 x 10^{-4}	8.3 x 10^{-8}	5.8 x 10^{-5}	6.6 x 10^{-9}	4.7 x 10^{-4}	5.3 x 10^{-8}	3.5 x 10^{-3}	4.0 x 10^{-7}	4.4 x 10^{-3}	5.0 x 10^{-7}	1.32	1.5 x 10^{-4}	1.7 x 10^{-2}	2.0 x 10^{-6}	0.88	1.0 x 10^{-4}	3.5 x 10^{-4}	4.0 x 10^{-8}	1.0 x 10^{-2}	1.2 x 10^{-6}	2.6 x 10^{-4}	3.0 x 10^{-8}
Greenhouse 9	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Greenhouse 10	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Greenhouse 12	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Greenhouse 13	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Greenhouse 20	2.4 x 10^{-4}	2.8 x 10^{-8}	1.9 x 10^{-5}	2.2 x 10^{-9}	1.6 x 10^{-4}	1.8 x 10^{-8}	1.2 x 10^{-3}	1.3 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.44	5.0 x 10^{-5}	5.7 x 10^{-3}	6.5 x 10^{-7}	0.29	3.3 x 10^{-5}	1.2 x 10^{-4}	1.3 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	8.7 x 10^{-5}	1.0 x 10^{-8}
Materials Science & Engineering	4.4 x 10^{-3}	5.0 x 10^{-7}	3.5 x 10^{-4}	4.0 x 10^{-8}	2.8 x 10^{-3}	3.2 x 10^{-7}	2.1 x 10^{-2}	2.4 x 10^{-6}	2.6 x 10^{-2}	3.0 x 10^{-6}	7.95	9.1 x 10^{-4}	0.10	1.2 x 10^{-5}	5.27	6.0 x 10^{-4}	2.1 x 10^{-3}	2.4 x 10^{-7}	6.2 x 10^{-2}	7.0 x 10^{-6}	1.6 x 10^{-3}	1.8 x 10^{-7}
Physics	5.3 x 10^{-3}	6.1 x 10^{-7}	4.3 x 10^{-4}	4.9 x 10^{-8}	3.4 x 10^{-3}	3.9 x 10^{-7}	2.6 x 10^{-2}	2.9 x 10^{-6}	3.2 x 10^{-2}	3.6 x 10^{-6}	9.72	1.1 x 10^{-3}	0.13	1.4 x 10^{-5}	6.44	7.4 x 10^{-4}	2.6 x 10^{-3}	2.9 x 10^{-7}	7.5 x 10^{-2}	8.6 x 10^{-6}	1.9 x 10^{-3}	2.2 x 10^{-7}
Pierce Hall	3.1 x 10^{-2}	3.6 x 10^{-6}	2.5 x 10^{-3}	2.9 x 10^{-7}	2.0 x 10^{-2}	2.3 x 10^{-6}	0.15	1.7 x 10^{-5}	0.19	2.2 x 10^{-5}	57.4	6.6 x 10^{-3}	0.74	8.5 x 10^{-5}	38.0	4.3 x 10^{-3}	1.5 x 10^{-2}	1.7 x 10^{-6}	0.44	5.1 x 10^{-5}	1.1 x 10^{-2}	1.3 x 10^{-6}
Science Lab 1	1.8 x 10^{-2}	2.0 x 10^{-6}	1.4 x 10^{-3}	1.6 x 10^{-7}	1.1 x 10^{-2}	1.3 x 10^{-6}	8.6 x 10^{-2}	9.8 x 10^{-6}	0.11	1.2 x 10^{-5}	32.7	3.7 x 10^{-3}	0.42	4.8 x 10^{-5}	21.7	2.5 x 10^{-3}	8.6 x 10^{-3}	9.8 x 10^{-7}	0.25	2.9 x 10^{-5}	6.5 x 10^{-3}	7.4 x 10^{-7}
School of Medicine – Research	1.2 x 10^{-3}	1.4 x 10^{-7}	9.7 x 10^{-5}	1.1 x 10^{-8}	7.8 x 10^{-4}	8.8 x 10^{-8}	5.8 x 10^{-3}	6.6 x 10^{-7}	7.3 x 10^{-3}	8.3 x 10^{-7}	2.21	2.5 x 10^{-4}	2.9 x 10^{-2}	3.3 x 10^{-6}	1.46	1.7 x 10^{-4}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.7 x 10^{-2}	2.0 x 10^{-6}	4.4 x 10^{-4}	5.0 x 10^{-8}
Spieth Hall	1.1 x 10^{-2}	1.3 x 10^{-6}	9.1 x 10^{-4}	1.0 x 10^{-7}	7.3 x 10^{-3}	8.3 x 10^{-7}	5.5 x 10^{-2}	6.2 x 10^{-6}	6.8 x 10^{-2}	7.8 x 10^{-6}	20.8	2.4 x 10^{-3}	0.27	3.1 x 10^{-5}	13.8	1.6 x 10^{-3}	5.5 x 10^{-3}	6.2 x 10^{-7}	0.16	1.8 x 10^{-5}	4.1 x 10^{-3}	4.7 x 10^{-7}
University Lab Building	1.7 x 10^{-3}	1.9 x 10^{-7}	1.4 x 10^{-4}	1.5 x 10^{-8}	1.1 x 10^{-3}	1.2 x 10^{-7}	8.1 x 10^{-3}	9.3 x 10^{-7}	1.0 x 10^{-2}	1.2 x 10^{-6}	3.09	3.5 x 10^{-4}	4.0 x 10^{-2}	4.6 x 10^{-6}	2.05	2.3 x 10^{-4}	8.1 x 10^{-4}	9.3 x 10^{-8}	2.4 x 10^{-2}	2.7 x 10^{-6}	6.1 x 10^{-4}	7.0 x 10^{-8}
Webber Hall	7.3 x 10^{-3}	8.3 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	4.7 x 10^{-3}	5.3 x 10^{-7}	3.5 x 10^{-2}	4.0 x 10^{-6}	4.4 x 10^{-2}	5.0 x 10^{-6}	13.2	1.5 x 10^{-3}	0.17	2.0 x 10^{-5}	8.78	1.0 x 10^{-3}	3.5 x 10^{-3}	4.0 x 10^{-7}	0.10	1.2 x 10^{-5}	2.6 x 10^{-3}	3.0 x 10^{-7}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Oleum		p-Dichlorobenzene (1,4-Dichlorobenzene)		Perchloroethylene (Tetrachloro-ethene)		Phenanthrene [PAH, POM]		Phosphoric acid		Propylene oxide		Pyrene [PAH, POM]		Selenium		Sodium hydroxide		Sulfuric acid		Toluene	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	9.3 x 10^{-2}	1.1 x 10^{-5}	3.9 x 10^{-2}	4.4 x 10^{-6}	8.4 x 10^{-2}	9.6 x 10^{-6}	1.2 x 10^{-2}	1.4 x 10^{-6}	4.46	5.1 x 10^{-4}	9.1 x 10^{-2}	1.0 x 10^{-5}	1.6 x 10^{-2}	1.9 x 10^{-6}	1.4 x 10^{-2}	1.6 x 10^{-6}	7.75	8.8 x 10^{-4}	5.94	6.8 x 10^{-4}	6.82	7.8 x 10^{-4}
Biological Sciences	3.2 x 10^{-2}	3.6 x 10^{-6}	1.3 x 10^{-2}	1.5 x 10^{-6}	2.9 x 10^{-2}	3.3 x 10^{-6}	4.2 x 10^{-3}	4.8 x 10^{-7}	1.53	1.7 x 10^{-4}	3.1 x 10^{-2}	3.6 x 10^{-6}	5.6 x 10^{-3}	6.4 x 10^{-7}	4.9 x 10^{-3}	5.6 x 10^{-7}	2.66	3.0 x 10^{-4}	2.04	2.3 x 10^{-4}	2.34	2.7 x 10^{-4}
Bourns Hall	9.0 x 10^{-2}	1.0 x 10^{-5}	3.8 x 10^{-2}	4.3 x 10^{-6}	8.2 x 10^{-2}	9.3 x 10^{-6}	1.2 x 10^{-2}	1.4 x 10^{-6}	4.33	4.9 x 10^{-4}	8.8 x 10^{-2}	1.0 x 10^{-5}	1.6 x 10^{-2}	1.8 x 10^{-6}	1.4 x 10^{-2}	1.6 x 10^{-6}	7.52	8.6 x 10^{-4}	5.76	6.6 x 10^{-4}	6.62	7.6 x 10^{-4}
Boyce Hall	0.11	1.2 x 10^{-5}	4.5 x 10^{-2}	5.2 x 10^{-6}	9.8 x 10^{-2}	1.1 x 10^{-5}	1.4 x 10^{-2}	1.6 x 10^{-6}	5.19	5.9 x 10^{-4}	0.11	1.2 x 10^{-5}	1.9 x 10^{-2}	2.2 x 10^{-6}	1.7 x 10^{-2}	1.9 x 10^{-6}	9.02	1.0 x 10^{-3}	6.91	7.9 x 10^{-4}	7.94	9.1 x 10^{-4}
Boyden Lab	6.9 x 10^{-3}	7.9 x 10^{-7}	2.9 x 10^{-3}	3.3 x 10^{-7}	6.3 x 10^{-3}	7.2 x 10^{-7}	9.2 x 10^{-4}	1.1 x 10^{-7}	0.33	3.8 x 10^{-5}	6.8 x 10^{-3}	7.7 x 10^{-7}	1.2 x 10^{-3}	1.4 x 10^{-7}	1.1 x 10^{-3}	1.2 x 10^{-7}	0.58	6.6 x 10^{-5}	0.44	5.1 x 10^{-5}	0.51	5.8 x 10^{-5}
Chapman Hall	1.8 x 10^{-2}	2.1 x 10^{-6}	7.6 x 10^{-3}	8.6 x 10^{-7}	1.6 x 10^{-2}	1.9 x 10^{-6}	2.4 x 10^{-3}	2.7 x 10^{-7}	0.87	9.9 x 10^{-5}	1.8 x 10^{-2}	2.0 x 10^{-6}	3.1 x 10^{-3}	3.6 x 10^{-7}	2.8 x 10^{-3}	3.2 x 10^{-7}	1.50	1.7 x 10^{-4}	1.15	1.3 x 10^{-4}	1.32	1.5 x 10^{-4}
Chemical Sciences	0.22	2.5 x 10^{-5}	9.1 x 10^{-2}	1.0 x 10^{-5}	0.20	2.2 x 10^{-5}	2.9 x 10^{-2}	3.3 x 10^{-6}	10.4	1.2 x 10^{-3}	0.21	2.4 x 10^{-5}	3.8 x 10^{-2}	4.3 x 10^{-6}	3.3 x 10^{-2}	3.8 x 10^{-6}	18.0	2.1 x 10^{-3}	13.8	1.6 x 10^{-3}	15.9	1.8 x 10^{-3}
Entomology	4.0 x 10^{-2}	4.6 x 10^{-6}	1.7 x 10^{-2}	1.9 x 10^{-6}	3.7 x 10^{-2}	4.2 x 10^{-6}	5.3 x 10^{-3}	6.1 x 10^{-7}	1.93	2.2 x 10^{-4}	3.9 x 10^{-2}	4.5 x 10^{-6}	7.0 x 10^{-3}	8.0 x 10^{-7}	6.2 x 10^{-3}	7.1 x 10^{-7}	3.35	3.8 x 10^{-4}	2.57	2.9 x 10^{-4}	2.95	3.4 x 10^{-4}
Fawcett Lab	1.8 x 10^{-2}	2.1 x 10^{-6}	7.6 x 10^{-3}	8.6 x 10^{-7}	1.6 x 10^{-2}	1.9 x 10^{-6}	2.4 x 10^{-3}	2.7 x 10^{-7}	0.87	9.9 x 10^{-5}	1.8 x 10^{-2}	2.0 x 10^{-6}	3.1 x 10^{-3}	3.6 x 10^{-7}	2.8 x 10^{-3}	3.2 x 10^{-7}	1.50	1.7 x 10^{-4}	1.15	1.3 x 10^{-4}	1.32	1.5 x 10^{-4}
Genomics	4.3 x 10^{-2}	4.9 x 10^{-6}	1.8 x 10^{-2}	2.1 x 10^{-6}	3.9 x 10^{-2}	4.5 x 10^{-6}	5.7 x 10^{-3}	6.5 x 10^{-7}	2.06	2.4 x 10^{-4}	4.2 x 10^{-2}	4.8 x 10^{-6}	7.5 x 10^{-3}	8.6 x 10^{-7}	6.6 x 10^{-3}	7.5 x 10^{-7}	3.59	4.1 x 10^{-4}	2.75	3.1 x 10^{-4}	3.16	3.6 x 10^{-4}
Geology	0.10	1.2 x 10^{-5}	4.3 x 10^{-2}	4.9 x 10^{-6}	9.3 x 10^{-2}	1.1 x 10^{-5}	1.4 x 10^{-2}	1.6 x 10^{-6}	4.93	5.6 x 10^{-4}	0.10	1.1 x 10^{-5}	1.8 x 10^{-2}	2.0 x 10^{-6}	1.6 x 10^{-2}	1.8 x 10^{-6}	8.56	9.8 x 10^{-4}	6.56	7.5 x 10^{-4}	7.54	8.6 x 10^{-4}
Greenhouse 1	2.8 x 10^{-3}	3.2 x 10^{-7}	1.2 x 10^{-3}	1.3 x 10^{-7}	2.5 x 10^{-3}	2.9 x 10^{-7}	3.7 x 10^{-4}	4.2 x 10^{-8}	0.13	1.5 x 10^{-5}	2.7 x 10^{-3}	3.1 x 10^{-7}	4.8 x 10^{-4}	5.5 x 10^{-8}	4.3 x 10^{-4}	4.9 x 10^{-8}	0.23	2.6 x 10^{-5}	0.18	2.0 x 10^{-5}	0.20	2.3 x 10^{-5}
Greenhouse 2	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Greenhouse 3	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Greenhouse 6	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Greenhouse 7	4.2 x 10^{-3}	4.7 x 10^{-7}	1.7 x 10^{-3}	2.0 x 10^{-7}	3.8 x 10^{-3}	4.3 x 10^{-7}	5.5 x 10^{-4}	6.3 x 10^{-8}	0.20	2.3 x 10^{-5}	4.1 x 10^{-3}	4.6 x 10^{-7}	7.3 x 10^{-4}	8.3 x 10^{-8}	6.4 x 10^{-4}	7.3 x 10^{-8}	0.35	4.0 x 10^{-5}	0.27	3.0 x 10^{-5}	0.31	3.5 x 10^{-5}
Greenhouse 9	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Greenhouse 10	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Greenhouse 12	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Greenhouse 13	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Greenhouse 20	1.4 x 10^{-3}	1.6 x 10^{-7}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.8 x 10^{-4}	2.1 x 10^{-8}	6.7 x 10^{-2}	7.6 x 10^{-6}	1.4 x 10^{-3}	1.5 x 10^{-7}	2.4 x 10^{-4}	2.8 x 10^{-8}	2.1 x 10^{-4}	2.4 x 10^{-8}	0.12	1.3 x 10^{-5}	8.9 x 10^{-2}	1.0 x 10^{-5}	0.10	1.2 x 10^{-5}
Materials Science & Engineering	2.5 x 10^{-2}	2.8 x 10^{-6}	1.0 x 10^{-2}	1.2 x 10^{-6}	2.3 x 10^{-2}	2.6 x 10^{-6}	3.3 x 10^{-3}	3.8 x 10^{-7}	1.20	1.4 x 10^{-4}	2.4 x 10^{-2}	2.8 x 10^{-6}	4.4 x 10^{-3}	5.0 x 10^{-7}	3.8 x 10^{-3}	4.4 x 10^{-7}	2.08	2.4 x 10^{-4}	1.60	1.8 x 10^{-4}	1.83	2.1 x 10^{-4}
Physics	3.0 x 10^{-2}	3.5 x 10^{-6}	1.3 x 10^{-2}	1.5 x 10^{-6}	2.8 x 10^{-2}	3.2 x 10^{-6}	4.0 x 10^{-3}	4.6 x 10^{-7}	1.46	1.7 x 10^{-4}	3.0 x 10^{-2}	3.4 x 10^{-6}	5.3 x 10^{-3}	6.1 x 10^{-7}	4.7 x 10^{-3}	5.4 x 10^{-7}	2.54	2.9 x 10^{-4}	1.95	2.2 x 10^{-4}	2.24	2.6 x 10^{-4}
Pierce Hall	0.18	2.1 x 10^{-5}	7.6 x 10^{-2}	8.6 x 10^{-6}	0.16	1.9 x 10^{-5}	2.4 x 10^{-2}	2.7 x 10^{-6}	8.65	9.9 x 10^{-4}	0.18	2.0 x 10^{-5}	3.1 x 10^{-2}	3.6 x 10^{-6}	2.8 x 10^{-2}	3.2 x 10^{-6}	15.0	1.7 x 10^{-3}	11.5	1.3 x 10^{-3}	13.2	1.5 x 10^{-3}
Science Lab 1	0.10	1.2 x 10^{-5}	4.3 x 10^{-2}	4.9 x 10^{-6}	9.3 x 10^{-2}	1.1 x 10^{-5}	1.4 x 10^{-2}	1.6 x 10^{-6}	4.93	5.6 x 10^{-4}	0.10	1.1 x 10^{-5}	1.8 x 10^{-2}	2.0 x 10^{-6}	1.6 x 10^{-2}	1.8 x 10^{-6}	8.56	9.8 x 10^{-4}	6.56	7.5 x 10^{-4}	7.54	8.6 x 10^{-4}
School of Medicine – Research	6.9 x 10^{-3}	7.9 x 10^{-7}	2.9 x 10^{-3}	3.3 x 10^{-7}	6.3 x 10^{-3}	7.2 x 10^{-7}	9.2 x 10^{-4}	1.1 x 10^{-7}	0.33	3.8 x 10^{-5}	6.8 x 10^{-3}	7.7 x 10^{-7}	1.2 x 10^{-3}	1.4 x 10^{-7}	1.1 x 10^{-3}	1.2 x 10^{-7}	0.58	6.6 x 10^{-5}	0.44	5.1 x 10^{-5}	0.51	5.8 x 10^{-5}
Spieth Hall	6.5 x 10^{-2}	7.4 x 10^{-6}	2.7 x 10^{-2}	3.1 x 10^{-6}	5.9 x 10^{-2}	6.8 x 10^{-6}	8.7 x 10^{-3}	9.9 x 10^{-7}	3.13	3.6 x 10^{-4}	6.4 x 10^{-2}	7.3 x 10^{-6}	1.1 x 10^{-2}	1.3 x 10^{-6}	1.0 x 10^{-2}	1.1 x 10^{-6}	5.44	6.2 x 10^{-4}	4.17	4.8 x 10^{-4}	4.79	5.5 x 10^{-4}
University Lab Building	9.7 x 10^{-3}	1.1 x 10^{-6}	4.1 x 10^{-3}	4.6 x 10^{-7}	8.8 x 10^{-3}	1.0 x 10^{-6}	1.3 x 10^{-3}	1.5 x 10^{-7}	0.47	5.3 x 10^{-5}	9.5 x 10^{-3}	1.1 x 10^{-6}	1.7 x 10^{-3}	1.9 x 10^{-7}	1.5 x 10^{-3}	1.7 x 10^{-7}	0.81	9.2 x 10^{-5}	0.62	7.1 x 10^{-5}	0.71	8.1 x 10^{-5}
Webber Hall	4.2 x 10^{-2}	4.7 x 10^{-6}	1.7 x 10^{-2}	2.0 x 10^{-6}	3.8 x 10^{-2}	4.3 x 10^{-6}	5.5 x 10^{-3}	6.3 x 10^{-7}	2.00	2.3 x 10^{-4}	4.1 x 10^{-2}	4.6 x 10^{-6}	7.3 x 10^{-3}	8.3 x 10^{-7}	6.4 x 10^{-3}	7.3 x 10^{-7}	3.47	4.0 x 10^{-4}	2.66	3.0 x 10^{-4}	3.05	3.5 x 10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

	Trichloroethylene		Trichlorofluoromethane (Freon 11)		Trichlorotrifluoro-ethane (CFC^{-11}3)		Triethylene glycol dimethyl ether		Urethane (Ethyl carbamate)		Xylenes	
Source	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**	**A**	**H**
Batchelor Hall	0.60	6.9 x 10^{-5}	3.9 x 10^{-2}	4.4 x 10^{-6}	8.4 x 10^{-2}	9.6 x 10^{-6}	0.87	9.9 x 10^{-5}	2.1 x 10^{-2}	2.4 x 10^{-6}	3.62	4.1 x 10^{-4}
Biological Sciences	0.21	2.4 x 10^{-5}	1.3 x 10^{-2}	1.5 x 10^{-6}	2.9 x 10^{-2}	3.3 x 10^{-6}	0.30	3.4 x 10^{-5}	7.1 x 10^{-3}	8.1 x 10^{-7}	1.24	1.4 x 10^{-4}
Bourns Hall	0.59	6.7 x 10^{-5}	3.8 x 10^{-2}	4.3 x 10^{-6}	8.2 x 10^{-2}	9.3 x 10^{-6}	0.84	9.6 x 10^{-5}	2.0 x 10^{-2}	2.3 x 10^{-6}	3.51	4.0 x 10^{-4}
Boyce Hall	0.70	8.0 x 10^{-5}	4.5 x 10^{-2}	5.2 x 10^{-6}	9.8 x 10^{-2}	1.1 x 10^{-5}	1.01	1.2 x 10^{-4}	2.4 x 10^{-2}	2.8 x 10^{-6}	4.21	4.8 x 10^{-4}
Boyden Lab	4.5 x 10^{-2}	5.1 x 10^{-6}	2.9 x 10^{-3}	3.3 x 10^{-7}	6.3 x 10^{-3}	7.2 x 10^{-7}	6.5 x 10^{-2}	7.4 x 10^{-6}	1.6 x 10^{-3}	1.8 x 10^{-7}	0.27	3.1 x 10^{-5}
Chapman Hall	0.12	1.3 x 10^{-5}	7.6 x 10^{-3}	8.6 x 10^{-7}	1.6 x 10^{-2}	1.9 x 10^{-6}	0.17	1.9 x 10^{-5}	4.0 x 10^{-3}	4.6 x 10^{-7}	0.70	8.0 x 10^{-5}
Chemical Sciences	1.41	1.6 x 10^{-4}	9.1 x 10^{-2}	1.0 x 10^{-5}	2.0 x 10-1	2.2 x 10^{-5}	2.03	2.3 x 10^{-4}	4.8 x 10^{-2}	5.5 x 10^{-6}	8.42	9.6 x 10^{-4}
Entomology	0.26	3.0 x 10^{-5}	1.7 x 10^{-2}	1.9 x 10^{-6}	3.7 x 10^{-2}	4.2 x 10^{-6}	0.38	4.3 x 10^{-5}	9.0 x 10^{-3}	1.0 x 10^{-6}	1.56	1.8 x 10^{-4}
Fawcett Lab	0.12	1.3 x 10^{-5}	7.6 x 10^{-3}	8.6 x 10^{-7}	1.6 x 10^{-2}	1.9 x 10^{-6}	0.17	1.9 x 10^{-5}	4.0 x 10^{-3}	4.6 x 10^{-7}	0.70	8.0 x 10^{-5}
Genomics	0.28	3.2 x 10^{-5}	1.8 x 10^{-2}	2.1 x 10^{-6}	3.9 x 10^{-2}	4.5 x 10^{-6}	0.40	4.6 x 10^{-5}	9.6 x 10^{-3}	1.1 x 10^{-6}	1.67	1.9 x 10^{-4}
Geology	0.67	7.6 x 10^{-5}	4.3 x 10^{-2}	4.9 x 10^{-6}	9.3 x 10^{-2}	1.1 x 10^{-5}	0.96	1.1 x 10^{-4}	2.3 x 10^{-2}	2.6 x 10^{-6}	3.99	4.6 x 10^{-4}
Greenhouse 1	1.8 x 10^{-2}	2.1 x 10^{-6}	1.2 x 10^{-3}	1.3 x 10^{-7}	2.5 x 10^{-3}	2.9 x 10^{-7}	2.6 x 10^{-2}	3.0 x 10^{-6}	6.2 x 10^{-4}	7.1 x 10^{-8}	0.11	1.2 x 10^{-5}
Greenhouse 2	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Greenhouse 3	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Greenhouse 6	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Greenhouse 7	2.7 x 10^{-2}	3.1 x 10^{-6}	1.7 x 10^{-3}	2.0 x 10^{-7}	3.8 x 10^{-3}	4.3 x 10^{-7}	3.9 x 10^{-2}	4.4 x 10^{-6}	9.3 x 10^{-4}	1.1 x 10^{-7}	0.16	1.8 x 10^{-5}
Greenhouse 9	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Greenhouse 10	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Greenhouse 12	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Greenhouse 13	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Greenhouse 20	9.0 x 10^{-3}	1.0 x 10^{-6}	5.8 x 10^{-4}	6.6 x 10^{-8}	1.3 x 10^{-3}	1.4 x 10^{-7}	1.3 x 10^{-2}	1.5 x 10^{-6}	3.1 x 10^{-4}	3.5 x 10^{-8}	5.4 x 10^{-2}	6.2 x 10^{-6}
Materials Science & Engineering	0.16	1.9 x 10^{-5}	1.0 x 10^{-2}	1.2 x 10^{-6}	2.3 x 10^{-2}	2.6 x 10^{-6}	0.23	2.7 x 10^{-5}	5.6 x 10^{-3}	6.4 x 10^{-7}	0.97	1.1 x 10^{-4}
Physics	0.20	2.3 x 10^{-5}	1.3 x 10^{-2}	1.5 x 10^{-6}	2.8 x 10^{-2}	3.2 x 10^{-6}	0.29	3.3 x 10^{-5}	6.8 x 10^{-3}	7.8 x 10^{-7}	1.19	1.4 x 10^{-4}
Pierce Hall	1.17	1.3 x 10^{-4}	7.6 x 10^{-2}	8.6 x 10^{-6}	1.6 x 10-1	1.9 x 10^{-5}	1.69	1.9 x 10^{-4}	4.0 x 10^{-2}	4.6 x 10^{-6}	7.02	8.0 x 10^{-4}
Science Lab 1	0.67	7.6 x 10^{-5}	4.3 x 10^{-2}	4.9 x 10^{-6}	9.3 x 10^{-2}	1.1 x 10^{-5}	0.96	1.1 x 10^{-4}	2.3 x 10^{-2}	2.6 x 10^{-6}	3.99	4.6 x 10^{-4}
School of Medicine – Research	4.5 x 10^{-2}	5.1 x 10^{-6}	2.9 x 10^{-3}	3.3 x 10^{-7}	6.3 x 10^{-3}	7.2 x 10^{-7}	6.5 x 10^{-2}	7.4 x 10^{-6}	1.6 x 10^{-3}	1.8 x 10^{-7}	0.27	3.1 x 10^{-5}
Spieth Hall	0.42	4.8 x 10^{-5}	2.7 x 10^{-2}	3.1 x 10^{-6}	5.9 x 10^{-2}	6.8 x 10^{-6}	0.61	7.0 x 10^{-5}	1.5 x 10^{-2}	1.7 x 10^{-6}	2.54	2.9 x 10^{-4}
University Lab Building	6.3 x 10^{-2}	7.2 x 10^{-6}	4.1 x 10^{-3}	4.6 x 10^{-7}	8.8 x 10^{-3}	1.0 x 10^{-6}	9.1 x 10^{-2}	1.0 x 10^{-5}	2.2 x 10^{-3}	2.5 x 10^{-7}	0.38	4.3 x 10^{-5}
Webber Hall	0.27	3.1 x 10^{-5}	1.7 x 10^{-2}	2.0 x 10^{-6}	3.8 x 10^{-2}	4.3 x 10^{-6}	0.39	4.4 x 10^{-5}	9.3 x 10^{-3}	1.1 x 10^{-6}	1.62	1.8 x 10^{-4}

A = annual emissions (lbs/year); H = hourly emissions (lbs/hr); PAHs = polycyclic aromatic hydrocarbons; POM = polycyclic organic matter

Table B-10 Diesel Truck Emissions – Baseline Scenario

Route Type[1,2]	Emissions[3,4] Annual (lbs/year)	Hourly (lbs/hour)
Hazardous Waste	1.43×10^{-1}	2.19×10^{-3}
Dining Facilities	3.87	1.06×10^{-2}
Chameleon Food Truck	2.39	6.76×10^{-3}
Municipal Waste Trash/Refuse Service	2.05	1.46×10^{-3}
Airgas	1.04×10^{-1}	3.99×10^{-4}

[1] Delivery and service frequency information was provided by UCR on October 29, 2020.

[2] There are 5 delivery and service routes that were modeled: hazardous waste pickup, dining facilities deliveries, food trucks, municipal waste and refuse services, and Airgas deliveries. As noted in Table 4, some routes had varying delivery or service frequencies based on the service. Emissions were modeled based on route and therefore are presented here as the sum by route rather than service type.

[3] Annual and hourly emissions are based on the number of trips, route mileage, vehicle class and associated emission factors for each type of delivery or service identified by UCR.

[4] The following assumptions were used for vehicle class: Hazardous waste trucks = 100% HHDT; Dining Facilities = 4% LDT2, 56% MHDT, and 40% HHDT; Chameleon Food Trucks = 44% LHDT2 and 56%% MHDT; Municipal Waste Trash/Refuse Service Trucks = 100% HHDT; Airgas trucks = 100% HHDT

Table B-11 Diesel Truck Emissions – Future Scenario

Route Type[1,2]	Emissions[3,4] Annual (lbs/year)	Hourly (lbs/hour)
Hazardous Waste	3.18×10^{-2}	4.89×10^{-4}
Dining Facilities	4.14×10^{-1}	1.14×10^{-3}
Chameleon Food Truck	5.22×10^{-1}	1.48×10^{-3}
Municipal Waste Trash/Refuse Service	4.57×10^{-1}	3.26×10^{-4}
Airgas	2.31×10^{-2}	8.88×10^{-5}

[1] Delivery and service frequency information was provided by UCR on October 29, 2020.

[2] There are 5 delivery and service routes that were modeled: hazardous waste pickup, dining facilities deliveries, food trucks, municipal waste and refuse services, and Airgas deliveries. As noted in Table 13, some routes had varying delivery or service frequencies based on the service. Emissions were modeled based on route and therefore are presented here as the sum by route rather than service type.

[3] Annual and hourly emissions are based on the number of trips, route mileage, vehicle class and associated emission factors for each type of delivery or service identified by UCR. Future number of trips and mileage is presented in Table 5.

[4] The following assumptions were used for vehicle class and weighted emission factors: Hazardous waste trucks = 100% HHDT; Dining Facilities = 4% LDT2, 56% MHDT, and 40% HHDT; Chameleon Food Trucks = 44% LHDT2 and 56%% MHDT; Municipal Waste Trash/Refuse Service Trucks = 100% HHDT; Airgas trucks = 100% HHDT

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Appendix C

AERMOD and Hotspots Analysis and Reporting Program Model Outputs

Digital Appendix – Available Upon Request at UCR Office of Planning, Design & Construction

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Appendix D

Biological Resources Constraints Report

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PSOMAS

Balancing the Natural and Built Environment

March 13, 2019

Tricia D. Thrasher
Principal Environmental Planner
Capital Asset Strategies
University of California, Riverside
1223 University Avenue, Suite 240
Riverside, California 92521

VIA EMAIL
Tricia.Thrasher@UCR.edu

Subject: Biological Resources Constraints Report for Long Range Development Plan at University of California, Riverside

Dear Ms. Thrasher:

This Letter Report presents the findings of a biological resources assessment for the University of California, Riverside's (UCR's) Long Range Development Plan (LRDP). The purpose of the survey was to evaluate potential biological constraints on future development implemented as part of the LRDP.

PROJECT DESCRIPTION AND LOCATION

The current LRDP in use by the campus was last updated in 2011 and bases its land use assumptions on a projected maximum population of 25,000 students. The LRDP is being updated to guide campus planning through 2035 to support continued future growth on the campus.

The LRDP covers the approximately 1,127-acre UCR campus located in the City of Riverside, California (Exhibit 1). The campus is generally bound by Blaine Street in the north, Valencia Hill Drive in the east, Le Conte Drive in the south, and Chicago Avenue in the west. It occurs on the U.S. Geological Survey's (USGS') Riverside East 7.5-minute quadrangle in Sections 19, 20, 29, and 30 of Township 2 South, Range 4 West (Exhibit 2). Surrounding land uses include commercial and residential development to the north, south, and west; undeveloped open space in the Box Springs Mountains is located to the east. Interstate 15 (I-15) separates the main campus facility in the east from campus agricultural uses and a large parking lot in the west.

Topography on the main campus and west campus is relatively flat with an elevation of approximately 1,000 to 1,100 feet above mean sea level (msl). Topography in the southeast portion of the campus consists of gently sloping hills with a peak elevation of 1,548 feet above msl. A variety of soils are mapped on campus, including loam and sandy loam soils of the Arlington, Buren, Cieneba, Gorgonio, Hanford, Madera, Monserate, Ramona, and Vista series and terrace escarpments (Exhibit 3).

SURVEY METHODS

Psomas Senior Biologists Allison Rudalevige and Lindsay Messett conducted a general plant and wildlife survey, mapped vegetation, and performed an assessment of potential jurisdictional waters for the LRDP on December 12 and 13, 2018. The survey area includes the entire LRDP area. Representative photographs are provided in Attachment A-1 through A-6.

Prior to the survey, a literature review was conducted to identify special status plants, wildlife, and habitats that have been reported to occur in the vicinity of the survey area. Resources reviewed included the California Native Plant Society's (CNPS') Inventory of Rare and Endangered Plants (CNPS 2018), the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CDFW 2018a), and previous reports for the LRDP area.

Vegetation was mapped on a 1 inch equals 350 feet (1″=350′) scale color aerial. The minimum mapping unit was approximately 0.25 acre. Nomenclature for vegetation types generally follows that of *A Manual of California Vegetation* (CNPS 2019). All plant species observed were recorded in field notes. Plant species were identified in the field or collected for subsequent identification using keys in Baldwin et al. (2012). Nomenclature of plant taxa conform to the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2018d) for special status species and the Jepson eFlora (Jepson Flora Project 2017) for all other taxa. It should be noted that, since the general plan survey occurred in the winter season, many annual species were not detectable (because they will not germinate until closer to spring) or were not identifiable to species because they were not blooming. Surveys conducted in the spring or summer would likely record higher diversity of annual species. Perennial species and vegetation types were observable and are sufficient for the purposes of this report.

All wildlife species detected during the course of the surveys were documented in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows the *Special Animals List* (CDFW 2018c) for special status species and, for other species, Center for North American Herpetology (2015) for amphibians and reptiles, the American Ornithological Society (2018) for birds, and the Smithsonian National Museum of Natural History (2011) for mammals.

An assessment of potential jurisdictional water resources on the campus was made concurrently with the general survey. This included mapping the location of drainages and waterbodies and noting potential wetlands based on the presence of hydrology and vegetation. Resources reviewed to assist in the assessment of potential jurisdictional waters included the U.S. Department of Agriculture, Natural Resources Conservation Service's (USDA NRCS') Web Soil Survey, the USDA NRCS' Hydric Soils List (USDA NRCS 2018), and the USFWS' National Wetlands Inventory (NWI) Wetland Mapper (USFWS 2018).

SURVEY RESULTS

Vegetation Types and Other Areas

The 2005 LRDP EIR described on-campus biological resources as natural, naturalistic, landscaped, and agricultural areas (EIP 2005). For continuity, vegetation types mapped in the survey area have been grouped into these broad categories. Generally, unvegetated areas have been mapped as other areas and include basins, disturbed areas, and developed areas. Exhibit 4 and Table 1 show the vegetation types and other landcover mapped in the survey area.

TABLE 1
VEGETATION TYPES AND OTHER AREAS IN THE SURVEY AREA

Vegetation Type and Other Area	Amount in Survey Area (acres)	CNPS 2019 Equivalent	CDFW Sensitive Natural Community
Natural Areas			
Brittle Bush Scrub	65.73	*Encelia farinosa* Shrubland Alliance	No
Rock Outcrop	16.16	*Encelia farinosa* Shrubland Alliance	No
Prickly Pear Scrub	2.75	*Opuntia littoralis* – *Opuntia oricola* – *Cylindropuntia prolifera* Shrubland Alliance	Yes
Annual Grassland	42.40	Varies, including the *Bromus* (*diandrus*, *hordeaceus*) – *Brachypodium distachyon* Herbaceous Semi-natural Alliance, *Bromus rubens* – *Schismus* (*arabicus*, *barbatus*) Herbaceous Semi-natural Alliance, or *Avena* (*barbata*, *fatua*) Herbaceous Semi-natural Alliance	No
Naturalistic Areas			
Sage Scrub Restoration	5.96	Not a natural community; similar to various shrubland Alliances including *Artemisia californica*, *Eriogonum fasciculatum*, and *Salvia mellifera* Shrubland Alliances	Not a natural community; not sensitive
Mixed Scrub	2.31	Not a natural community; similar to *Isocoma menziesii* Shrubland Alliance associated with non-native shrubs	Not a natural community; not sensitive
Quailbush Scrub	1.08	*Atriplex lentiformis* Shrubland Alliance	No
Upland Mustards	1.80	No named equivalent, but functionally similar to the *Brassica nigra* – *Raphanus* spp. Herbaceous Semi-natural Alliance	No
Annual Grassland	8.13	Varies, including the *Bromus* (*diandrus*, *hordeaceus*) – *Brachypodium distachyon* Herbaceous Semi-natural Alliance, *Bromus rubens* – *Schismus* (*arabicus*, *barbatus*) Herbaceous Semi-natural Alliance, or *Avena* (*barbata*, *fatua*) Herbaceous Semi-natural Alliance	No
Mixed Riparian	8.26	Not a natural community; similar to various woodland Alliances such as *Salix gooddingii* and *Platanus racemosa* Woodland Alliances associated with non-native trees	Not a natural community; not sensitive
Walnut Grove	0.57	Not a natural community; similar to *Juglans californica* Woodland Alliance or *Juglans hindsii* and Hybrids Woodland Special Stands and Semi-natural Alliance	Not a natural community; not sensitive
Ash Grove	1.52	Not a natural community, but functionally similar to the *Fraxinus latifolia* Forest Alliance	Not a natural community; not sensitive
Mulefat Thicket	0.58	*Baccharis salicifolia* Shrubland Alliance	No
Tamarisk Thicket	0.35	*Tamarix* spp. Shrubland Semi-natural Alliance	No
Eucalyptus Grove	13.96	*Eucalyptus* spp. – *Ailanthus altissima* – *Robinia pseudoacacia* Woodland Semi-natural Alliance	No

TABLE 1
VEGETATION TYPES AND OTHER AREAS IN THE SURVEY AREA

Vegetation Type and Other Area	Amount in Survey Area (acres)	CNPS 2019 Equivalent	CDFW Sensitive Natural Community
Botanic Garden	22.86	Not a natural community; no equivalent	No
Landscaped Areas			
Landscaped Area	124.45	Not a natural community; no equivalent	No
Agricultural Areas			
Jojoba Scrub	4.28	Not a natural community; similar to the *Simmondsia chinensis* Provisional Shrubland Alliance	Not a natural community; not sensitive
Giant Reed Stand	0.25	*Phragmites australis – Arundo donax* Herbaceous Semi-natural Alliance	No
Orchard	227.29	Not a natural community; no equivalent	No
Agriculture	165.22	Not a natural community; no equivalent	No
Other Areas			
Basin	7.07	Not a natural community; no equivalent	No
Disturbed	26.36	Not a natural community; no equivalent	No
Developed	377.59	Not a natural community; no equivalent	No
Total	**1,126.93**		

Natural Areas

Natural areas are defined as undeveloped open space areas that are composed of native and naturally occurring plant species.

Brittle Bush Scrub

Brittle bush scrub occurs on the hillsides and drainages in the southeast corner of the campus. This area is relatively undeveloped, with dirt access roads/trails closer to campus. The dominant shrub is brittlebush (*Encelia farinosa*). Native shrubs present in lower amounts include California sagebrush (*Artemisia californica*) and California buckwheat (*Eriogonum fasciculatum*). Other scattered natives include wishbone bush (*Mirabilis laevis* var. *crassifolia*), filago-leaved sand-aster (*Corethrogyne filaginifolia*), phacelia (*Phacelia* sp.), and cryptantha (*Cryptantha* sp.). The shrub canopy is relatively open over most of the area. At the time of the survey, the understory and spaces between shrubs were either bare or contained annual species such as redstem filaree (*Erodium cicutarium*), eastern sisymbrium (*Sisymbrium orientale*), and non-native grasses (immature, but likely including species such as cheat grass [*Bromus tectorum*], ripgut grass [*Bromus diandrus*], red brome [*Bromus madritensis* ssp. *rubens*], Mediterranean grass [*Schismus* sp.], or oat [*Avena* sp.]). Other annual understory species expected to occur based on previous documentation includes tidy-tips (*Layia platyglossa*), cream cups (*Platystemon californicus*), California poppy (*Eschscholzia californica*), ovate plantain (*Plantago ovata*), splendid mariposa lily (*Calochortus splendens*), and blue dicks (*Dichelostema capitatum*) (EIP 2005).

Rock Outcrop

Rock outcrops occur throughout the hillsides in the southeast corner of the campus. These areas contain exposed granitic rock with many crevices and soil between individual rocks. Vegetation growing between the rocks is similar to that of the brittle bush scrub.

Prickly Pear Scrub

Prickly pear scrub occurs naturally on the slopes along the botanical garden road and in a small patch in the west campus. It is dominated by Vasey's prickly-pear (*Opuntia vaseyi*) with lesser amounts of cholla (*Cylindropuntia* sp.) and brittle bush.

Annual Grassland

Annual grassland is patchily distributed on slopes in the southeastern corner of campus. This vegetation type is dominated by non-native grasses that were immature at the time of the survey. Species composition likely includes cheat grass, ripgut grass, red brome, Mediterranean grass, and/or oat. Redstem filaree and eastern sisymbrium were also observed in these areas. Other annual understory species expected to occur based on previous documentation includes common fiddleneck (*Amsinckia intermedia*), common goldenstar (*Bloomeria crocea*), baby blue-eyes (*Nemophila menziesii*), and California croton (*Croton californicus*) (EIP 2005). It should be noted that annual grassland occurring in areas subject to disturbance (such as graded slopes) on the main campus or the west campus are discussed below under Naturalistic Areas.

Naturalistic Areas

Naturalistic areas are defined as mostly undeveloped areas that have been subject to disturbance/ modification and/or the introduction of ornamental trees and shrubs.

Sage Scrub Restoration

Sage scrub restoration occurs along the drainage in the eastern portion of the main campus. It is considered a Naturalistic Area because the slopes have been modified, the vegetation has been planted, and the area is actively maintained. This vegetation type contains a mix of planted sage scrub species, including California sagebrush, California buckwheat, black sage (*Salvia mellifera*), brittle bush, coyote brush (*Baccharis pilularis* ssp. *consanguinea*), mule fat (*Baccharis salicifolia* ssp. *salicifolia*), and deer grass (*Muhlenbergia rigens*).

Mixed Scrub

Mixed scrub occurs between parking lot 13 and Big Springs Road. It is considered a Naturalistic Area because the vegetation has been planted. This vegetation type contains a mix of native (e.g., coastal goldenbush [*Isocoma menziesii*] and California buckwheat) and non-native (primarily acacia [*Acacia* sp.]) shrubs along a potential drainage feature.

Quailbush Scrub

Quailbush scrub occurs on the slopes immediately surrounding the botanic garden basin. It is considered a Naturalistic Area because the slopes have been modified and the vegetation has been planted. This vegetation type is dominated by big saltbush (*Atriplex lentiformis*) with a lesser amount of mule fat and coastal goldenbush. Weedy, non-native species, such as grayish shortpod mustard (*Hirschfeldia incana*) and tree tobacco (*Nicotiana glauca*), are abundant. The slopes in this area are covered with an erosion control mat.

Upland Mustards

Upland mustards occur on a slope in the west campus. It is considered a Naturalistic Area because the slopes have been modified. This vegetation type is dominated by eastern sisymbrium, a non-native species.

Annual Grassland

Annual grassland occurring in areas subject to disturbance, such as graded slopes on the main campus or the west campus, are considered Naturalistic Areas. This vegetation type is dominated by non-native grasses that were immature at the time of the survey. Species composition likely includes cheat grass, ripgut grass, red brome, Mediterranean grass, and/or oat.

Mixed Riparian

Mixed riparian occurs along drainages in the main campus. The riparian area in the eastern portion of the main campus is considered a Naturalistic Area because the slopes have been modified and the vegetation has been planted as mitigation for a previous project (i.e., Glen Mor 2 Student Apartments Arroyo Improvements). This vegetation consists of a mix of riparian species such as Goodding’s black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), western sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii* ssp. *fremontii*), Mexican palo verde (*Parkinsonia aculeata*), and coast live oak (*Quercus agrifolia*). There is scattered mule fat in the drainage and along the banks. The understory of this vegetation type is generally open.

The riparian area along University Avenue is considered a Naturalistic Area because the area has been historically modified (i.e., historic aerial imagery from 1948 shows orchards in this area). This vegetation contains similar species as above, including Goodding’s black willow, western sycamore, Fremont cottonwood, walnut (*Juglans* sp.), and mule fat. It also contains escapee ash trees such as shamel ash (*Fraxinus uhdei*) and velvet ash cultivars (*Fraxinus velutina*). The understory contains leaf litter and scattered species such as California blackberry (*Rubus ursinus*) and hoary nettle (*Urtica dioica* ssp. *holosericea*).

Walnut Grove

A walnut grove occurs in the northwestern portion of the main campus. It is considered a Naturalistic Area because it occurs on a graded parcel, and the vegetation likely consists of escapees. This vegetation type consists of a stand of mature walnuts (likely a hybrid of southern California black walnut [*Juglans californica*], northern California black walnut [*Juglans hindsii*], and/or black walnut [*Juglans nigra*]).

Ash Grove

An ash grove occurs in the eastern portion of the main campus. It is considered a Naturalistic Area because the vegetation likely consists of escapees. This vegetation type is dominated by shamel ash and velvet ash cultivars with lesser amounts of coast live oak (*Quercus agrifolia*), walnut (*Juglans* sp.), and mule fat. The understory contains leaf litter and scattered herbs such as petty spurge (*Euphorbia peplus*) and milk thistle (*Silybum marianum*).

Mulefat Thicket

Mulefat thicket occurs around the basin in the botanic garden. It is considered a Naturalistic Area because it is part of a manufactured basin. This vegetation type is dominated by mule fat, with scattered, immature red willow (*Salix laevigata*), arroyo willow, and Mexican palo verde; mugwort (*Artemisia douglasiana*) occurs in the understory.

Tamarisk Thicket

Tamarisk thicket occurs around water tanks at the edge of open space in the southeast corner of the main campus. It is considered a Naturalistic Area because it consists of non-native species. This vegetation is dominated by saltcedar (*Tamarix ramosissima*) with scattered brittlebush and an understory of non-native grasses.

Eucalyptus Grove

Eucalyptus groves occur along drainages in west campus and south of Eucalyptus Drive in the main campus. It is considered a Naturalistic Area because it consists of non-native species. This vegetation type is dominated by mature gum trees (*Eucalyptus* spp.). Individual gum trees intermixed with other species are included as landscaped areas, described below.

Botanic Garden

The UCR Botanic Gardens is considered a naturalistic landscaped area. It contains a mix of native and non-native planted species, primarily from Mediterranean climates and arid areas similar to California, including geographical collections from Australia; Baja California, Mexico; South Africa; and temperate deciduous forests. Paved and unpaved trails in the gardens are not mapped separately. The botanic garden is mapped separately from landscaped areas on the main campus because it has a more natural topography and generally lacks turf grass as a ground cover.

Landscaped Areas

Landscaped areas are considered open spaces that have been developed with turf-covered lawn areas or groundcover, mature trees, and shrubs.

Landscaped Area

Landscaped areas occur throughout the main campus and consist of ornamental vegetation planted in open areas between buildings, in road medians, and along the edges of walkways and roads. This vegetation type includes a variety of mature trees such as jacaranda (*Jacaranda mimosifolia*), bottlebrush (*Melaleuca* sp.), gum tree, deodar cedar (*Cedrus deodara*), pepper tree (*Schinus molle*), Brazilian pepper tree (*Schinus terebinthifolius*), walnut, and coast live oak. Understory vegetation is limited. The primary groundcover is turf grass; other areas contain rock, leaf litter, bare ground, or mulch.

Agricultural Areas

Agricultural areas are used for agricultural teaching and research and are dominated by row crops and orchards.

Jojoba Scrub

Jojoba scrub occurs on a single plot in the Agricultural Area of west campus. It is dominated by jojoba (*Simmondsia chinensis*) with scattered pepper trees around the edges of the plot. This was part of an experimental plot of Dr. Yermanos planted in the 1970s/1980s (Sanders pers. comm.).

Giant Reed Stand

Giant reed stand occurs in the Agricultural Area of west campus. It consists of giant reed (*Arundo donax*) growing on debris piles in a fallow field.

Orchard

Orchards occur primarily on the west campus but also in small areas on the main campus. Trees, of varying levels of maturity, include different types of citrus (*Citrus* spp.), avocado (*Persea americana*), and European olive (*Olea europeaea*).

Agriculture

These areas include all undeveloped portions of the west campus that are not described above. These consist of currently fallow fields, other planted crops (e.g., corn [*Zea mays*]), weedy vegetation (e.g., cheeseweed [*Malva parviflora*]), or turf grass.

Other Areas

Other areas include basins, disturbed areas, and developed areas. These areas are generally unvegetated, though they may include ornamental landscaping that is closely associated with a structure and smaller than the 0.25-acre minimum mapping unit.

Basin

Basins occur throughout the west campus, at the edge of the main campus adjacent to undeveloped open space, and along the road to the botanic garden. The botanic garden basin is unlined but has concrete weirs and a concrete spillway. The center of the basin lacks vegetation and contains built-up sediment, but the outer portion of the basin and banks are vegetated. This basin holds water intermittently. The other basins are unvegetated; some are concrete-lined while others are soft bottomed. Based on a review of historic aerials, these basins appear to hold water for extended periods of time and/or year-round.

Disturbed

Disturbed areas occur throughout the campus and consist of bare ground that has been graded or otherwise altered. This includes an active construction site east of Iowa Avenue. It should be noted that unpaved access roads (e.g., in the agricultural areas and the southeast corner of the campus) have not been mapped separately from the surrounding vegetation.

Developed

Developed areas occur throughout the campus and include structures (such as buildings, water tanks, greenhouses, etc.) and paved surfaces (such as paved roads and parking lots). Most developed areas occur on the main campus; but water tanks occur in the southeast corner of the campus while various offices, greenhouses, and laboratories occur on the west campus. Ornamental vegetation that is closely associated with these structures (i.e., not meeting the 0.25-acre minimum mapping unit) was not mapped separately.

Jurisdictional Resources

The National Wetlands Inventory (NWI) maps riverine wetlands and freshwater ponds on the campus (Exhibit 5).

The NWI identifies four basins in the west campus; these are mapped as freshwater ponds classified as PUBK (i.e., in the Palustrine System with unconsolidated bottom and artificially flooded water regime). These artificial basins were also observed during the field survey and contain surface water. They are potential jurisdictional resources.

The NWI identified another freshwater pond classified as PUBK in the middle of the eastern edge of the botanical garden. Mature trees and an access road currently occur in this area, so it is not considered a jurisdictional resource.

The basin in the botanic garden was not identified by the NWI. This basin was artificially created as part of the UCR Flood Control Management Plan for the University Arroyo Watershed (Jones & Stokes 2005). It is a potential jurisdictional resource.

The basin adjacent to undeveloped open space in the southeastern portion of the survey area is artificial and was not identified by the NWI, though is similar to the basins in the west campus described above. This area is a potential jurisdictional resource.

Two drainage features were identified by the NWI. Gage Canal is located outside the survey area but is adjacent to the western campus. A second channel flows through the agricultural area south of Martin Luther King Boulevard. This drainage was referred to as the Box Springs Arroyo in the previous LRDP (EIP 2005). The eastern portion was classified as R4SBC, while the western portion was classified as R4SBA (i.e., streambeds in the Riverine System with intermittent flow that are either seasonally flooded or temporarily flooded). The field-verified alignment of this drainage varies slightly from the NWI mapping (Exhibit 5). Both of these drainages are potential jurisdictional resources.

The main drainage on campus was referred to as the University Arroyo in the previous LRDP (EIP 2005). It runs along Big Springs Road, North Campus Drive, and University Avenue. Portions of this drainage have been channelized and are diverted underground via culverts. The tributary between Pentland Hills and Lothian residence halls is surrounded by riparian and sage scrub habitat that has been planted as part of a restoration effort. The western end of University Arroyo was referred to as Gage Basin (EIP 2005). This drainage and its tributaries are potential jurisdictional resources.

An arroyo also runs through the northern edge of the botanic garden, along the road leading to the garden, and into the botanic garden basin, which was discussed above. A tributary of the arroyo extends from the hills south of the main campus. These drainages are potential jurisdictional resources.

Additional small drainage features are located in the hills in the southeastern corner of the campus. Culverts are located at the downstream ends of these features at I-215. Each of these drainages are potential jurisdictional resources.

U.S. Army Corps of Engineers

Section 404 of the federal Clean Water Act (CWA) regulates activities affecting water resources under the jurisdiction of the United States Army Corps of Engineers (USACE). Waters of the United States under the jurisdiction of the USACE include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce.

The University Arroyo, including its tributaries and the botanic garden basin, connects with the campus storm drain system, which enters the Gage Basin and then the City of Riverside storm drain system. This ultimately connects to the Santa Ana River, which flows to the Pacific Ocean. With a significant nexus to a traditional navigable water (TNW), these areas would likely be considered waters of the United States.

The drainage features in the hills in the southeastern corner of the campus go underground at the I-215. If these connect to the City of Riverside storm drain system and the Santa Ana River, they may be considered waters of the United States.

Except for the basin in the botanic garden, the on-campus basins are isolated and so would not be considered waters of the United States.

A formal jurisdictional delineation of these potential waters is recommended to map the extent of waters of the United States. If jurisdictional waters are determined to be present and would be impacted, a Section 404 permit from the USACE may be required.

Regional Water Quality Control Board

Section 401 of the CWA provides the Regional Water Quality Control Board (RWQCB) with the authority to regulate, through a Water Quality Certification, any proposed federally permitted activity that may affect water quality. The RWQCB also has jurisdiction over isolated wetlands and waters under the Porter-Cologne Water Quality Control Act.

The RWQCB would take jurisdiction over waters of the United States, described above. The isolated basins were artificially created within uplands and do not support vegetation; however the RWQCB may take jurisdiction over them.

A formal jurisdictional delineation of these potential waters is recommended prior to construction in order to map their extent. Issuance of the USACE Section 404 permit (described above), if needed, would be contingent upon the approval of a Section 401 Water Quality Certification from the RWQCB. The RWQCB requires an Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications.

California Department of Fish and Wildlife

Section 1602 of the *California Fish and Game Code* regulates activities affecting water resources under the jurisdiction of the CDFW. The CDFW has jurisdictional authority over resources associated with rivers, streams, and lakes.

Drainages on the campus have defined bed and banks, with some areas supporting riparian vegetation. The CDFW is expected to take jurisdiction over the on-campus drainages. Although the isolated basins were artificially created within uplands and do not support vegetation, they provide pond habitat for wildlife.

A formal jurisdictional delineation of these potential waters is recommended prior to construction in order to map their extent. Impacts on waters under CDFW jurisdiction would require a Lake or Streambed Alteration Agreement from the CDFW.

Wildlife Habitat

The quality of wildlife habitat varies across the survey area. Natural Areas (undeveloped areas with native vegetation) and Naturalistic Areas (larger areas of vegetation such as the Botanic Garden) provide relatively high quality habitat. Landscaped Areas (smaller patches of vegetation among developed areas) and the Agricultural Areas of the west campus provide moderate quality habitat. Densely developed areas with limited vegetation generally provide low quality wildlife habitat. The presence of non-native vegetation, human activity, and surrounding urban development generally decrease the wildlife value relative to undisturbed areas. Wildlife species present are expected to be relatively urban-tolerant and acclimated to human activity.

No fish species were observed during the biological survey, and suitable aquatic habitat is minimal. The drainages are ephemeral and travel underground for portions of their length, so are not expected to provide fish habitat. The basins may hold introduced species, such as western mosquitofish (*Gambusia affinis*).

No amphibian species were observed during the biological survey. Common species that may occur include Baja California treefrog (*Pseudacris hypochondriaca*) and American bullfrog (*Lithobates catesbeianus*).

Reptile species observed in the survey area include western fence lizard (*Sceloporus occidentalis*) and side-blotched lizard (*Uta stansburiana*). Other common reptile species expected to occur in the survey area include southern alligator lizard (*Elgaria multicarinata*), Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), and gopher snake (*Pituophis catenifer*).

Bird species observed on or adjacent to the survey area include mallard (*Anas platyrhynchos*), ring-necked duck (*Aythya collaris*), hooded merganser (*Lophodytes cucullatus*), pied-billed grebe (*Podilymbus podiceps*), rock pigeon (*Columba livia*), white-throated swift (*Aeronautes saxatalis*), Anna's hummingbird (*Calypte anna*), Allen's hummingbird (*Selasphorus sasin*), American coot (*Fulica americana*), killdeer (*Charadrius vociferus*), great egret (*Ardea alba*), red-tailed hawk (*Buteo jamaicensis*), belted kingfisher (*Megaceryle alcyon*), Nuttall's woodpecker (*Picoides nuttallii*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), Cassin's kingbird (*Tyrannus vociferans*), California scrub-jay (*Aphelocoma californica*), common raven (*Corvus corax*), bushtit (*Psaltriparus minimus*), house wren (*Troglodytes aedon*), blue-gray gnatcatcher (*Polioptila caerulea*), wrentit (*Chamaea fasciata*), hermit thrush (*Catharus guttatus*), northern mockingbird (*Mimus polyglottos*), American pipit (*Anthus rubescens*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), spotted towhee (*Pipilo maculatus*), rufous-crowned sparrow (*Aimophila ruficeps*), California towhee (*Melozone crissalis*), song sparrow (*Melospiza melodia*), white-crowned sparrow (*Zonotrichia leucophrys*), western meadowlark (*Sturnella neglecta*), great-tailed grackle (*Quiscalus mexicanus*), and yellow-rumped warbler (*Setophaga coronata*).

No mammal species were directly observed during the survey; however, evidence of mammal presence (e.g., scat, tracks, and/or burrows) was observed. California ground squirrel (*Otospermophilus beecheyi*) burrows, bobcat (*Lynx rufus*) scat, coyote (*Canis latrans*) scat and tracks, and southern mule deer

(*Odocoileus hemionus*) tracks were present in the survey area. Other mammal species that may occur include Botta's pocket gopher (*Thomomys bottae*), common raccoon (*Procyon lotor*), Virginia opossum (*Didelphia virginiana*), and striped skunk (*Mephitis mephitis*). Common bat species with potential to forage in the survey area include big brown bat (*Eptesicus fuscus*) and California myotis (*Myotis californicus*). Bats may also roost in trees, buildings, and rock crevices on campus.

Wildlife Movement

Within large, open space areas where few or no man-made or naturally occurring physical constraints to wildlife movement are present, wildlife corridors may not yet exist. However, once open space areas become constrained and/or fragmented as a result of urban development or the construction of physical obstacles (e.g., roads and highways), the remaining landscape features or travel routes that connect the larger open space areas become corridors as long as they provide adequate space, cover, food, and water and do not contain obstacles or distractions (e.g., man-made noise, lighting) that would generally hinder wildlife movement.

UCR is located at the edge of urban development in the eastern portion of the City of Riverside. Because of this, there is no regional connection to other open space areas to the north, west, and south.

The southeast corner of the survey area consists of undeveloped open space linking in the Box Springs Mountains to the northeast with Sycamore Canyon Wilderness Park to the southwest. It should be noted that the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) identifies the hillside areas to the northeast as important for wildlife movement (see MSHCP discussion below for information about Proposed Constrained Linkage 7; Exhibit 7). Although UCR is not required to follow the requirements of the MSHCP, any future development in the southeastern portion of the survey area should minimize indirect effects on the wildlife movement corridor planned by the MSHCP.

Although the main campus is developed, University Arroyo, Gage Canal, and the drainage south of Martin Luther King Boulevard provide opportunities for local wildlife movement. Wildlife would also be expected to move through the agricultural portions of the survey area west of I-215.

Special Status Vegetation Types

The CDFW provides a list of vegetation Alliances, Associations, and Special Stands that are considered "Sensitive Natural Communities" based on their rarity and threat (CDFW 2018b). As discussed in Table 1, prickly pear scrub would be considered a sensitive natural community. Impacts on sensitive communities may require mitigation depending on the amount of habitat impacted. Sensitive communities that are providing compensatory mitigation for a previous project should be avoided and would require mitigation if impacted.

Special Status Plant and Wildlife Species

Plants or wildlife may be considered "special status" due to declining populations, vulnerability to habitat change, or restricted distributions. Certain special status species have been listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts.

Special Status Plants

Forty-one special status plant species have been reported in the vicinity of the survey area based on the results of the literature review or were analyzed in the previous LRDP EIR.

Of these, eight species are federally and/or State-listed Endangered or Threatened: Munz's onion (*Allium munzii*), San Diego ambrosia (*Ambrosia pumila*), marsh sandwort (*Arenaria paludicola*), Nevin's barberry (*Berberis nevinii*), salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*), slender-horned spineflower (*Dodecahema leptoceras*), Santa Ana River woollystar (*Eriastrum densifolium* ssp. *sanctorum*), and Gambel's water cress (*Nasturtium gambelii*). Marginally suitable habitat for Munz's onion, San Diego ambrosia, Nevin's barberry, and slender-horned spineflower occur in the Natural vegetation types in the survey area (Exhibit 6); therefore, these species have low potential to occur. They are only expected to occur in Naturalistic vegetation types if seed washes down from a Natural area (e.g., into the basin at the botanic garden) or if they were planted. Any impact on Threatened or Endangered plant species would require mitigation and additional consultation/permitting with the resource agencies under the federal or State Endangered Species Acts. The remaining species are not expected to occur in the survey area because the survey area does not support suitable habitat or soils for these species; all records in the region are historic; and/or the survey area is outside the current known range of the species.

A total of 23 species reported in the vicinity of the survey area have a California Rare Plant Rank (CRPR) of 1A, 1B, or 2B, which may be considered constraints on development per Section 15380 of the California Environmental Quality Act (CEQA) Guidelines. Suitable or marginally suitable habitat for 14 of these species occurs in the Natural vegetation types in the survey area (Exhibit 6). They are only expected to occur in Naturalistic vegetation types if seed washes down from a Natural area (e.g., into the basin at the botanic garden) or if they were planted. These 14 species are chaparral sand-verbena (*Abronia villosa* var. *aurita*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), Parry's spineflower (*Chorizanthe parryi* var. *parryi*), long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*), snake cholla (*Cylindropuntia californica* var. *californica*), many-stemmed dudleya (*Dudleya multicaulis*), mesa horkelia (*Horkelia cuneata* var. *puberula*), California satintail (*Imperata brevifolia*), Parish's desert-thorn (*Lycium parishii*), Brand's star phacelia (*Phacelia stellaris*), chaparral ragwort (*Senecio aphanactis*), salt spring checkerbloom (*Sidalcea neomexicana*), prairie wedge grass (*Sphenopholis obtusata*), and San Bernardino aster (*Symphyotrichum defoliatum*). These species have low potential to occur in the survey area. Impacts on these species may require mitigation, depending on the size of the population impacted relative to the regional population status. The remaining species are not expected to occur in the survey area because the survey area does not support suitable habitat or soils for these species; all records in the region are historic; the species is considered extirpated from the region; and/or the survey area is outside the current known range of the species

Plant species with a CRPR of 3 or 4 are not typically considered constraints on development. One species, Robinson's pepper-grass (*Lepidium virginicum* ssp. *robinsonii*) has been reported from the southeastern portion of the survey area (CCH 2019).

Special Status Wildlife

Fifty-six special status wildlife species have been reported in the vicinity of the survey area based on the results of the literature review or were analyzed in the previous LRDP EIR. Of these, 15 species are federally and/or State-listed Endangered or Threatened or are candidates for listing: Santa Ana sucker (*Catostomus santaanae*), steelhead – southern California Distinct Population Segment (*Oncorhynchus mykiss irideus* pop. 10), Riverside fairy shrimp (*Streptocephalus woottoni*), Delhi Sands flower-loving fly (*Rhaphiomidas terminates abdominalis*), southern mountain yellow-legged frog (*Rana muscosa*), Swainson's hawk (*Buteo swainsoni*), bald eagle (*Haliaeetus leucocephalus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), California black rail (*Laterallus jamaicensis coturniculus*), southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), coastal California gnatcatcher (*Polioptila californica californica*), tricolored blackbird (*Agelaius tricolor*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), and Stephens' kangaroo rat (*Dipodomys stephensi*). Marginally suitable habitat for Riverside fairy shrimp occurs in the basins on campus.

Marginally suitable habitat for least Bell's vireo occurs in the mixed riparian vegetation and the mulefat thicket in the survey area. Suitable habitat for coastal California gnatcatcher occurs in the brittle bush scrub, rock outcrops, sage scrub restoration, mixed scrub, and prickly pear scrub in Natural and Naturalistic areas on campus. Marginally suitable habitat for Stephens' kangaroo rat occurs in the annual grassland in Natural Areas on campus. Any impacts on these species would be considered significant and require mitigation. Exhibit 6 shows areas of potentially suitable habitat for these species. Swainson's hawks may forage in the larger open space areas of campus as migrants but do not nest in the project region. Any potential impact on Threatened or Endangered wildlife species and/or its habitat, would require mitigation and additional consultation/permitting with the resource agencies under the federal or State Endangered Species Acts. The remaining listed species are not expected to occur in the survey area due to lack of suitable habitat.

In addition to species formally listed by the resource agencies, several special status species (California Species of Special Concern, Watch List, and Fully Protected species) have been reported near the survey area. Species having potential to occur and for which impacts may be significant per Section 15380 of the CEQA Guidelines include western spadefoot (*Spea hammondii*), burrowing owl (*Athene cunicularia*), and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). Impacts on these species may require mitigation, depending on the size of the population impacted relative to the regional population status.

In addition, the following special status species have potential or limited potential to occur in the survey area due to the presence of suitable or marginally suitable habitat: San Diego banded gecko (*Coleonyx variegatus abbottii*), coast horned lizard (*Phrynosoma blainvillii*), orange-throated whiptail, coastal whiptail (*Aspidoscelis tigris stejnegeri*), southern California legless lizard (*Anniella stebbinsi*), California glossy snake (*Arizona elegans occidentalis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), two-striped garter snake (*Thamnophis hammondii*), red-diamond rattlesnake (*Crotalus ruber*), white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), ferruginous hawk (*Buteo regalis*), merlin (*Falco columbarius*), loggerhead shrike (*Lanius ludovicianus*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), Bell's sage sparrow (*Artemisiospiza belli belli*), yellow-breasted chat (*Icteria virens*), yellow warbler (*Setophaga petechia*), northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*), southern grasshopper mouse (*Onychomys torridus ramona*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), western yellow bat (*Lasiurus xanthinus*), pallid bat (*Antrozous pallidus*), and American badger (*Taxidea taxus*). For these non-listed species, impacts on a small amount of habitat (relative to the availability of habitat in the region) are not expected to reduce the regional population below a self-sustaining level. Typical avoidance and minimization measures (e.g., nesting bird surveys, roosting bat surveys) are used to avoid direct mortality to special status bird and bat species.

The remaining species reported from database searches are not expected to occur in the survey area due to lack of suitable habitat.

Critical Habitat

Critical Habitat is designated for the survival and recovery of species listed as Threatened or Endangered under the Federal Endangered Species Act (FESA). The survey area is not located in areas designated or proposed as Critical Habitat.

OTHER CONSIDERATIONS

Western Riverside County Multiple Species Habitat Conservation Plan

UCR is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) area. The MSHCP is a comprehensive, multi-jurisdictional plan that focuses on conservation of species and their associated habitats in Western Riverside County. The MSHCP is used to allow the participating jurisdictions to authorize "take" of plant and wildlife species identified within the Plan Area. UCR is given the option of utilizing the MSHCP as a "Participating Special Entity" (PSE).[1] If processing a project under the MSHCP, UCR would need to follow all aspects of the MSHCP for that project. However, if choosing not to process a project under the MSHCP, the project would have to be processed under traditional consultation/permitting mechanisms.

The relationship of the UCR campus to the MSHCP is shown on Exhibit 7. The survey area is located in the Cities of Riverside/Norco Area Plan. The target conservation acreage range for this area plan is 3,465–3,615 acres. The southeast portion of the campus is part of the Area Plan Subunit 2: Sycamore Canyon – West. Biological issues and considerations for this subunit include augmentation of conservation in Subunit 1 of the Highgrove Area Plan; conservation of grasslands adjacent to sage scrub to provide foraging habitat for raptors; maintenance of a linkage area for bobcat; and conservation of upland habitat supporting Bell's sage sparrow and southern California rufous-crowned sparrow. The planning species for this subunit include Bell's sage sparrow, loggerhead shrike, southern California rufous-crowned sparrow, and bobcat.

The southeast portion of the survey area is located in an MSHCP Criteria Area, specifically Criteria Cell 634. Conservation in this cell will contribute to assembly of Proposed Constrained Linkage 7, which is the only connection between existing core habitat in Sycamore Canyon Wilderness Park to the southwest and existing noncontiguous habitat block A in the Box Springs Mountains to the northeast. Conservation in this cell is planned to focus on upland scrub habitat to connect upland scrub habitat proposed for conservation in Cell 635 to the east with Cell 719 to the south. Conservation in Cell 634 will be approximately 5 percent of the cell, focusing on the eastern portion of the Cell. Since the UCR campus boundary only extends over the western half of Cell 634, future development of this area as part of the LRDP would not conflict with the conservation goals for Cell 634.

If a future project would impact habitat occupied by Riverside fairy shrimp, least Bell's vireo, coastal California gnatcatcher, or Stephens' kangaroo rat, using the MSHCP for take authorization may be beneficial. The MSHCP requires focused surveys to be conducted for Riverside fairy shrimp and least Bell's vireo; this would be the same whether or not UCR acted as a PSE. If these species are present, and UCR elects to act as a PSE, take could be obtained through preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP). If UCR chooses not to act as a PSE, then the project would be processed under Section 7 or 10 of the Endangered Species Act. If acting as a PSE, no surveys would be required for coastal California gnatcatcher, or Stephens' kangaroo rat, even though they have potential to occur; but all other MSHCP requirements would also need to be followed for the project. If not acting as a PSE, and potentially suitable habitat would be impacted, focused surveys would be required for coastal California gnatcatcher. If the species is observed, then the project would be processed under Section 7 or 10 of the Endangered Species Act. The benefit of using the MSHCP would depend on the

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[1] A "Participating Special Entity" is any regional public facility provider (e.g., a utility company, a public district or agency) that operates and/or owns land within the MSHCP Plan Area and that applies for Take Authorization pursuant to Section 11.8 of the Implementing Agreement.

types of habitat being impacted and whether take authorization would be needed; this would be determined on a project by project basis.

The portion of the campus that overlaps Cell 634 is in an additional survey needs area for Criteria Area plant species (i.e., Nevin's barberry, smooth tarplant, and round-leaved filaree [*California macrophylla*]).[2] As discussed above, suitable habitat for Nevin's barberry and smooth tarplant is present in the survey area. Therefore, if a project is planned in this area, focused surveys would be required for these species whether or not UCR acted as a PSE.

The survey area is in the additional survey needs area for burrowing owl. As discussed above, suitable habitat for burrowing owl is present in the survey area. Therefore, if a project is planned in an area with suitable burrowing owl habitat, focused surveys would be required for this species whether or not UCR acted as a PSE.

The MSHCP provides guidelines pertaining to the urban/wildlands interface. These indirect effects (i.e., "edge effects") are associated with locating development in proximity to the MSHCP Conservation Area. These impacts affect the quality of nearby wildlife habitat resulting from disturbance by construction (such as noise, dust, night lighting, spread of invasive species, and urban pollutants), and/or the long-term use of the site. Measures would be in place to avoid or minimize these indirect effects whether or not UCR acted as a PSE. Relevant indirect effects are discussed below.

Stephens' Kangaroo Rat

In response to the federal listing of Stephens' kangaroo rat, the Riverside County Habitat Conservation Agency (RCHCA) was formed. Its purpose is to acquire and manage habitat for the Stephens' kangaroo rat and other associated special status species. The RCHCA Stephens' Kangaroo Rat Habitat Conservation Plan (HCP) was developed to meet the requirements of the program's Federal Endangered Species Act Section 10(a) permit. The HCP for this species is managed by the RCHCA. The HCP establishes a Reserve System where activities in the core reserve areas are limited and/or restricted. Areas outside the Reserve System are within a designated Fee Area.

The survey area is located within a designated Fee Area. For projects within a Fee Area, focused surveys for the Stephens' kangaroo rat are not required, and all potential impacts are mitigated through the RCHCA.

Water Quality

Future projects and their construction could impact water quality. Discharges or runoff from project operation may carry pollutants, while runoff from construction may carry excessive silt, petroleum, or other chemical contaminants. The impact on water quality could affect habitat quality and the species using the waters. BMPs should be used to avoid and minimize indirect impacts on water quality.

Noise

Future projects and their construction could increase the noise in adjacent habitat areas. During operation, additional human activity and noise from vehicles and other machinery (generators) would increase the noise level in adjacent habitat. During construction, equipment noise would temporarily increase noise levels in adjacent areas. Increased noise could discourage use by wildlife that are not urban-tolerant

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[2] While the MSHCP considers this a Criteria Area plant species, its status has recently changed and it does not currently have a CRPR.

and/or has the potential to disrupt foraging, nesting, roosting, and/or denning activities for a variety of wildlife species. This impact would be minimal for construction located on the main campus where ambient noise presently exists and wildlife is expected to be urban-tolerant. This impact could adversely affect wildlife if located adjacent to undeveloped open space, particularly in the southeast portion of the survey area next to areas planned for conservation by the MSHCP as discussed above. BMPs should be used to avoid and minimize indirect impacts due to noise.

Dust

Grading activities would disturb soils and result in the accumulation of dust on the surface of the leaves of trees, shrubs, and herbs in adjacent open space areas. The respiratory function of the plants in the area could be impaired when dust accumulation is excessive. This impact could represent an adverse effect on native plants in the vicinity of active construction. BMPs should be used to avoid and minimize indirect impacts due to dust.

Night Lighting

Night lighting of new facilities, roads, or pathways could result in an indirect impact on the behavioral patterns of nocturnal and crepuscular (i.e., active at dawn and dusk) wildlife adjacent to the lighted areas. Of greatest concern is the effect on small ground-dwelling animals that use the darkness to hide from predators (e.g., owls), which are specialized night foragers. Additional night lighting in areas that are currently developed is not expected to adversely impact wildlife species. However, new lighting in areas adjacent to undeveloped open space, particularly in the southeast portion of the survey area next to areas planned for conservation by the MSHCP as discussed above, could adversely affect wildlife. BMPs should be used to avoid and minimize indirect impacts due to night lighting.

Human Activity

An increase in human activity may impact wildlife species in adjacent open space as a result of unauthorized public access, illegal dumping, and domestic animal predation. Human disturbance could disrupt normal foraging and breeding behavior of wildlife remaining in the area adjacent to the development, diminishing the value of the habitat. Wildlife stressed by human activity may be extirpated from the natural open space adjacent to the development, leaving only wildlife tolerant of human activity. Given the high level of human activity presently on the campus, this impact is not expected to adversely affect wildlife species except when new facilities, roads, or pathways are located adjacent to undeveloped open space, particularly in the southeast portion of the survey area next to areas planned for conservation by the MSHCP as discussed above. A substantial increase in human activity near MSHCP Proposed Constrained Linkage 7 has the potential to prevent wildlife from moving between habitat in Sycamore Canyon Wilderness Park and the Box Springs Mountains. BMPs should be used to avoid and minimize indirect impacts due to increased human activity.

Invasive Species

Landscaping that includes the use of non-native, invasive plant species (e.g., species listed in the California Invasive Plant Council’s [Cal-IPC’s] invasive plant inventory) can be detrimental to surrounding native habitat. Invasive species have the potential to spread into the surrounding natural open space and displace native species, hybridize with native species (thereby impacting the genetic integrity of the native species), alter biological communities, or alter ecosystem processes. This would degrade the quality of the adjacent vegetation, including vegetation communities that provide suitable habitat for Threatened or Endangered species. Additionally, construction vehicles can carry the seeds of non-native invasive species to a construction site, where they can escape into open space areas with the same effects as described above. BMPs should be used to avoid and minimize indirect impacts due to invasive species.

Nesting Birds and Raptors

The Migratory Bird Treaty Act (MBTA) protects migratory birds and their nests and eggs, both common and special status. Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (50 *Code of Federal Regulations* [CFR] §10.13, as amended). Since the 1970s, the MBTA has been interpreted to prohibit the accidental or "incidental" take of migratory birds. However, in December 2017, the acting Solicitor of the Department of the Interior issued a new memorandum disclaiming the interpretation of the MBTA as prohibiting incidental take of migratory birds (DOI 2017). In response to the federal changes in interpretation of the MBTA, the CDFW and the California Attorney General have issued an advisory affirming California's protections for migratory birds (CDFW and Attorney General 2018).

Multiple sections of *California Fish and Game Code* provide protection for nesting birds and raptors unless the *California Fish and Game Code* or its implementing regulations provide otherwise. Section 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 specifically addresses raptors (i.e., birds of prey in the orders *Falconiformes* and *Strigiformes*) and makes it unlawful to take, possess, or destroy these birds or their nest or eggs. Section 3513 prohibits the take or possession of migratory non-game birds as designated by the MBTA or any part of such bird.

Nesting birds and raptors have the potential to nest on buildings, in culverts, in shrubs and trees, in rocky outcrops, and on bare ground throughout the survey area. To the extent possible, construction should be initiated outside the peak nesting season (February 1 to August 31). If timing requires that construction be initiated during the peak nesting season, vegetation removal and/or tree removal should be planned to occur outside the nesting season (September 1 to January 31). If construction and/or vegetation removal must occur during the peak breeding season, a pre-construction nesting bird survey should be conducted prior to vegetation removal, building demolition, and/or the initiation of construction activities.

Bird Strikes

A potential long-term, operational impact of future development concerns bird strike mortality and injury. Ornithologists estimate that up to a billion birds are killed or injured annually by collisions with clear and reflective sheet glass and plastic (Klem 2009). It is thought that birds cannot distinguish between the reflection on the glass/plastic surface and the natural landscape. Construction of glass-fronted buildings or other structures using exposed glass (e.g., glass-topped walls) has the potential to result in bird strikes, especially if the structures are located adjacent to natural areas. The use of ultraviolet patterns in the glass are not detectable to humans but can substantially reduce bird strikes. BMPs should be used to avoid and minimize bird strikes.

Roosting Bats

Several bat species may forage and roost throughout the survey area. Impacts on a small amount of foraging habitat are not expected to decrease the regional population below self-sustaining levels. Therefore, impacts on foraging habitat would be less than significant. Bat species may also roost in buildings, culverts, mature trees, and in rock outcrops throughout the survey area. The CDFW is increasingly recommending/requiring the use of pre-construction roosting bat surveys prior to impacts on potential roost structures and mature vegetation to avoid and minimize impacts on these species.

RECOMMENDATIONS

This section provides recommendations for future projects.

1. A jurisdictional delineation is recommended for any project that could impact one of the areas identified as a potential jurisdictional water resource. Permits/certifications/agreements from the USACE, the RWQCB, and/or the CDFW may be required for impacts to waters under the regulatory authority of those agencies. A pre-application meeting with these agencies is recommended prior to submittal of permit applications to discuss existing conditions, to confirm the agencies' jurisdiction over water resources in the survey area, to discuss impacts to these resources that would result from the project, and to discuss the regulatory permitting process. Following the pre-application meeting, UCR would prepare and process the appropriate permits, which may include a Section 404 Permit, a Section 401 Water Quality Certification, a Report of Waste Discharge, and/or a CDFW Section 1602 Notification of Lake or Streambed Alteration. The resource agencies would be expected to require mitigation for impacts to areas under their respective jurisdictions. Compensatory mitigation may include restoration (i.e., re-establishment or rehabilitation), establishment (i.e., creation), enhancement, and/or preservation of jurisdictional resources. Compensatory mitigation may occur through permittee-responsible mitigation, payment to an in-lieu fee program, or purchase of compensatory mitigation credits from an approved mitigation bank. Mitigation ratios (i.e., the amount of mitigation acreage compared to the amount of impacted habitat) would be negotiated with each regulatory agency on a project-by-project basis.
2. Impacts on sensitive vegetation communities should be avoided to the extent practicable. If a future project would result in removal of sensitive vegetation, then compensatory mitigation may be required depending on the amount of vegetation impacted. Mitigation should ensure no net loss of habitat following implementation of the project. This mitigation may be in the form of habitat preservation, restoration, enhancement, and/or establishment (i.e., creation). Compensatory mitigation may be in the form of permittee-responsible mitigation, in which the permittee maintains liability for the construction and long-term success of the mitigation site or through mitigation banking or an in-lieu fee program, where liability for project success is transferred to a third party (i.e., a mitigation bank or an in-lieu fee sponsor). For permittee-responsible mitigation, preparation of a Habitat Mitigation Monitoring Plan (HMMP) may be required.
3. Focused surveys for special status plants and wildlife species with potential to occur in the survey area are recommended prior to impacts on areas of suitable habitat for each respective species (Exhibit 6). This would include surveys for special status plant species, Riverside fairy shrimp, burrowing owl, coastal California gnatcatcher, and least Bell's vireo. Surveys should be performed by a qualified Biologist with the appropriate federal/State permits, if necessary, and follow approved survey protocol, which includes appropriate timing of surveys. If listed species are observed and habitat areas cannot be avoided, then consultation/permitting would be required to obtain take authorization. Appropriate avoidance, minimization, and compensatory mitigation will be required for each listed species that could be impacted. Depending on the listed species present, it may be desirable for UCR to act as a PSE under the MSHCP to obtain the necessary take authorization.
4. In order to minimize impacts on water quality associated with both construction activities, as well as long-term operation of future projects, project-related construction activities will be in compliance with UCR's Stormwater Management Plan and their Phase II Small Municipal Separate Storm Sewer System (MS4) general storm water permit, which includes BMPs to

maintain water quality. If a project would disturb one acre or more, preparation of a storm water pollution prevention plan would be required.

5. In order to avoid indirect impacts on areas planned for conservation by the MSHCP, it is recommended that development be limited in the southeast portion of the survey area. If development occurs in this area, various measures are recommended to minimize impacts to these areas:
    - Appropriate setbacks or barriers (e.g., berms or walls) are recommended to minimize noise and human activity impacts. Buffer areas should be vegetated with native species to help screen these indirect effects.
    - Active construction areas should be sprayed with water periodically to minimize dust.
    - New lighting and night lighting during construction should be shielded and/or directed away from adjacent open space.
    - Barriers (e.g., fencing or walls) or signage directing the public away from off-site open space should be installed to minimize unauthorized human activity.
    - Landscaping plans should be reviewed by a qualified Biologist to ensure that no plants identified on the Cal-IPC's plant inventory are included in the plant palette.

6. In order to avoid impacts on nesting birds and raptors (common or special status), the initiation of construction should be scheduled outside the peak nesting season (generally between September 1 and January 31). If timing requires that construction activities be initiated during the peak nesting season, vegetation removal and/or tree removal should be planned to occur outside the nesting season (September 1 to January 31). If construction and/or vegetation removal must occur during the peak breeding season (February 1 to August 31), a pre-construction nesting bird survey should be conducted by a qualified Biologist within three days prior to vegetation removal, building demolition, and/or the initiation of construction activities.

    If the Biologist finds an active nest within or adjacent to the construction area, the Biologist will identify an appropriate protective buffer zone around the nest depending on the sensitivity of the species, the nature of the construction activity, and the amount of existing disturbance in the vicinity. In general, the Biologists should designate a buffer of 50 to 200 feet for common nesting birds and 200 to 500 feet for special status nesting birds and nesting raptors. No construction activities will be allowed within the buffer until nesting activity has ended to ensure compliance with *California Fish and Game Code.*

7. In order to minimize mortality to due bird strikes against glass, it is recommended that glass-fronted buildings or other structures with exposed glass (e.g., glass-topped walls) incorporate measures to minimize the risk of bird strikes. This may include (1) the use of opaque or uniformly textured/patterned/etched glass, (2) angling of glass downward so that the ground instead of the surrounding habitat or sky is reflected, (3) installation of one-way film that results in opaque or translucent covering when viewed from either side of the glass, (4) installation of a uniformly dense dot pattern created as ceramic frit on both sides of the glass, and/or (5) installation of a striped or grid pattern of clear ultra-violet (UV)-reflecting and UV-absorbing film applied to both sides of the glass. It should be noted that single decals (e.g., falcon silhouettes or large eye patterns) are ineffective and are not recommended unless the entire glass surface is uniformly covered with the objects or patterns (Klem 1990).

8. If future projects would impact rocky outcrops, mature vegetation, existing buildings, or other structures that could be used for roosting, a passive acoustic survey is recommended to identify the species using the area for day/night roosting. If special status roosting bats are present and their roosts would be impacted, a qualified bat biologist should prepare a plan to identify the proper exclusionary methods. Removal of mature trees should be monitored by a qualified bat Biologist and occur by pushing down the entire tree (without trimming or limb removal) using heavy equipment and leaving the felled tree on the ground untrimmed and undisturbed for a period of at least 24 hours. To exclude bats from buildings/structures or rocky outcrops, exclusion measures should be installed on crevices by placing one-way exclusionary devices that allow bats to exit but not enter the crevice.
9. The determination of whether UCR should be a PSE in the MSHCP should occur on a project-by-project basis depending on the potential take authorization needed for each project.

If you have any questions or comments, please contact Amber Heredia at (714) 751-7373.

Sincerely,

PSOMAS

Amber O Heredia

Amber O. Heredia
Senior Project Manager

Enclosures: Exhibits 1–7
Attachment A – Representative Photographs

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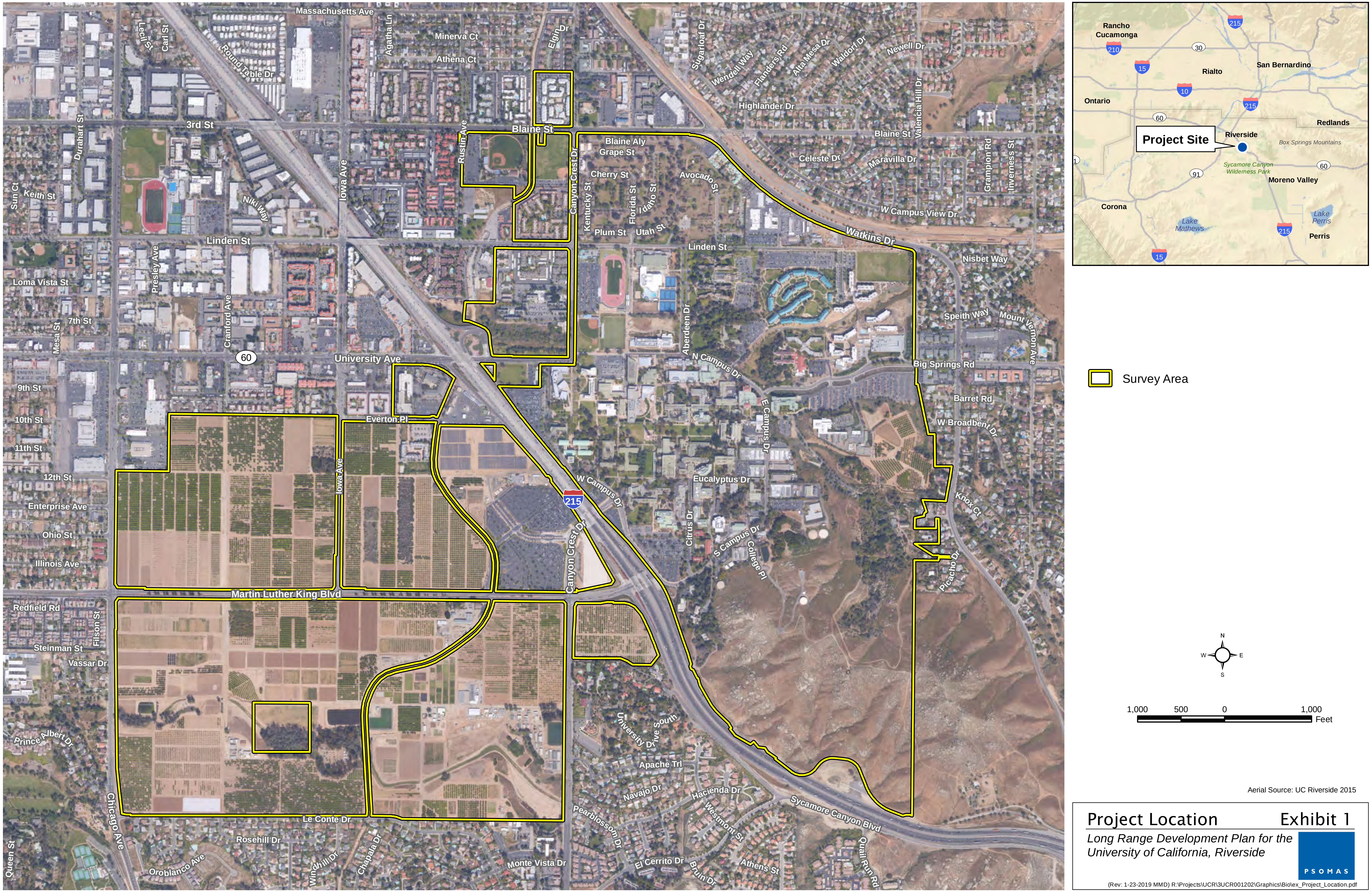

Aerial Source: UC Riverside 2015

Project Location Exhibit 1

Long Range Development Plan for the University of California, Riverside

PSOMAS

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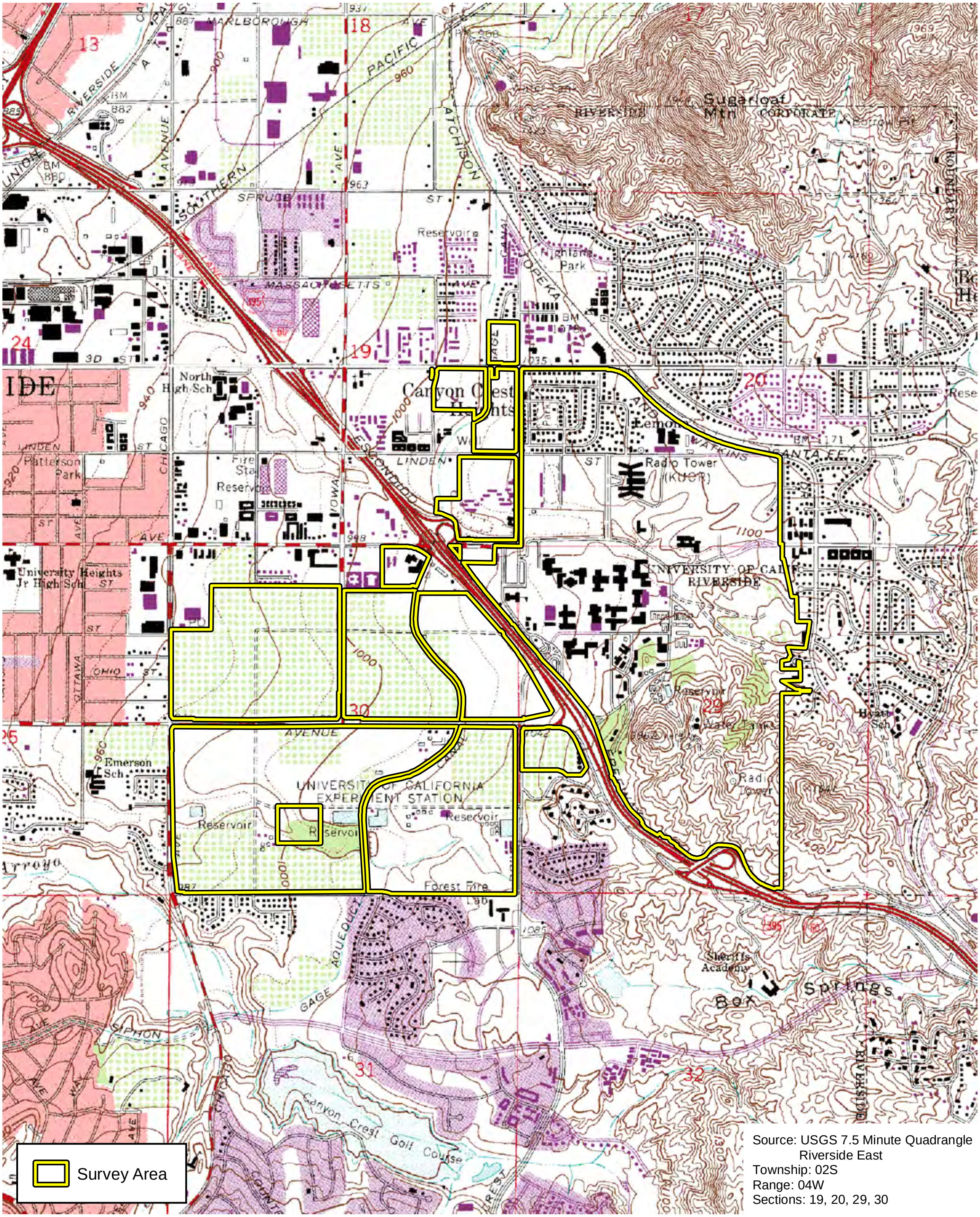

Survey Area

Source: USGS 7.5 Minute Quadrangle
Riverside East
Township: 02S
Range: 04W
Sections: 19, 20, 29, 30

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U.S. Geological Survey 7.5-Minute Digital Quadrangle

Exhibit 2

Long Range Development Plan for the University of California, Riverside

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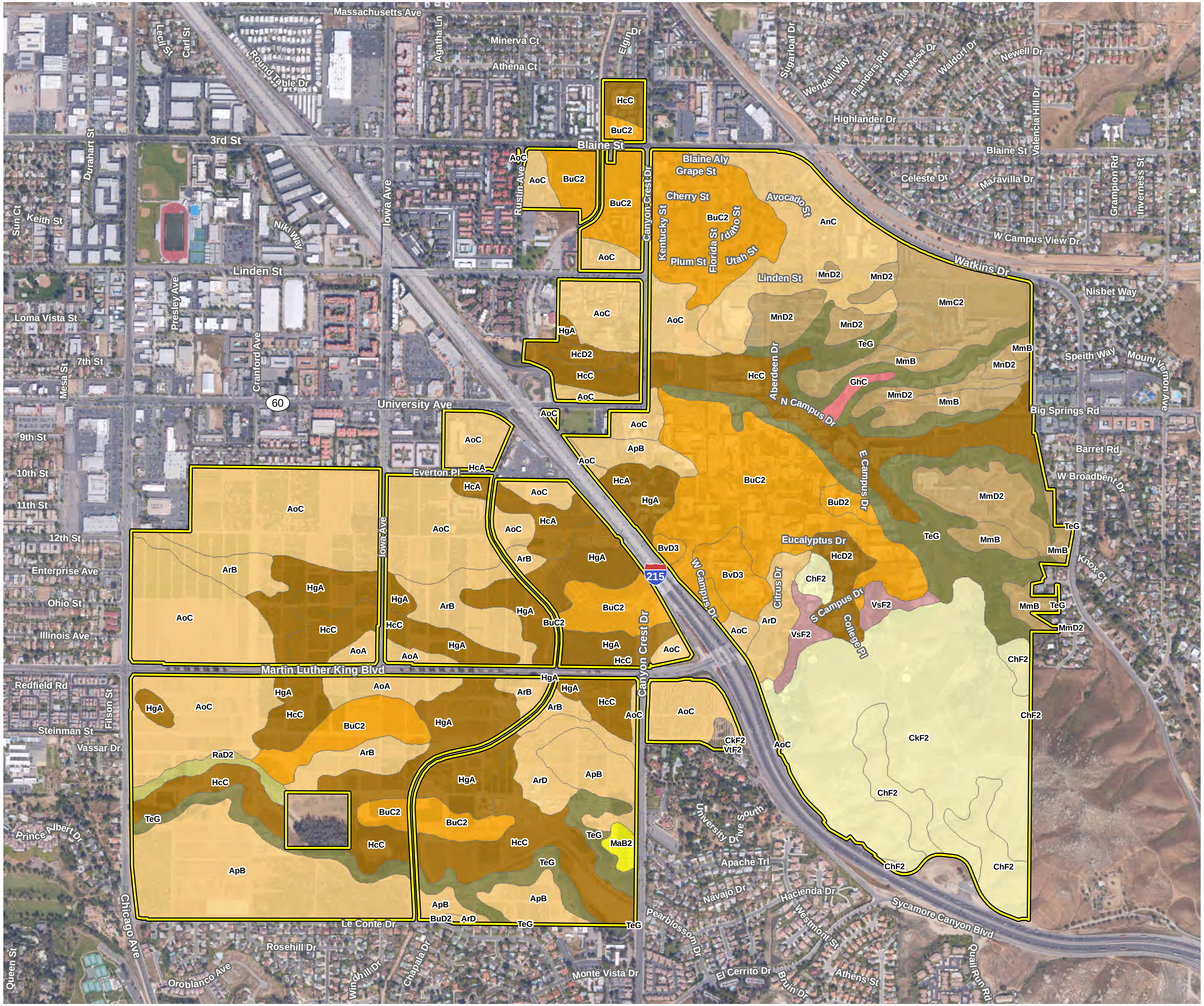

□ Survey Area

▨ Arlington

AnC: Arlington fine sandy loam, 2 to 8 percent slopes

AoA: Arlington fine sandy loam, deep, 0 to 2 percent slopes

AoC: Arlington fine sandy loam, deep, 2 to 8 percent slopes

ApB: Arlington loam, 2 to 5 percent slopes

ArB: Arlington loam, deep, 0 to 5 percent slopes

ArD: Arlington loam, deep, 5 to 15 percent slopes

▨ Buren

BuC2: Buren fine sandy loam, 2 to 8 percent slopes, eroded

BuD2: Buren fine sandy loam, 8 to 15 percent slopes, eroded

BvD3: Buren loam, 5 to 15 percent slopes, severely eroded

▨ Cieneba

ChF2: Cieneba sandy loam, 15 to 50 percent slopes, eroded

CkF2: Cieneba rocky sandy loam, 15 to 50 percent slopes, eroded

▨ Gorgonio

GhC: Gorgonio loamy sand, 0 to 8 percent slopes

▨ Hanford

HcA: Hanford coarse sandy loam, 0 to 2 percent slopes

HcC: Hanford coarse sandy loam, 2 to 8 percent slopes

HcD2: Hanford coarse sandy loam, 8 to 15 percent slopes, erod ed

HgA: Hanford fine sandy loam, 0 to 2 percent slopes

▨ Madera

MaB2: Madera fine sandy loam, 2 to 5 percent slopes, eroded

▨ Monserate

MmB: Monserate sandy loam, 0 to 5 percent slopes

MmC2: Monserate sandy loam, 5 to 8 percent slopes, eroded

MmD2: Monserate sandy loam, 8 to 15 percent slopes, eroded

MnD2: Monserate sandy loam, shallow, 5 to 15 percent slopes, eroded

▨ Ramona

RaD2: Ramona sandy loam, 8 to 15 percent slopes, eroded

▨ Terrace

TeG: Terrace escarpments

▨ Vista

VsF2: Vista coarse sandy loam, 15 to 35 percent slopes, erode d

VtF2: Vista rocky coarse sandy loam, 2 to 35 percent slopes, eroded

N W E S

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Data Source: U.S. Department of Agriculture;
Natural Resources Conservation Service
Aerial Source: UC Riverside 2015

Soil Types Exhibit 3

Long Range Development Plan for the University of California, Riverside

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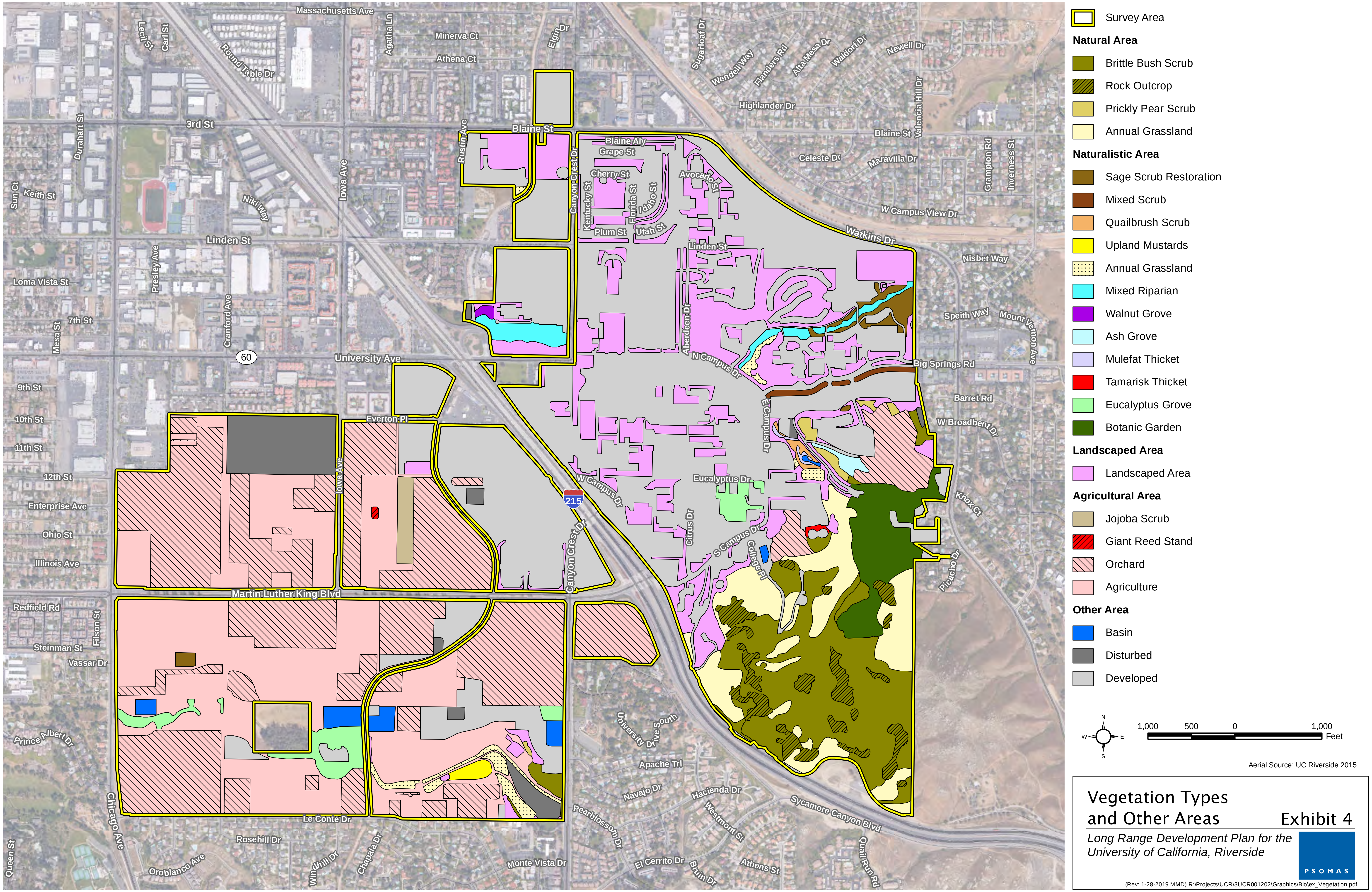

Aerial Source: UC Riverside 2015

Vegetation Types and Other Areas

Exhibit 4

Long Range Development Plan for the University of California, Riverside

PSOMAS

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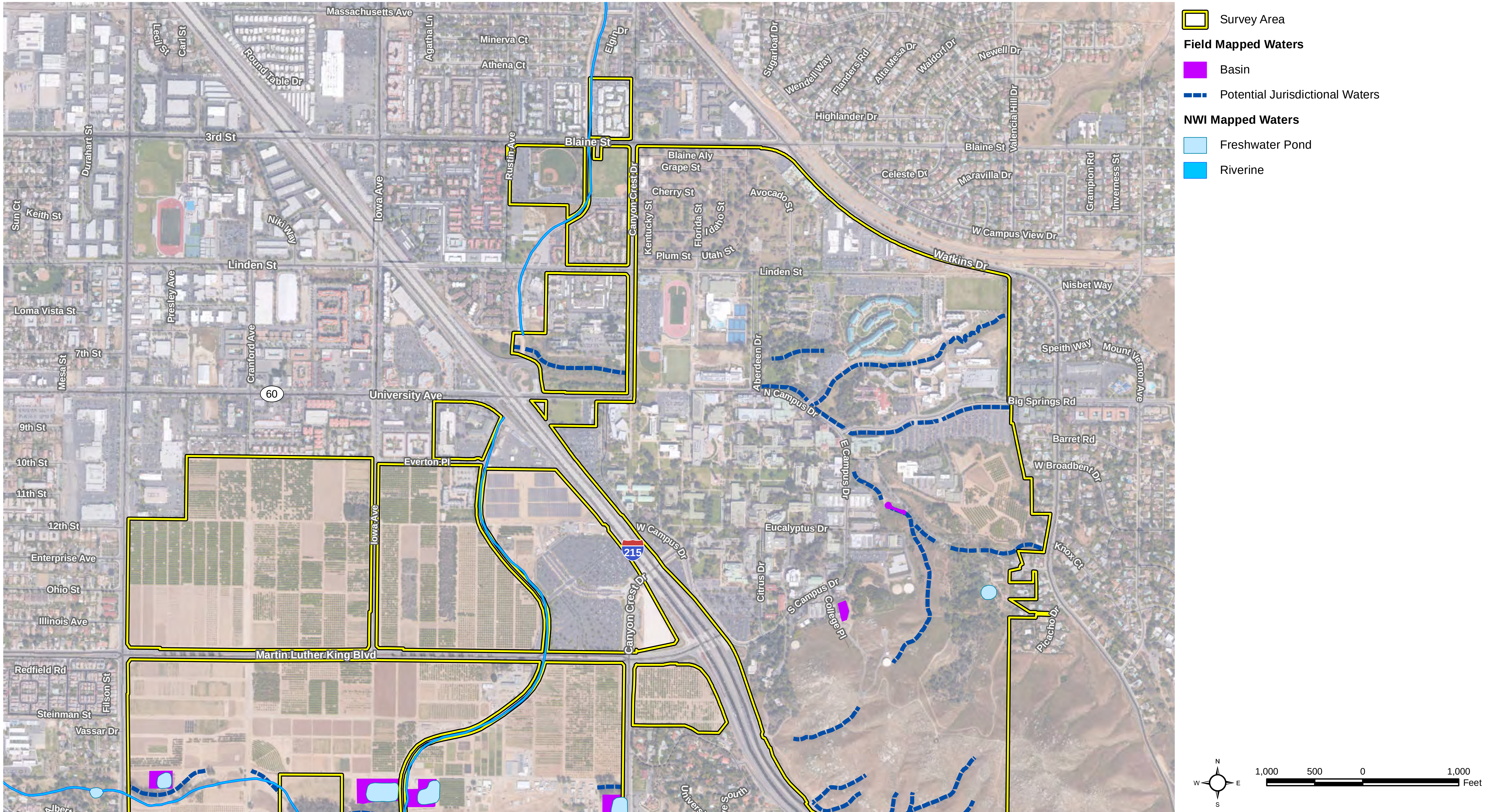

Data Source: U.S. Fish & Wildlife Service; National
Wetlands Inventory December 2016
Aerial Source: UC Riverside 2015

Potential Jurisdictional Waters

Exhibit 5

Long Range Development Plan for the
University of California, Riverside

PSOMAS

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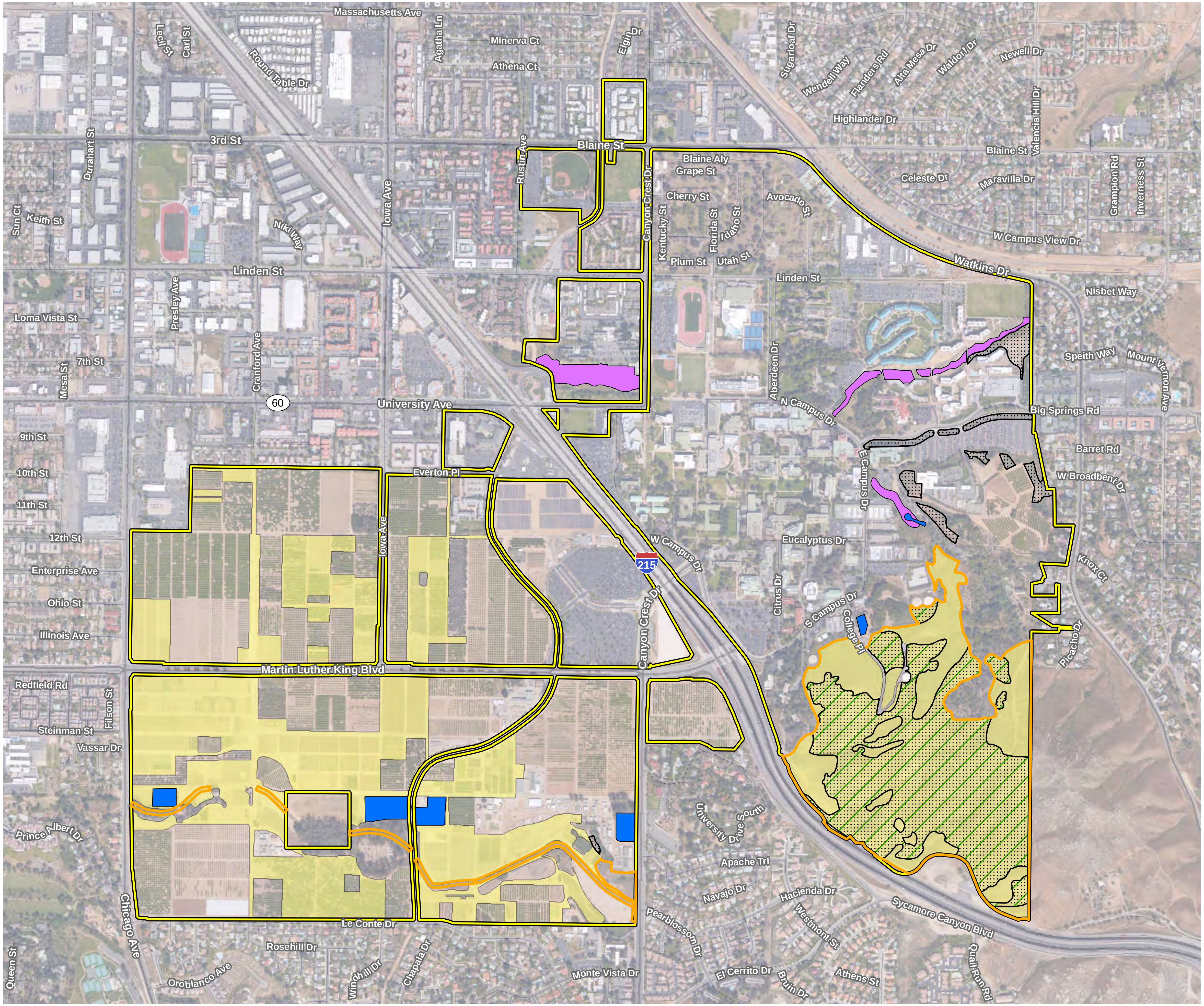

☐ Survey Area

☐ Special Status Plant Species

🟦 Fairy Shrimp & Western Spadefoot

🟪 Least Bell's Vireo

▨ Coastal California Gnatcatcher

🟨 Burrowing Owl

▨ Los Angeles Pocket Mouse

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Aerial Source: UC Riverside 2015

Areas of Potential Habitat for Special Status Species

Exhibit 6

Long Range Development Plan for the University of California, Riverside

PSOMAS

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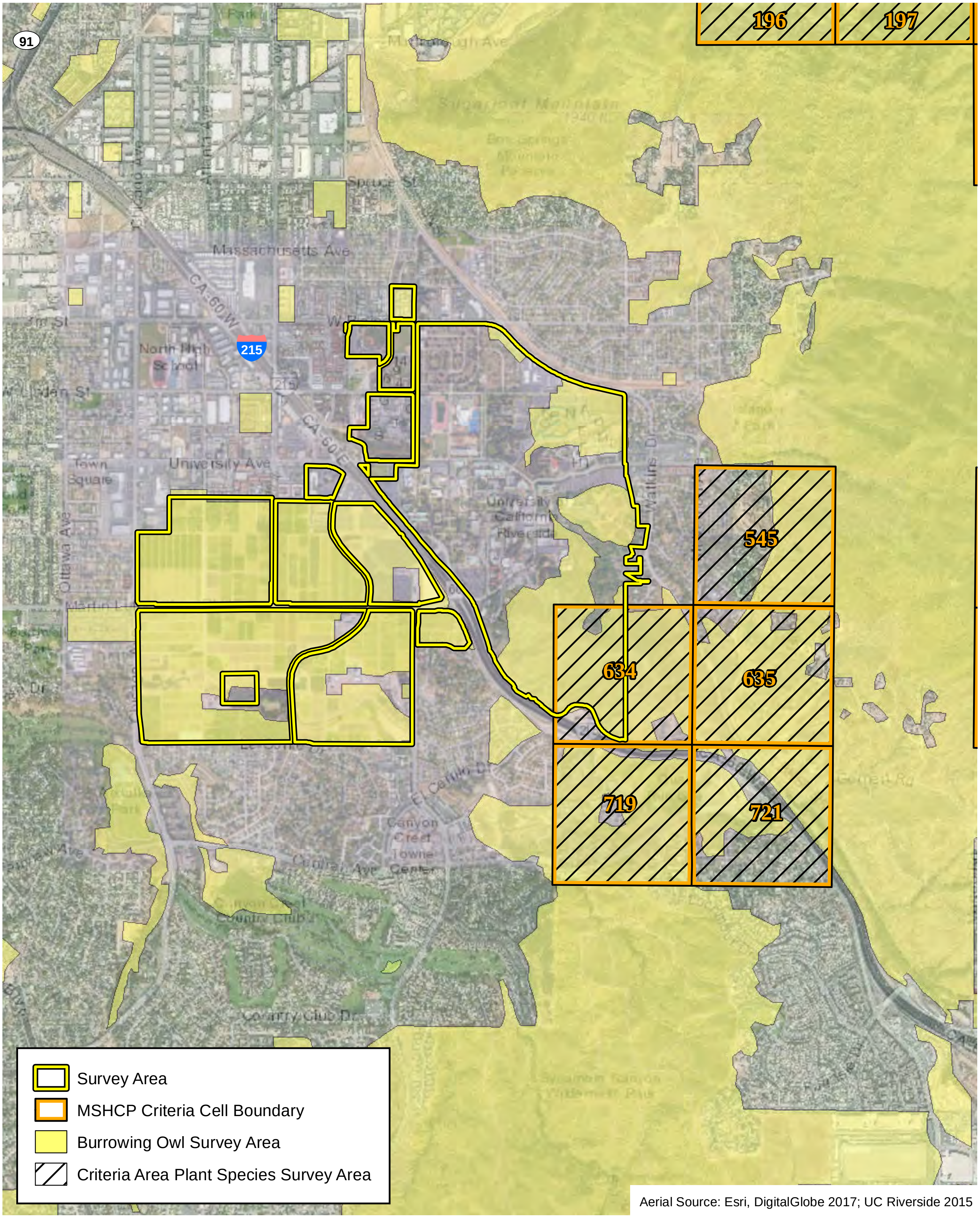

Aerial Source: Esri, DigitalGlobe 2017; UC Riverside 2015

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Relationship to MSHCP

Exhibit 7

Long Range Development Plan for the University of California, Riverside

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ATTACHMENT A

REPRESENTATIVE SITE PHOTOGRAPHS

Brittle bush scrub in a Natural Area in the southeastern corner of the Survey Area.

Rock outcrop in a Natural Area in the southeastern corner of the Survey Area.

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Representative Photographs

Exhibit A-1

Long Range Development Plan for the University of California, Riverside

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Potential jurisdictional water resource in the southeastern corner of the Survey Area.

Sage scrub restoration in a Naturalistic Area in the eastern portion of the main campus.

Representative Photographs

Exhibit A-2

Long Range Development Plan for the University of California, Riverside

PSOMAS

Overview of the botanical garden basin.

Mixed riparian surrounded by sage scrub restoration in a Naturalistic Area in the eastern portion of the main campus.

Representative Photographs

Exhibit A-3

Long Range Development Plan for the University of California, Riverside

Mixed riparian with a canopy of willows, Fremont cottonwood, and other trees and an understory containing mulefat, Mexican fan palm, and non-native grasses.

Representative landscaped area on the main campus.

Representative Photographs

Exhibit A-4

Long Range Development Plan for the University of California, Riverside

PSOMAS

Representative landscaped area on the main campus.

Representative developed area on the main campus showing closely-associated vegetation.

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Representative Photographs

Exhibit A-5

Long Range Development Plan for the University of California, Riverside

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Representative fallow field in the Agricultural Area in the west campus.

Active Agricultural Area (foreground) and Eucalyptus grove (background) in the west campus.

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Representative Photographs

Exhibit A-6

Long Range Development Plan for the University of California, Riverside

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Appendix E

Cultural Resources Supporting Information

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Appendix E1

Cultural Resource Constraint Study

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PSOMAS

Balancing the Natural and Built Environment

March 13, 2019

Tricia D. Thrasher
University of California Riverside
Principal Environmental Planner
Office of Campus Architect
1223 University Avenue, Suite 240
Riverside, California 92507

VIA EMAIL
Tricia.Thrasher@ucr.edu

Subject: Cultural Resource Constraint Study for Long-Range Development Plan at University of California, Riverside

Dear Ms. Thrasher:

This memorandum intends to transmit the results of the cultural and paleontological resource constraint study conducted for University of California, Riverside Long-Range Development Plan (LRDP) in the City of Riverside, Riverside County, California (Exhibit 1). The purpose of the study is to evaluate cultural and paleontological constraints on future development implemented as part of the LRDP.

INTRODUCTION

The management of cultural resources falls within the jurisdiction of several levels of government. Federal laws provide the framework for the identification, protection, and mitigation of cultural resources. Additionally, states and local governments play active roles in identifying, documenting, and protecting resources within their communities. The National Historic Preservation Act (NHPA) of 1966, as amended, and the *California Public Resources Code* (PRC), Section 5024.1, are the primary federal and state laws, respectively, that govern the evaluation of significance of a cultural resource.

In California, the California Environmental Quality Act (CEQA) is a statute that requires lead agencies to identify the significant environmental impacts caused by their actions, including their effects to cultural and historic resources. CEQA applies to all projects that are approved through a discretionary process by State, local, and public agencies. Resources listed in or determined to be eligible for the California Register of Historical Resources (CRHR) must be considered in the CEQA process.

In State and local governments, resources are considered historically or culturally significant if the resource is eligible to be listed on a local register(s) or can satisfy the criteria for significance set forth by federal and State regulations. In California, resources are considered significant under the CEQA if the resource is eligible for listing on the CRHR, which is modeled after the federal register, the National Register of Historic Places (hereinafter referred to as the “National Register”). A resource may also be considered significant if the resource is listed on a local register and/or has been treated as a significant resource by a lead agency in the past.

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Santa Ana, CA 92707

Tel 714.751.7373
Fax 714.545.8883
www.Psomas.com

PROJECT DESCRIPTION AND LOCATION

The current LRDP in use by the University of California, Riverside (UCR) campus was last updated in 2011 and bases its land use assumptions on a projected maximum population of 25,000 students. The LRDP is being updated to guide campus planning through 2035 to support continued future growth on the campus.

The LRDP covers the approximately 1,127-acre UCR campus located in the City of Riverside, California (Exhibit 1). The campus is generally bound by Blaine Street in the north, Valencia Hill Drive in the east, Le Conte Drive in the south, and Chicago Avenue in the west. It occurs on the U.S. Geological Survey's (USGS') Riverside East 7.5-minute quadrangle in Sections 19, 20, 29, and 30 of Township 2 South, Range 4 West (Exhibit 2). Surrounding land uses include commercial and residential development; undeveloped open space in the Box Springs Mountains are located to the east. Interstate 15 (I-15) separates the main campus facility in the east from campus agricultural uses and a large parking lot in the west.

Topography on the main campus and west campus is relatively flat with an elevation of approximately 1,000 to 1,100 feet above mean sea level (msl). Topography in the southeast portion of the campus consists of gently sloping hills with a peak elevation of 1,548 feet above msl.

METHODS

Paleontological Resources Records Search

A paleontological records search was conducted by Dr. Samuel McLeod of the Natural History Museum of Los Angeles County ("LACM") on December 18, 2018. This search used the vertebrate paleontology records housed at the LACM to identify fossil localities near or within the UCR campus vicinity, as well as those within the geologic formations that underlie the UCR campus. In addition to this records search, online records searches were conducted using the Paleobiology Database (PBDB) and University of California Museum of Paleontology (UCMP) online collections. To augment the information from the records searches, a literature search was conducted using scientific publications and unpublished technical reports regarding the geology and paleontology of the Project area and surrounding region.

Archaeological Resources Records and Archival Search

The Eastern Information Center (EIC), located on the campus of University of California, Riverside, houses the records of the California Historical Resources Information System (CHRIS) for Riverside County. The records search included a 0.8-kilometer (0.5-mile) radius around the UCR campus and was conducted by Kassie Sugimoto, Psomas Archaeologist, on November 28, 2018. The purpose of the literature search was to identify prehistoric or historic archaeological sites or historic buildings and structures previously recorded within and around the campus area.

Sacred Lands File Search

An inquiry was made of the Native American Heritage Commission (NAHC) on December 5, 2018, to request a review of the Sacred Lands File database regarding the possibility of Native American cultural resources and/or sacred places in the campus vicinity that are not documented on other databases. The NAHC completed its Sacred Lands File search on December 19, 2018, and also provided a list of Native American groups and individuals who may have knowledge of Native American cultural resources not formally listed on any database.

Archaeological and Paleontological Field Survey

Psomas Archaeologist Kassie Sugimoto and Paleontologist Melissa Macias surveyed the UCR campus on December 7 and 11, 2018. The survey was divided into the following sections: west campus agricultural fields, main campus, south campus hillside, and botanic gardens. The survey consisted of walking open spaces and into any outcrops located on the ground. Ground visibility varied based on location but is estimated to range between 25 and 75 percent visibility.

RESULTS

Paleontological Resources Records Search

A paleontological records search was requested of Dr. Sam McLeod at the Natural History Museum (LACM) of Los Angeles County, Vertebrate Paleontology Department and results were received on December 18, 2018. The results indicate that no vertebrate fossil localities are directly within the boundaries of the campus; however, two fossil-bearing localities are recorded near the campus. Results of the records search are detailed in Table 1 below.

TABLE 1
PALEONTOLOGICAL RESOURCES WITHIN ONE MILE OF THE UCR LONG-RANGE DEVELOPMENT PLAN

Locality Number	Resource Type	Taxa	Location	Depth
LACM 7811	Vertebrate Fossils	*Masticophis* sp. (whipsnake)	Outside (~12 miles from APE)	9-11 feet below surface
LACM 1207	Vertebrate Fossils	*Odocoileus* sp. (deer)	Outside (~12 miles from APE)	Unknown
APE: area of potential effect				

Archaeological Resources Records and Archival Search

The purpose of a historic and archaeological literature review is to gather information on previous research within the area. The literature review results will elucidate the number of studies completed within a specified distance of the UCR campus and the type of research and development near the campus and provide a research timeline for the area. Understanding the type of resources previously found within the area is helpful in assessing the sensitivity of the area by explicating the type of sites that may be encountered during future development of the campus.

The records search and literature review conducted for the LRDP revealed 51 cultural resource studies occurring within a 0.5 mile radius. The studies consisted primarily of archaeological and historic surveys (Table 2). Seventeen studies studied portions of the UCR campus. Of these 17 studies, five reports (RI-4997, RI-4998, RI-5873, RI-8577, and RI-10285) document resources within the campus vicinity.

TABLE 2
CULTURAL RESOURCE STUDIES WITHIN ONE-MILE OF UCR CAMPUS

Report Number	Year	Author/Firm	Title	Location
RI-02345	1988	Drover, Christopher	A Cultural Resources Assessment of the Proposed USDA Salinity Laboratory, University of California, Riverside.	Within
RI-03693	1991	Greenwood & Associates	Cultural Resource Investigation: Inland Feeder Project, Metropolitan Water District of Southern California	Within
RI-03381	1992	Archaeological Research Unit, U.C. Riverside.	Cultural Resources Assessment: Thermal Energy Storage Facility, University of California, Riverside; Riverside County, California	Within
RI-03899	1994	Sheldon and Drover	Environmental Impact Evaluation: A Cultural Resources Assessment of the Insectary Building, University of California, Riverside, Riverside County	Within
RI-04053	1997	Keith Companies	Environmental Impact Evaluation: A Cultural Resources Impact Assessment of The Proposed Coxsprint Antenna Site University of California, Riverside - Riverside East 7.5' USGS Quadrangles Riverside County, California	Within
RI-04450	1999	LSA Associates, Inc.	Cultural Resource Assessment for Pacific Bell Mobile Services Facility CM 681-02, County of Riverside, California	Within
RI-05622	2000	Drover, Christopher	Environmental Impact Evaluation: An Archaeological Assessment of Alternate Parking A5c, University of California, Riverside, Riverside California	Within
RI-04997	2001	McKenna et Al.	A Phase I Cultural Resources Investigation of the Proposed Chiller Plant, Tank, and Pipeline System on The University of California, Riverside Campus, Riverside, Riverside County, California.	Within
RI-04998	2001	McKenna et al.	A Phase I Cultural Resources Investigation of The Islander Park Retention Basins and Channel Improvements Project Area, Riverside, Riverside County, California.	Within
RI-05054	2002	McKenna et al.	Tes Expansion & Satellite Plant Monitoring Program	Within
RI-05873	2002	CRM Tech	Cultural Resources Technical Report, UCR Long Range Development Plan	Within
RI-09920	2005	Michael Brandman Associates	Cultural Resource Records Search and Site Visit Results for T-Mobile Telecommunications Facility Candidate IE05098A (TM098 UCR Monopine), East Campus Drive, Riverside, Riverside County, California	Within
RI-07316	2006	Michael Brandman Associates	Cultural Resource Records Search and Site Visit Results for Sprint Nextel Telecommunications Facility Candidate RV70XC106A (Cottonwood Reservoir), Vacant Land North of Cedarhill Lane, Lake Elsinore, Riverside County, California.	Within

TABLE 2
CULTURAL RESOURCE STUDIES WITHIN ONE-MILE OF UCR CAMPUS

Report Number	Year	Author/Firm	Title	Location
RI-08308	2009	Michael Brandman Associates	Letter Report: Cultural Resources Records and Site Visit Results for T-Mobile USA Candidate IE05098A, (TM098 UCR Monopine) UC Riverside, Riverside County, California.	Within
RI-08577	2010	LSA Associates, Inc.	Historic Resources Assessment: The Barn Group and University Cottage; University of California, Riverside City of Riverside, Riverside County, California	Within
RI-09143	2013	LSA Associates, Inc.	Cultural Resources Assessment West Campus Solar Farm UCR #950338 University of California, Riverside, Riverside County, California	Within
RI-10285	2017	Helix Environmental Planning, Inc.	Cultural Resource Records Search and Site Visit Results for Cellco Partnership and Their Controlled Affiliates Doing Business as Verizon Wireless Candidate 'Highlanders', 080 Pennsylvania Avenue, Riverside, Riverside County, California.	Within
RI-00081	1973	Archaeological Research Unit, U.C. Riverside.	Golden Crest Residential Development: Expected Impact on Archaeological Resources	Outside
RI-00127	1974	Archaeological Research Unit, U.C. Riverside.	Letter Report: Survey of 11 Acres In Riverside East Quad.	Outside
RI-01247	1981	Albert A Webb Associates, Riverside, Ca	Environmental Impact Evaluation: Archaeological Assessment of TPM 16013, Riverside, California	Outside
RI-02549	1989	Drover, Christopher	An Archaeological Assessment of Gateway Center - Long Beach Equities, Riverside County, California.	Outside
RI-03570	1992	Keller, Jean	Assessment of A Planned Residential Development (PRD-2-923), 18.30 Acres of Land in The City of Riverside, California.	Outside
RI-09990	1998	Chambers Group, Inc	Cultural Resources Record Search and Literature Review for A Pacific Bell Mobile Services Telecommunications Facility: CM 043-18 City of Riverside, California	Outside
RI-04363	1999	LSA Associates, Inc.	Letter Report: Cultural Resource Assessment for Sprint Pcs Facility RV03XC086-A (Canyon Crest Heights), County of Riverside,	Outside
RI-04404	2000	Jones and Stokes Associates, Inc.	Final Cultural Resources Inventory Report for the Williams Communications, Inc., Fiber Optic Cable System Installation Project, Riverside to San Diego, California Vol I-IV.	Outside
RI-10354	2001	Tetra Tech, Inc.	With Antenna Licensing from the Federal Communications Commission (FCC), Verizon Wireless, Inc. Is Proposing the Installation of An Unmanned Cellular Telecommunications Facility at the Location Specified Below:	Outside

TABLE 2
CULTURAL RESOURCE STUDIES WITHIN ONE-MILE OF UCR CAMPUS

Report Number	Year	Author/Firm	Title	Location
RI-05776	2002	CRM Tech	Archaeological Testing and Evaluation Report, Stone Canyon Project, Site Ca-Riv-6851/H, APN 253-250-5100, Quail Run Road, City of Riverside, Riverside County, California	Outside
RI-07058	2002	Kyle Consulting	Cultural Resource Assessment for Cingular Wireless Facility SB145-01 City of Riverside, Riverside County, California	Outside
RI-05173	2003	LSA Associates, Inc.	Results of The Cultural Resource Assessment for The Fidelity Family Holdings Four Lots In The City of Riverside, Riverside County, California	Outside
RI-05748	2003	CRM Tech	Archaeological Sensitivity Assessment: Hunter Park Redevelopment Plan Amendment, City of Riverside, Riverside County, California	Outside
RI-07147	2003	LSA Associates, Inc.	Cultural Resource Assessment: Cingular Wireless Facility No. SB 263-02, Riverside City and County, California	Outside
RI-04799	2004	Historical, Environmental, Archaeological, Research, Team	A Phase I Archaeological Study for Telacu Housing-Riverside, Inc., 1807 11th Street, City of Riverside, County of Riverside, California	Outside
RI-07169	2004	LSA Associates, Inc.	Cultural Resource Assessment: Cingular Wireless Facility No. SB-304-02, City of Riverside, Riverside County, California	Outside
RI-09923	2005	Michael Brandman Associates	Cultural Resource Records Search and Site Visit Results for Cingular Telecommunications Facility Candidate LSANCA6087D (SE Riverside), 5225-6B Canyon Crest Drive, Riverside, Riverside County, California	Outside
RI-06271	2006	Chambers Group, Inc.	Archaeological Survey of APN 258-163-010, 011, and 012, Located in The City and County of Riverside, California	Outside
RI-06275	2006	Ecorp Consulting, Inc.	Cultural Resources Investigation of the 6.0 Acre Austin Property, City and County of Riverside, California	Outside
RI-06838	2006	McKenna et al.	A Phase I Cultural Resources Investigation and Historic Building Survey for The Proposed New Eastside Elementary School Site in Riverside, Riverside County, California	Outside
RI-07498	2007	Michael Brandman Associates	Letter Report: Cultural Resource Records Search and Site Visit Results for T-Mobile Facility Candidate IE25350A (UCR Sports Center), 1000 West Blaine Street, Riverside, Riverside County, California.	Outside
RI-07925	2007	SWCA Environmental Consultants	Cultural Resources Survey for The Tequesquite Arroyo Trunk Sewer Project, City of Riverside, Riverside County, California	Outside
RI-07816	2008	Michael Brandman Associates	Letter Report: Cultural Resource Records Search and Site Visit Results for AT&T Facility Candidate RS0166-51 (UCR Watkins-Valencia), 3671	Outside

TABLE 2
CULTURAL RESOURCE STUDIES WITHIN ONE-MILE OF UCR CAMPUS

Report Number	Year	Author/Firm	Title	Location
			Valencia Hill Drive, Riverside, Riverside County, California	
RI-07924	2008	Zepeda-Herman, Carmen	Letter Report: Results of Cultural Resources Survey for The Expanded Gage Exchange Project (RECON No. 4694A)	Outside
RI-07958	2008	Brian F. Smith and Associates	A Phase I Archaeological Assessment of The Alexan Cityscape Project, City of Riverside	Outside
RI-08064	2008	Michael Brandman Associates	Letter Report: Cultural Resource Records Search and Site Visit Results for T-Mobile USA Telecommunications Candidate IE25351G (Canyon Crest Shopping Center) 5225 Canyon Crest Drive, Riverside, Riverside County, California	Outside
RI-08412	2009	McKenna et al.	Letter Report: A Summary Report on The Proposed Improvements at The Emerson Elementary School Campus in The City of Riverside, Riverside County, California.	Outside
RI-08598	2010	McKenna et al.	A Summary Report on The Proposed Improvements at The John W. North High School Campus in The City of Riverside County, California	Outside
RI-08771	2010	CRM Tech	Preliminary Historical/Archaeological Resource Study Southern California Regional Rail Authority (SCRRA) Perris Valley Line Positive Train Control (PTC) Project In and Near The Cities of Riverside, Perris, and Menifee, Riverside County, California CRM TECH Contract No. 2444	Outside
RI-08547	2011	CRM Tech	Letter Report: Proposed Children's Playground Project	Outside
RI-09314	2014	Michael Brandman Associates	Cultural Resources Records Search and Site Visit Results for Verizon Wireless Candidate 'Quail Run' 599 Central Avenue, Riverside, Riverside County, California, EBI Project No. 61144588	Outside
RI-10069	2015	NWB Environmental Services, LLC	Phase I Investigation for The Verizon Wireless Islander Tower Installation Project, Riverside, Riverside County, California	Outside
RI-10258	2015	CRM Tech	Historical/Archaeological Resources Survey Report: Quail Run Apartment Project, City of Riverside, Riverside County, California	Outside
RI-09676	2016	Helix Environmental Planning, Inc.	Cultural Resource Records Search and Site Visit Results for Cellco Partnership and Their Controlled Affiliates Doing Business as Verizon Wireless Candidate 'Holyoke', 1910 Martin Luther King Boulevard, Riverside, Riverside County, CA 92507	Outside

The records search and literature review conducted for the LRDP revealed 39 cultural resources within 0.5 mile of the UCR campus. The resources consisted primarily of prehistoric milling features (Table 1). Five resources are located within the campus area.

Prehistoric Milling Site (P-33-0495/ CA-RIV-495)

A single slick on a group of rocks was observed during a 1971 survey. The surrounding areas did not contain any other evidence of human occupation.

Prehistoric Milling Site (P-33-3605/ CA-RIV-3605)

Three bedrock milling slicks on three separate granite boulders were observed on a granite boulder outcrop on a broad ridge in 1989. The milling slicks were located about 500 meters southeast of a covered reservoir at Muirfield Road, 300 meters north of a major seasonal drainage.

Prehistoric Milling Site (P-33-5056/ CA-RIV-5056)

The site is described as a granitic bedrock outcrop containing six slicks in various stages of weathering. The site was recorded in 1993; at the time, the site was in poor condition due to the weathering and exfoliation.

Gage Canal (P-33-4768/ CA-RIV-4768)

Gage Canal is a water conveyance system spanning northeast to southwest from Santa Ana River to Mockingbird Reservoir. A portion of the canal is located at the junction of State Route (SR-) 60 and University Avenue. Prior to 1903, the water ran through an uncemented ditch. The ditch was implemented in 1885 to facilitate agricultural development. The canal contributed to the growth and development of the city of Riverside. As such, it possesses integrity of location, design, setting, workmanship, and feeling and association that qualify it as a significant resource to local and regional history.

The Barn Group (P-33-7877 and P-33-7878)

The Barn Group, originally consisted of a horse stable, an office/carpenter shop, a hay barn, and two wagon sheds. Today, the Barn Group comprises three historic structures: the Barn, the Barn Theater, and the Barn Stable. These three structures were originally part of the Citrus Experiment Station (CES), which was initially established at the base of nearby Mount Rubidoux in 1906 to conduct agricultural research that would improve citrus crops. In 1917, CES operations were moved to the lower slopes of the Box Springs Mountains, which subsequently became the nucleus of the University of California, Riverside (UCR) campus. Today, the Barn Group consists only of the horse stable, which was converted into the Barn dining hall; the wagon shed No. 1, which is now the Barn Theater; and wagon shed No. 2, which is now known as the Barn Stable.

The Barn Group structures have undergone major changes in function as well as appearance. The office/carpenter shop and the hay barn are no longer in existence. The horse stable was converted into a dining hall in the mid-1950s. A fire occurred in the late 1960s; damages occurred on the northern side of the Barn, which was subsequently shored up. A stage was constructed on the newly constructed northern end to allow performances by prominent artists. The Barn went through renovations in the late 1980s to expand the patio and add a west wing. An additional renovation was carried out in the late 1990s to construct a commercial kitchen. The Barn continues to be a center for food, entertainment, and after-hours leisure for the UCR community but is currently closed for additional renovations.

The current Barn Theater also shows signs of alterations. In 1916, wagon shed No. 1 was open on both sides to allow for wagon access. In 1931, the structure was used as a “fertilizer shed” and then a “shop” in 1956. At an unknown time, the shed was enclosed with wooden walls and sliding doors. In 1972, the former wagon shed was assigned to the University’s Theater Facilities Unit as a theater workshop. Significant alterations were made to the structure to adapt the building to a theater workshop. The building was moved to its current location in 1999 from a site just north of its present location to accommodate the construction of the Humanities Social Sciences Building. During this move, it was placed on a new concrete foundation (Nakada et al. 2009). At present the structure serves as a classroom and practice area for performing arts classes at UCR, including Taiko (Japanese drumming) and Ballet Folklorico.

The second wagon shed, nearly identical to the first, retained much more of its original look after remodeling than the other two buildings. Its function over the years, according to the 1931 and 1956 plot plans was “garage shop,” or simply “shop,” before being renamed the “Barn Stable” (Tang 1993). As in the case of the Barn Theater, it is not clear when this building was enclosed with walls and sliding doors. A small shed extension has been added to the north end of the stable, but this appears to be the only other alteration that the Barn Stable has undergone over the years. It is currently being used as storage space for such things as special event tables and chairs (Nakada et al. 2009). The Barn, the Barn Theater, and the Barn Stable are some of the oldest standing buildings on the UCR campus and some of the earliest completed buildings from the Citrus Experiment Station site.

The Barn Group structures remain an integral part of campus life. These structures can be associated with important events, or pattern of events (Criterion 1), such as the Citrus Experiment Station. Additionally, the original structures would have been associated with the notable architects (Criterion 2), Lester H. Hibbard and H.B. Cody, and exhibit distinct structural characteristics associated with the early twentieth century (Criterion 3). However, significant alterations to the buildings and changes to the setting and location have severely compromised the historic integrity of the buildings and their ability to convey their association with important events or persons in history. Furthermore, the Barn is currently undergoing renovations which will further reduce the original integrity of the building. As such, these structures cannot provide useful information (Criterion 4).and do not satisfy any of the requirements for listing in the CRHR.

Three other buildings by Hibbard and Cody were built a few dozen feet from the Barn Group. Only one of these buildings remains at this location, the other two having been moved to another part of the campus. Labeled “Teamster’s Cottage” in the 1916 blueprints provided by UCR, this small cottage, now called the “University Cottage,” has largely retained its architectural integrity despite functioning as a variety of offices since the dedication of the campus in 1954 (LSA 2010).

TABLE 3
CULTURAL RESOURCES WITHIN ONE MILE OF THE UCR CAMPUS

Primary/ Trinomial	Age	Resource Name/ Description	Date (Author)	Location
P-33-000495 CA-RIV-000495	Prehistoric	Milling slick (1)	1971 (S. Broadbent, n/a)	Within
P-33-003605 CA-RIV-003605	Prehistoric	Bedrock milling slicks (3) on three separate granite boulders	1989 (UCR Archaeological Research Unit)	Within
P-33-005056 CA-RIV-005056	Prehistoric	Granitic bedrock outcrop with 6 slicks	1993 (UCR Archaeological Research Unit)	Within
P-33-004768 CA-RIV-004768	Historic	Water conveyance system/ dam	1992 (Robert J. Wlodarski)	Within
P-33-007877	Historic	The Barn Group: Composed of three historic structures, including the Barn, the Barn Theater, and the Barn Stable	LSA	Within
P-33-013105 CA-RIV-007303	Prehistoric	Bedrock milling features (5)		Outside
P-33-001187 CA-RIV-001187	Prehistoric	Milling complex: (9) bedrock metates	1973 (M. Gardner)	Outside
P-33-001188 CA-RIV-001188	Prehistoric	Bedrock metate (1) on low rock outcrop	1973 (M. Gardner)	Outside
P-33-001189 CA-RIV-001189	Prehistoric	Hunting blind constructed of rocks	1973 (M. Gardner)	Outside
P-33-001190 CA-RIV-001190	Prehistoric	Milling surfaces (3) on a rock	1973 (M. Gardner)	Outside
P-33-001191 CA-RIV-001191	Prehistoric	Bedrock metates (2) on separate very low outcrops	1973 (M. Gardner)	Outside
P-33-001192 CA-RIV-001192	Prehistoric	Bedrock metate (1) on a group of rocks	1973 (M. Gardner)	Outside
P-33-001193 CA-RIV-001193	Prehistoric	Bedrock metates (3) on two boulders	1973 (M. Gardner)	Outside
P-33-001194 CA-RIV-001194	Prehistoric	Bedrock milling features (2)	1973 (M. Gardner); 1991 (Scientific Resource Surveys, Inc.)	Outside
P-33-001195 CA-RIV-001195	Prehistoric	Milling surface (1) on a low boulder	1973 (M. Gardner)	Outside
P-33-001196 CA-RIV-001196	Prehistoric	Bedrock metates (3)	1973 (M. Gardner)	Outside
P-33-002384 CA-RIV-002384	Prehistoric	Milling features (14 features containing 27 slicks) and probable rock shelter	1973 (M. Gardner)	Outside
P-33-003553 CA-RIV-003553	Prehistoric	Bedrock milling slicks (2) on two separate granite boulders	1982 (UCR Archaeological Research Unit); 1989 (UCR Archaeological Research Unit); 2001 (McKenna et al.); 2007 (Morongo Band of Mission Indians)	Outside
P-33-003617 CA-RIV-003617	Prehistoric	Bedrock milling slicks (4)	1989 (UCR Archaeological Research Unit)	Outside

TABLE 3
CULTURAL RESOURCES WITHIN ONE MILE OF THE UCR CAMPUS

Primary/ Trinomial	Age	Resource Name/ Description	Date (Author)	Location
P-33-003620 CA-RIV-003620	Prehistoric	Bedrock milling slicks (2)	1989 (UCR Archaeological Research Unit)	Outside
P-33-005421 CA-RIV-005421	Prehistoric	Site consists of a boulder outcrop on the west side of a north-south running stream.	1994 (Mooney Associates)	Outside
P-33-005424 CA-RIV-005424	Prehistoric	The site is a sparse outcrop bordering a dry wash. One boulder with one slick was found.	1994 (Mooney Associates)	Outside
P-33-006002 CA-RIV-005669	Prehistoric	Milling slicks (3)	1995 (Magnon Properties)	Outside
P-33-008046 CA-RIV-005996	Prehistoric	Bedrock milling feature	1997 (L&L Environmental, Inc.,)	Outside
P-33-008047 CA-RIV-005997	Prehistoric	Bedrock milling feature	1997 (L&L Environmental, Inc.,)	Outside
P-33-011473 CA-RIV-006851	Prehistoric	Granitic bedrock boulder containing (3) mortars		Outside
P-33-013106 CA-RIV-007304	Prehistoric	Granitic boulder (1) with a milling slick		Outside
P-33-014951 CA-RIV-007950	Prehistoric	Semi-circular milling slick		Outside
P-33-023989 CA-RIV-011792	Prehistoric	This is a bedrock milling site containing two granodiorite boulders each with multiple milling slicks.	2014 (Cogstone Resource Management)	Outside
P-33-027259 CA-RIV-012640	Prehistoric	This site consists of a single milling surface on a granitic boulder within a bedrock outcrop of boulders.	2017 (LSA Associates Inc)	Outside
P-33-011219	Prehistoric	Bedrock milling site with (1) mortar) and (10) slicks	2001 (McKenna et al.)	Outside
P-33-012737	Prehistoric	Mano fragment		Outside
P-33-015988	Prehistoric	One gigantic, flat boulder with five (5) slicks	2007 (Morongo Band of Mission Indians)	Outside
P-33-015989	Prehistoric	Four features containing five slicks and one incipient bedrock mortar	2007 (Morongo Band of Mission Indians)	Outside
P-33-027258	Prehistoric	Andesite side-notched point found on top of push-pile at the corner of an earthen dam next to a bedrock outcrop.	2017 (LSA Associates Inc)	Outside
P-33-004904 CA-RIV-004904	Historic	Irrigation system	1992 (Chambers Group, Inc.)	Outside
P-33-004907 CA-RIV-004907	Historic	Historic trash dump	1992 (UCR Archaeological Research Unit)	Outside
P-33-006003 CA-RIV-005670	Historic	Historic refuse scatter associated with 300 artifacts	1995 (Magnon Properties)	Outside

TABLE 3
CULTURAL RESOURCES WITHIN ONE MILE OF THE UCR CAMPUS

Primary/ Trinomial	Age	Resource Name/ Description	Date (Author)	Location
P-33-013301 CA-RIV-007403	Both	Prehistoric: Granite outcrops (Outcrops 1-8) containing a total of 12 bedrock milling slicks. Historic: two standing historical structures (Structures No. 1 and No. 2), the remains of one aboveground cistern (Structure 3), an antique hand-crank gasoline pump (Feature I), and one red brick well (Feature 2)		Outside

Sacred Lands File Search

An inquiry was made by Kassie Sugimoto to the NAHC on December 5, 2018, to request a review of the Sacred Lands File database regarding the possibility of Native American cultural resources and/or sacred places in the UCR campus vicinity that are not documented on other databases. The NAHC completed its Sacred Lands File search on December 19, 2018. The results were positive for Tribal Cultural Resources and/or sacred sites. The NAHC recommends consulting with the Cahuilla Band of Indians for additional details regarding any resources considered sacred by the Tribe. The NAHC also provided a contact list of Native American groups and individuals who may have knowledge of Native American resources not formally listed on any database.

CONCLUSION

The UCR campus area contains two historic resources, the Gage Canal (P-33-4768) and The Barn Group (P-33-007877 and P-33-007878). Gage Canal contributed to the growth and development of the city of Riverside. As such, it possesses integrity of location, design, setting, workmanship, and feeling and association that qualify it as a significant resource to local and regional history. Although most of the UCR planning area has been designed to avoid the Gage Canal, future development located above or around this resource may cause significant adverse effect; such impacts may be mitigated to a less than significant level with the implementation of archaeological monitoring. The Barn Group consists of three historic structures that were constructed in the early twentieth century as part of the Citrus Experiment Station (CES). Over time, these structures have been structurally changed to accommodate the various functions of the buildings. While these structures remain an important part of campus life, they lack the integrity of their original design and location. Therefore, development near these areas is not expected to cause a substantial adverse change in their historical significance.

The record search yielded positive results for archaeological milling features. No physical milling evidence was observed during the survey. However, physical indicators of human occupation could be disguised by the natural weathering of the granitic outcrops. The eastern side of the planning area, especially in the southeast, is considered highly sensitive to archaeological resources, as indicated on Exhibit 2 of the sensitivity map. Development on the southern parts of the campus, particularly near the botanical gardens where known archaeological sites are present, should implement mitigating measures to reduce impacts.

Conversely, the western portion of the planning area is considered highly sensitive to paleontological resources, as indicated on Exhibit 3. Paleontological deposits may be present in the Quaternary old alluvial fan (Qof), Quaternary very old alluvial fan (Qvof), and Quaternary young alluvial fan deposits. As such, development in these regions should implement mitigation measures to reduce any potential impacts during development.

There is no indication that human remains are present within the LRDP planning area. The records search and field survey indicate no evidence of human remains on or near the site. Although the planning area illustrates a low sensitivity to burials and human remains, there is always a potential for the inadvertent discovery of human remains. Any development within the planning area should adhere to the regulatory measures listed below.

A tribal cultural resource is considered a site, feature, place, cultural landscape, sacred place, or object which is of cultural value to a California Native American Tribe and is either eligible for the CRHR or a local register. As discussed above, the results of the Sacred Lands File search conducted by the NAHC produced positive results. As such, development of the LRDP may affect significant Tribal Cultural Resources. This impact may be mitigated by implementing Tribal consultation, as required by Assembly Bill-52 (AB-52) and/or Senate Bill 18 (SB-18). If a Tribal Cultural Resource is identified through consultation, additional mitigation, such as the use of a Native American Monitor during earth-moving activities, may be required to reduce the impacts of a future project under the LRDP to a less than significant level.

RECOMMENDATIONS

This section provides recommendations for future projects.

1. Only one significant historic resource, Gage Canal, is located within the planning area. Although most of the planning area has been designed to avoid Gage Canal, future projects should avoid causing any direct or indirect effects to the Canal. Gage Canal bisects the campus in a north-south sigmoidal curve (Exhibit 2). The planning area overlaps with Gage Canal in the area north of the freeway entrance to SR-60 (the Moreno Valley Freeway). Future projects should avoid earth-moving activities in the areas flanking Gage Canal or reducing potential impacts by implementing mitigation measures.
2. The southeastern portion of the planning area containing Val Verde Pluton geologic features is considered highly sensitive to prehistoric archaeological resources. This assessment is supported by documented millingstone sites within the area. Earth-moving activities in the area designated as “high cultural sensitivity” (illustrated on Exhibit 2) can inadvertently discover significant prehistoric resources. As such, future projects within this area should implement archaeological and Native American monitoring to reduce the project’s impacts.
3. Most of the entire campus, with exception of the Val Verde Pluton, young axial-channel deposits, and very young wash deposits, is sensitive to paleontological resources. Future projects are recommended to implement paleontological monitoring during earth-moving activities exceeding 5 feet below the surface within the “high paleontological sensitivity” areas illustrated in Exhibit 3.

4. The Sacred Lands File search yielded positive results for Tribal Cultural Resources. As such, Tribal Consultation should be implemented for all future projects within the planning area.
5. If human remains are discovered during ground-disturbing activities, future projects should follow the procedures of conduct following the discovery of human remains on non-federal lands, mandated by California Health and Safety Code Section 7050.5, PRC Section 5097.98, and the California Code of Regulations (CCR) Section 15064.5(e). According to the provisions in CEQA, should human remains be encountered, all work in the immediate vicinity of the burial shall cease, and necessary steps shall be taken to insure the integrity of the immediate area. The County Coroner shall be immediately notified. The Coroner must then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner has 24 hours to notify the NAHC, who will, in turn, notify the person they identify as the most likely descendent (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.

Sincerely,
PSOMAS

Charles Cisneros, RPA
Senior Archaeologist/Project Manager

Melissa Macias
Paleontologist

Kassie Sugimoto, M.A.
Archaeologist

Attachments: Exhibit 1 – Project Location
Exhibit 2 – Archaeological Sensitivity Map
Exhibit 3 – Paleontological Sensitivity Map

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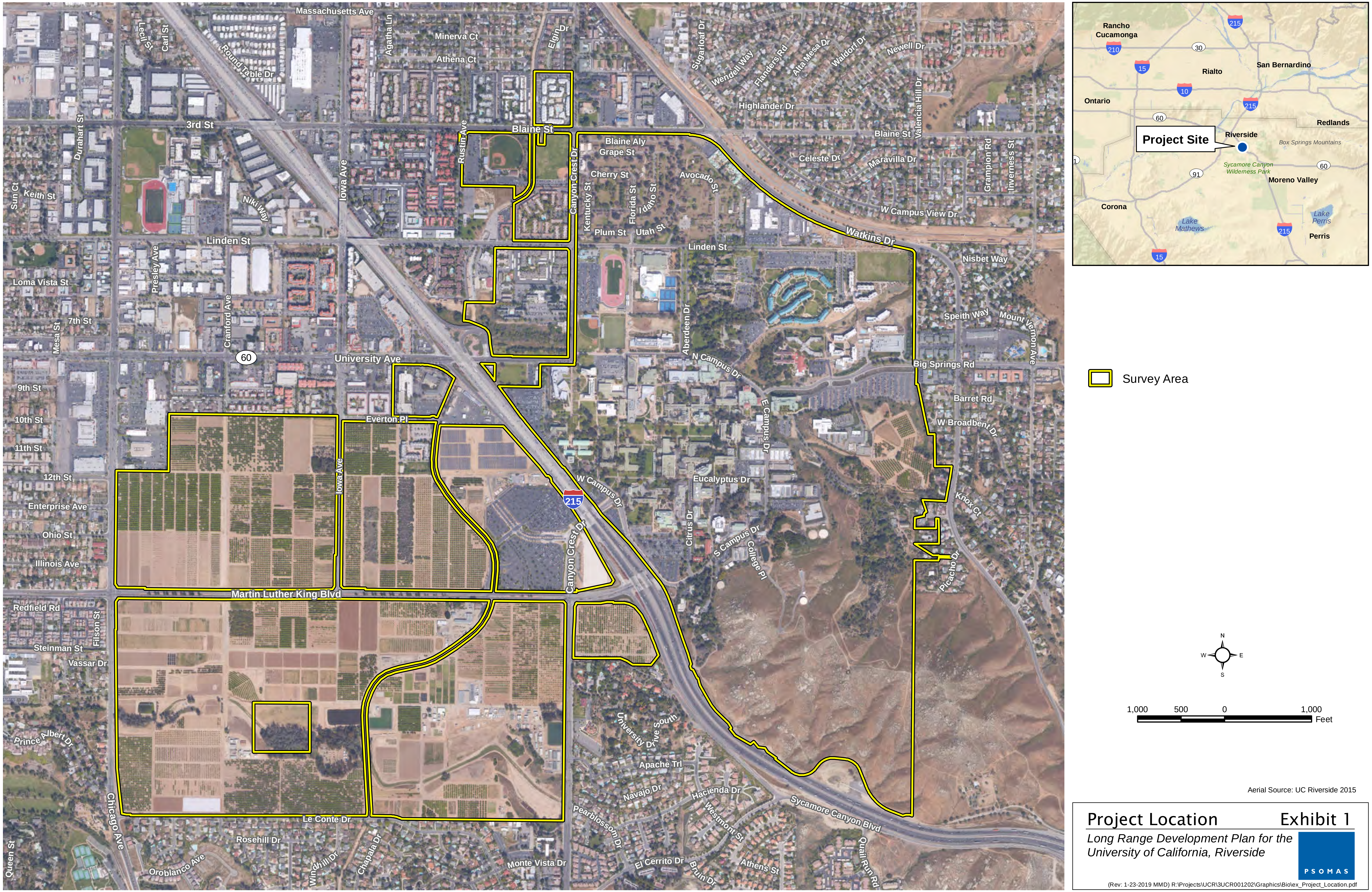

Aerial Source: UC Riverside 2015

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Project Location Exhibit 1

Long Range Development Plan for the University of California, Riverside

PSOMAS

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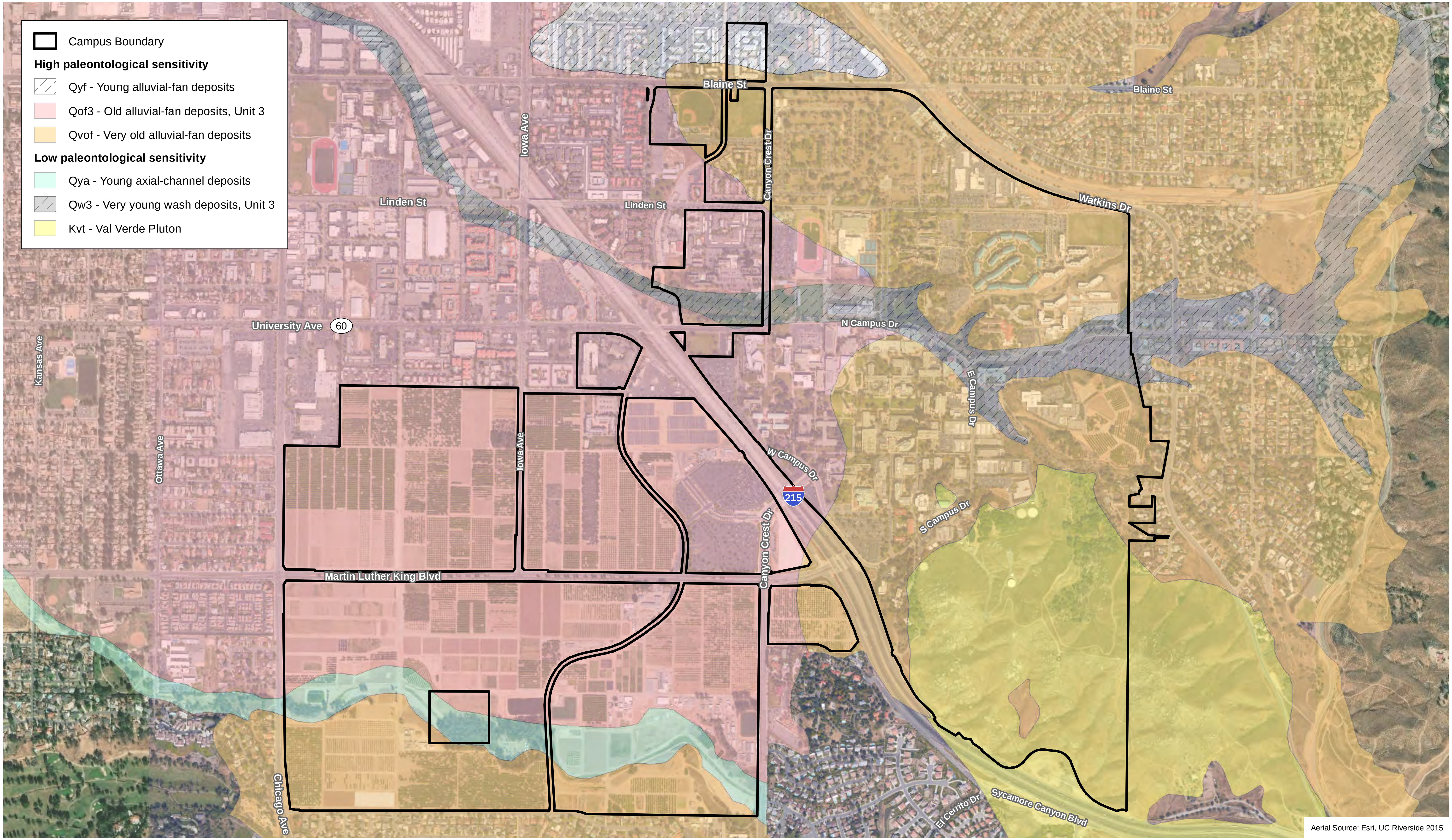

Aerial Source: Esri, UC Riverside 2015

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Paleontological Sensitivity Map

Exhibit 3

University of California Riverside Long Range Development Plan

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Appendix E2

Historic Resources Survey Report

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University of California, Riverside
2021 Long Range Development Plan

Final Historic Resources Survey Report

Project No. 958098

Lead Agency:

University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, California 92507
Contact: Stephanie Tang, Campus Environmental Planner

Prepared by:

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May 2021

RINCON CONSULTANTS, INC.
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Executive Summary

Rincon Consultants, Inc. (Rincon) was retained by the University of California, Riverside (UCR) to complete a campus-wide historic resources survey in support of the UCR 2021 Long Range Development Plan (LRDP) and Environmental Impact Report (EIR). The objective of this survey is to provide baseline information on UCR's historical resources in advance of long-term planning efforts, facilities upgrades, and new construction. This report presents the results of the UCR historic resources survey, which considered all permanent, built environment properties and landscapes 45 years of age (1975) and older. The eligibility criteria for the National Register of Historic Places (NRHP) and California Register of Historical Resources (CRHR) were applied in this survey.

Section 1 provides an introduction, including the project background, regulatory setting, and survey methodology. Work efforts included archival research, literature review, and ArcGIS analysis/mapping. All activities were conducted in accordance with the requirements of the California Environmental Quality Act (CEQA) and applicable guidelines. Section 2 provides an overview of the construction chronology at UCR, going back to its formative years as the Citrus Experiment Station, subsequent expansion as a UC College of Letters and Sciences in the early 1950s, and finally as a full "General Campus" of the University of California system. The construction chronology continues through 1975. Each era brought distinctive campaigns of expansion of facilities; these are described in narrative as well as historic images and maps.

Section 3 includes the historic context framework that guided all assessments. This section drew on available information to identify the contexts and themes that are most salient at UCR. This contextual framework for evaluations is also intended for use in future evaluations, as the LRDP is implemented and more properties reach the age threshold for assessment. Due to data gaps in the literature, the historic context section is intended as a starting point for building a UCR-specific context, as more information is available. Section 4 provides survey results. ArcGIS shapefiles were provided for incorporation into the university's mapping system. Eligible properties, historic districts, and cultural landscapes are listed in tabular form and maps. Following this report, Attachment A provides an illustrated table with all survey results and applicable criteria and contexts. Section 5 concludes the report, Sections 6 and 7 provide the bibliography and endnotes. The findings are summarized as follows:

- Among the approximately **165 properties** surveyed, a **total of nearly 40 buildings/structures and landscape features** appear eligible for listing in the NRHP and/or CRHR either individually or as contributors to historic districts.
- **One eligible historic district and one eligible cultural landscape** were identified: (1) the Mid-Century Modern Core Historic District, which has 15 contributing buildings as well as associated site plan features, circulation corridors, and landscaping; and (2) the Citrus Variety Collection Cultural Landscape, which has 11 contributing buildings and ancillary structures, as well as associated agricultural fields.
- All **15 contributors** to the Mid-Century Modern Core Historic District also appear individually eligible under Criteria A/1 and C/3 as indicated below.
- Among the eligible resources are two sets of historic street trees lining (1) Linden Street and (2) the center median of Aberdeen Drive.

1 Introduction

1.1 Project Objective and Background

UCR is an expansive campus occupying over 1,100 acres in western Riverside County. The origins of the university stretch back to the early twentieth century, when the University of California (UC) Board of Regents established the Citrus Experiment Station in 1912 near Mt. Rubidoux. Originally referred to as the Rubidoux Laboratory, the Citrus Experiment Station was a joint operation of the UC system, the US Department of Agriculture, and local citrus farmers. By 1917, operations had moved to the present-day location, at the foothills of the Box Spring Mountains.

Over a century later, the Citrus Experiment Station continues to operate on the grounds of UCR (though it is now known as the Citrus Research Center and Agricultural Experiment Station [CRC-AES]). UCR retains Citrus Experiment Station facilities and buildings reflecting the station's earliest phases (as described in more detail below). For more than 100 years, the station has provided a multidisciplinary research center and clearinghouse for the study of citrus hybridization, crop maintenance, and productivity. In 1954, the UC established a College of Letters and Sciences on an expanded campus site, paving the way for UCR's rapid expansion through the mid-1950s and into the 1960s.

Given this long and rich history, the campus-wide historic resources survey of UCR was completed to provide baseline information on the historical resources of the campus, in support of the 2021 Long Range Development Plan (UCR Project No. 958098). The survey included built environment properties, structures, and landscapes 45 years of age (1975) and older. Work efforts included archival research, literature review, and ArcGIS analysis and mapping, to identify properties 45-years or older, and a reconnaissance-level survey. (According to National Park Service Technical Assistance Bulletin #24, a reconnaissance survey represents an initial "once over" of a project area to identify historical resources. The reconnaissance survey is useful as a preservation planning tool. Following up on the reconnaissance-level survey, intensive-level surveys include additional building-specific information, construction chronologies, and alteration histories, as well as identification of character-defining features. The reconnaissance-level survey is a helpful tool for master planning; the intensive-level survey or evaluation is helpful in subsequent project specific planning.)

All activities were conducted in accordance with the requirements of the California Environmental Quality Act (CEQA) and applicable regulations and guidelines. In particular, this report is used to identify baseline conditions. As discussed under CEQA Guidelines Section 15125(a), "An EIR must include a description of the physical environmental conditions in the vicinity of the project. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to provide an understanding of the significant effects of the proposed project and its alternatives."

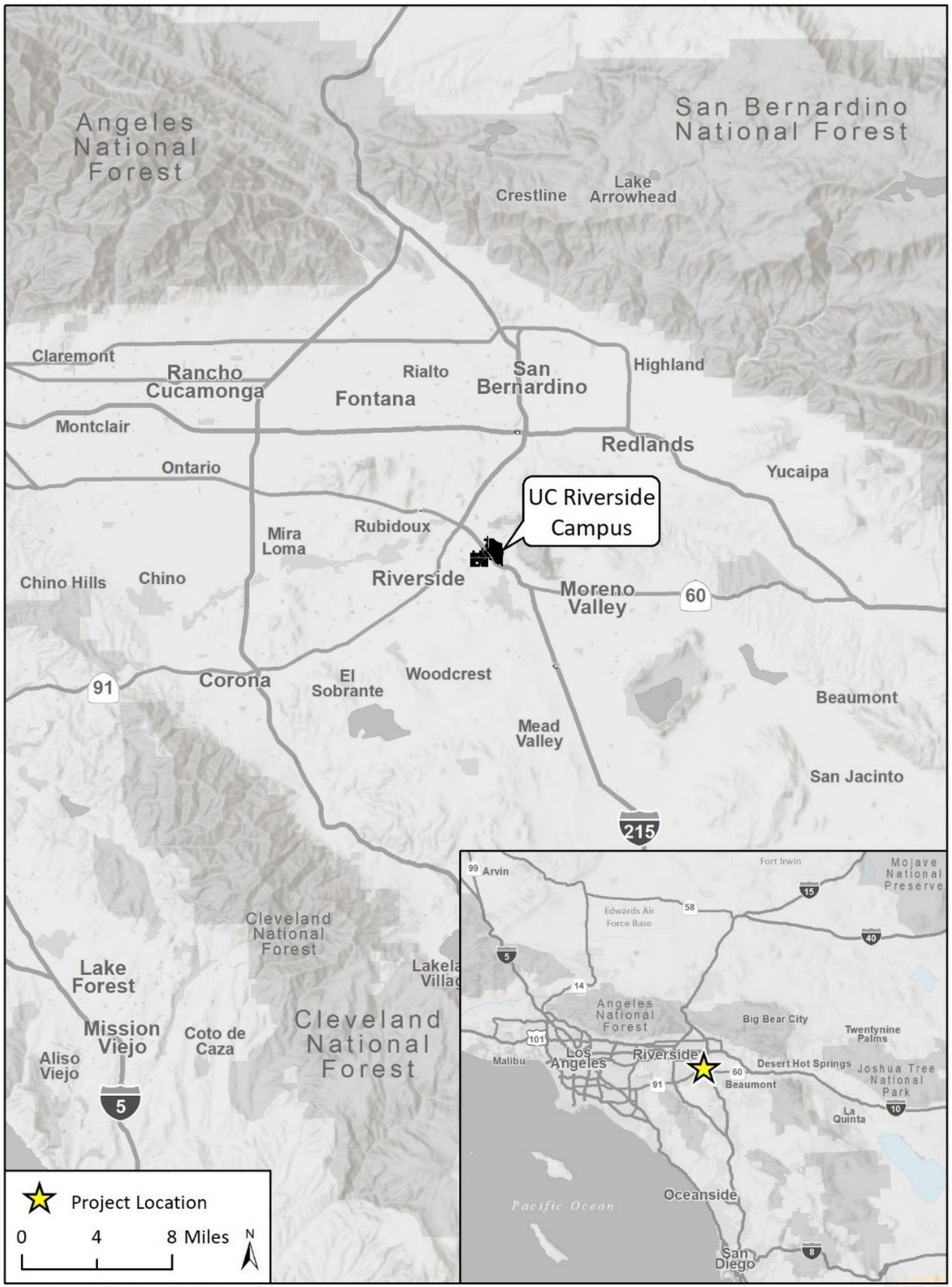
Located approximately three miles east of downtown Riverside, UCR falls within the University Neighborhood area, near the slopes of Box Springs Mountain. Interstate 215/State Route 60 (I-215/SR-60) divides the campus into East Campus and West Campus, with the east portion encompassing the campus core and the west portion occupied primarily by land-based research facilities. The East Campus is roughly bounded by W. Blaine Street/Watkins Drive to the north, Watkins Drive and Valencia Hill Drive to the east, and the I-215/SR-60 to the south and west. The

West Campus is roughly bounded by University Avenue to the north, Canyon Crest Drive to the east, Le Conte Drive to the south, and Chicago Avenue to the west (see

Figure 1, Figure 2, and Figure 3).

Adjacent to the University Neighborhood to the west and southwest are two of the City's oldest neighborhoods, Eastside and Victoria, which were the home of expansive citrus groves, packing houses and plants, as well as neighborhoods and communities, as early as the late nineteenth century.

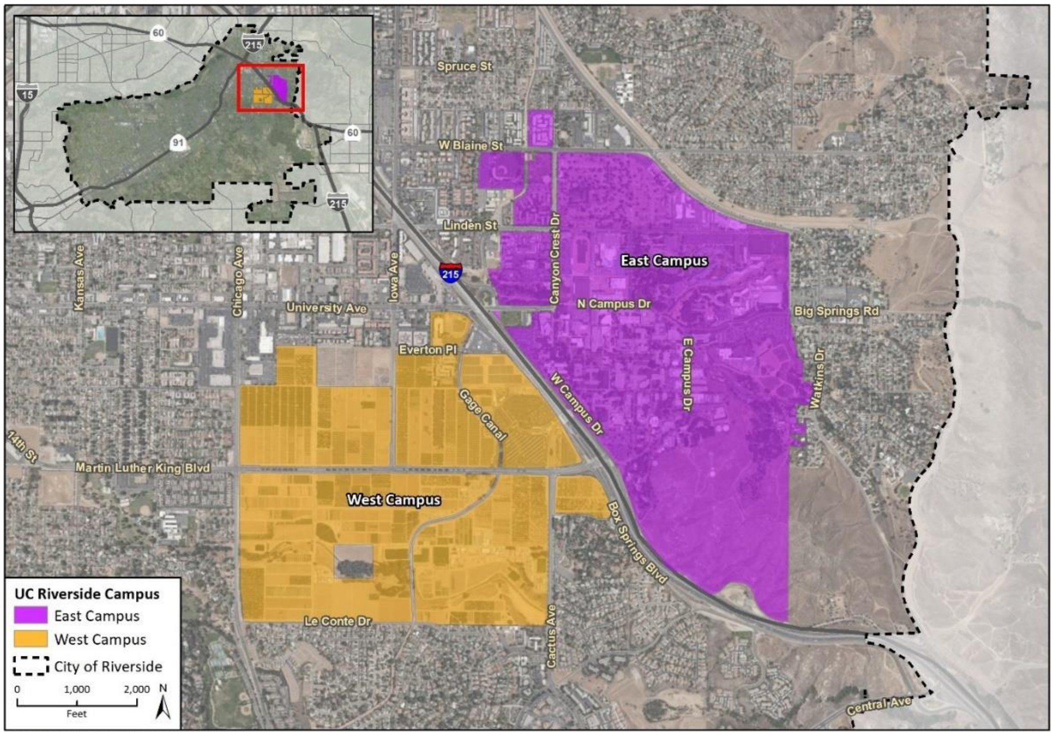
Figure 1 Regional and Vicinity Maps



Imagery provided by Esri and its licensors © 2020.

Source: Rincon Consultants, Inc., 2020

Figure 2 Project Location, UC Riverside East and West Campuses

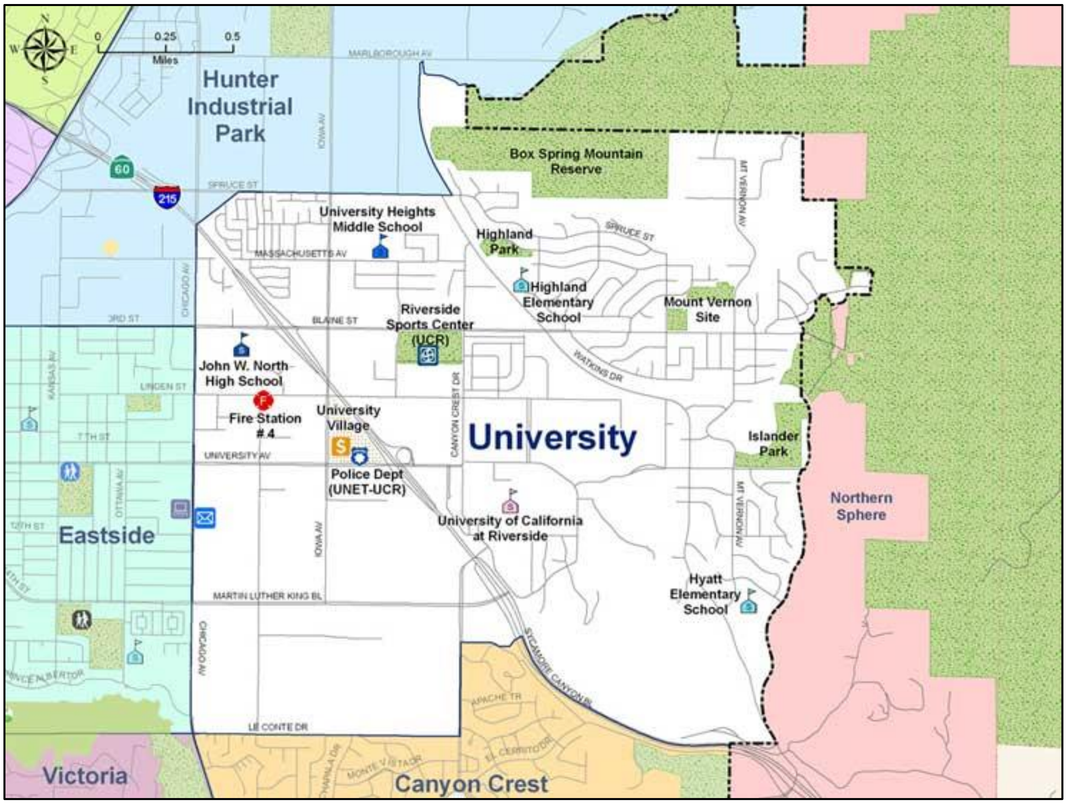


Imagery provided by Mircosoft Bing and its licensors © 2020.
Data provided by UC Riverside and County of Riverside, 2020.

Fig 3 Aerial Map

Source: Rincon Consultants, Inc., 2020

Figure 3 Overview of UCR and the surrounding "University Neighborhood"



Source: City of Riverside, Riverside General Plan 2025 – Land Use and Urban Design Element

1.2 Regulatory Setting

This section describes the applicable regulatory setting applied in the preparation of this study.

Per California State Government Code Section 53094, the properties of California school districts, including the UC system, are statutorily exempt from most provisions of local ordinances, including landmark designation. California State Government Code, Section 53094 permits "the governing board of a school district, by vote of two-thirds of its members . . . [to] render a city or county zoning ordinance inapplicable to a proposed use of property by such school district." The legislative history of Section 53094 indicates that "the Legislature deliberately accorded different treatment to school districts than to other local agencies because it was well aware that school construction was subject to almost complete control by the state…" The Legislature accordingly provided in Section 53094 that school districts, as opposed to other local agencies, should retain the right to exempt themselves from local zoning ordinances (Santa Clara, supra, 22 Cal.App.3d at p. 158 fn. 3.)."[1]

Federal

National Register of Historic Places

The National Register of Historic Places (NRHP) was established by the National Historic Preservation Act of 1966 as "an authoritative guide to be used by Federal, State, and local governments, private groups and citizens to identify the Nation's cultural resources and to indicate what properties should be considered for protection from destruction or impairment" (CFR 36 60.2). Such standards are applicable to areas under the jurisdiction of the National Park Service. (36 CFR § 1.1.) The NRHP recognizes properties that are significant at the national, state, and local levels. A property is eligible for the NRHP if it:

Criterion A.	Is associated with events that have made a significant contribution to the broad patterns of our history; or
Criterion B.	Is associated with the lives of persons significant in our past; or
Criterion C.	Embodies the distinctive characteristics of a type, period, or method of installation, or represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or
Criterion D.	Has yielded, or may be likely to yield, information important in prehistory or history.

In addition to meeting these criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service 1990). In order to assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, which are defined in the following manner in National Register Bulletin 15:

1. **Location.** The place where the historic property was constructed or the place where the historic event occurred.
2. **Design.** The combination of elements that create the form, plan, space, structure, and style of a property.
3. **Setting.** The physical environment of a historic property.

4. **Materials.** The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. **Workmanship.** The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. **Feeling.** A property's expression of the aesthetic or historic sense of a particular period of time.
7. **Association.** The direct link between an important historic event or person and a historic property.

Some aspects of integrity may be accorded more weight than others, depending on the type of resource being evaluated and the applicable eligibility criteria. Integrity can be assessed only after it has been concluded that a resource is significant.

Secretary of the Interior's Standards for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings

As noted in the Secretary of the Interior's Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings: "The Secretary of the Interior's Standards for Treatment of Historic Properties are only regulatory for projects receiving federal grant-in-aid funds otherwise, the Standards and Guidelines are intended only as general guidance for work on any historic building. …" The goal of the *Secretary's Standards* is to outline treatment approaches that allow for the retention of and/or sensitive changes to the distinctive materials and features that lend a historical resource its significance. The *Secretary's Standards* and Guidelines offer general recommendations for preserving, maintaining, repairing, and replacing historical materials and features, as well as designing new additions or making alterations. These standards also provide guidance on new construction adjacent to historic districts and properties.

Rehabilitation is the most flexible treatment approach of the *Secretary's Standards*. The ten *Secretary's Standards for Rehabilitation* are:

1. A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.
3. Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.
4. Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.
5. Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.
6. Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

7. Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.
8. Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.
9. New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.
10. New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

The *Secretary's Standards and Guidelines* offer general recommendations for preserving, maintaining, repairing, and replacing historical materials and features, as well as designing new additions or making alterations.[2] The *Secretary's Standards for Rehabilitation* also provide guidance on new construction adjacent to historic districts and properties.

Secretary's Standards compliance begins with the identification and documentation of the "character-defining," or historically significant, features of the historical resource. According to Preservation Brief 17, *Architectural Character: Identifying the Visual Aspects of Historic Buildings as an Aid to Preserving Their Character*, there is a three-step process to identifying character-defining features (Nelson, 1982). Step 1 involves assessing the physical aspects of the building exterior as a whole, including its setting, shape and massing, orientation, roof and roof features, projections, and openings. Step 2 looks at the building more closely—at materials, trim, secondary features, and craftsmanship. Step 3 encompasses the interior, including individual spaces, relations or sequences of spaces (floor plan), surface finishes and materials, exposed structure, and interior features and details. Alterations and replacement of character-defining features over time can impair a historic property's integrity and result in a loss of historic status.

State

The policies of the NHPA are implemented at the state level by the California Office of Historic Preservation, a division of the California Department of Parks and Recreation. The Office of Historic Preservation is also tasked with carrying out the duties described in the Public Resources Code and maintaining the California Historic Resources Inventory and CRHR. The state-level regulatory framework also includes CEQA, which requires the identification and mitigation of substantial adverse impacts that may affect the significance of eligible historical and archeological resources.

California Register of Historical Resources

Created in 1992 and implemented in 1998, the CRHR is "an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change."[3] Certain properties, including those listed in or formally determined eligible for listing on the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included on the CRHR.

According to PRC Section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

Criterion 1:	It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
Criterion 2:	It is associated with the lives of persons important in our past
Criterion 3:	It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values
Criterion 4:	Has yielded, or may be likely to yield, information important in prehistory or history

Properties that do not retain sufficient integrity for NRHP listing can still qualify for listing in the CRHR. Historical resources eligible for listing in the California Register must meet one of the criteria of significance described above and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.

California Environmental Quality Act (CEQA)

CEQA requires a lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (PRC Section 21084.1).

Answering this question is a two-part process: first, the determination must be made as to whether the proposed project involves cultural resources (i.e., historic and/or archaeological resources). Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

According to CEQA Guidelines Section 15064.5, historic resources are:

1. A resource listed in, or formally determined eligible for listing in, the California Register of Historical Resources (PRC 5024.1, Title 14 CCR, Section 4850 et seq);
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significance in a historic resources survey meeting the requirements of Section 5024.1(g) of the PRC;
3. Any building, structure, object, site, or district that the lead agency determines eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historic resource under CEQA) if the resource meets the criteria for listing on the California Register (as defined in PRC Section 5024.1, Title 14 CCR, Section 4852).

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined in previous section) does not meet NRHP criteria may still be eligible for listing in the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the California Register or is not included in a local register or survey shall not preclude the lead agency from determining that the resource may be an historical resource (PRC Section 5024.1). Pursuant to

CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (CEQA Guidelines, Section 15064.5(b)).

CEQA Guidelines specify that "substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (CEQA Guidelines, Section 15064.5).

Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for inclusion in the NRHR, CRHR, or local register. In addition, pursuant to CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

1.3 Project Methodology

Project Personnel and Acknowledgments

Rincon Senior Architectural Historian Debi Howell-Ardila, MHP, served as principal investigator and author of the report. Architectural Historian Alexandra Madsen assisted in research and writing. Additional strategic oversight and QA/QC was provided by Rincon Cultural Resources Principal Shannon Carmack. All team members meet and exceed the Secretary of the Interior's Professional Qualification Standards for architectural history and history (NPS 1983). Report figures were prepared by Rincon Geographic Information System (GIS) Specialist John Donohue.

Rincon wishes to acknowledge the assistance of UCR staff members, Stephanie Tang and Jaime Engbrecht, Campus Environmental Planners with UCR's Planning, Design & Construction division. Ms. Tang and Ms. Engbrecht assisted Rincon throughout the project, providing previous studies, architectural drawings and participating in site visits. Due to the closure of some areas of campus, during the COVID-19 pandemic, Ms. Engbrecht secured access and photographed several areas of campus, including the Citrus Research Center and Agricultural Experiment Station (CRC-AES) area in West Campus and the UCR Botanical Gardens.

Literature Review and Research

This survey was completed in accordance with recognized professional standards, following the Secretary of the Interior's Standards for Preservation Planning, Identification, Evaluation and Registration; California Office of Historic Preservation; and National Park Service professional standards and guidelines. Applicable national and state level criteria were considered.

Rincon conducted literature review and background research in order to build a thorough historic context and understand the relevant themes of significance for UCR. A number of primary and secondary sources were consulted over the course of the project including:

- Previous planning studies and evaluations, on file with UCR
- Architectural and site development building plans
- Historic aerial photographs and obtained from Environmental Data Resources
- Historical photographs and maps

- Historical newspaper articles from the *Los Angeles Times, The Press Enterprise*, among others
- American Architects Directory and Pacific Coast Architecture Database

A variety of additional secondary source materials were also consulted.

Previous Evaluations and Studies

Portions of the UCR campus have been subject to historic resources evaluations, generally in support of individual projects. The following presents an overview of known studies conducted for UCR-owned properties:

Campus Facility	Title of Cultural/Historic Resources Study/Report	Year Prepared
Various	1990 LRDP Historic Resources Survey, Appendix A, Photographs of Potentially Historic Structures (LSA, Irvine, CA)	April 1990
Various	1990 LRDP, Inventory and Assessment of Cultural Resources on the Campus of UC Riverside (LSA, Irvine, CA)	April 1990
Humanities and Social Sciences Building 1	"Appendix B: Historical and Archaeological Resources, Technical Appendix" (Jill Weisbord, Converse Environmental West)"	August 1991
Thermal Energy Storage Facility	"Cultural Resources Assessment, Thermal Energy Storage Facility, University of California, Riverside, Riverside County, CA" (Archaeological Research Unit, UCR)	Jan. 1992
The Barn Group	"Historical Resources Inventory: The Barn Theatre and the Barn Group" (B. Tom Tang, Archaeological Research Unit, University of California, Riverside)	June 1993
Insectary and Entomology Buildings	"Historic Resources Technical Report: Insectary and Entomology Buildings, University of California, Riverside, California" (RMW Paleo Associates, Inc., Mission Viejo, CA)	Sept. 1998
Box Springs Tower Facility	"A Phase I Cultural Resources Investigation of the Box Springs Tower Facility, Riverside County, California" (Albert A. Webb Associates, Riverside, CA)	Sept. 2001
Various	"Cultural Resources Technical Report: UCR Long Range Development Plan" (CRM Tech, Riverside, CA)	Jan. 2002
Watkins House	"Historic Building Assessment of the Watkins House, University of California, Riverside, Riverside County, California" (The Keith Companies, Palm Desert, CA)	2005
Teamster's Cottage/University Cottage	"State of California, Department of Parks and Recreation Form, Teamster's Cottage/University Cottage, UC Riverside" (LSA Associates, Riverside, CA)	April 2010

Campus Facility	Title of Cultural/Historic Resources Study/Report	Year Prepared
The Barn Group	“Historic Resources Assessment: The Barn Group and University Cottage, University of California, Riverside” (LSA, Riverside, CA)	April 2010
The Barn Group	“The Barn, Historic Resource Assessment,” Memorandum to UCR, Tricia Thrasher (Andy Plumley, Assistant Vice Chancellor, Housing, Dining & Residential Services)	June 2010
Glen Mor 2	“(Revised) Historic Resources Evaluation: Assessor Parcel Numbers 251-180-005-6, City of Riverside, Riverside County, California” (Chambers Group, Inc., Redlands, CA)	Nov. 2010
West Campus Solar Farm	“Final Cultural Resources Assessment, West Campus Solar Farm UCR #950338, University of California, Riverside, Riverside County, CA” (LSA, Riverside, CA)	Dec. 2013
Canyon Crest Family Housing Complex	“Historic Resource Evaluation Report for Canyon Crest Family Housing Complex, University of California, Riverside, Riverside County, CA” (Daly & Associates, Riverside, CA)	March 2017
Canyon Crest Family Housing Complex	“Phase I Cultural Resources Assessment, University of California, Riverside, North District Area” (Psomas, Santa Ana, CA)	March 2017
Lath House B and Plant Growth Glass Houses	“Historic Building Assessment for UCR Plant Growth Environments Facility (PGEF) in the City of Riverside, Riverside County, California” (Applied Earthworks, Inc., Hemet, CA)	Dec. 2018 (updated)
Lath House B and Plant Growth Glass Houses	“Memorandum - Cultural Resource Constraints Analysis for UCR Plant Growth Environments Facility (PGEF), Riverside County, California” (Applied Earthworks, Inc., Hemet, CA)	Dec. 2018 (updated)

Designated and Previously Identified Historic Resources

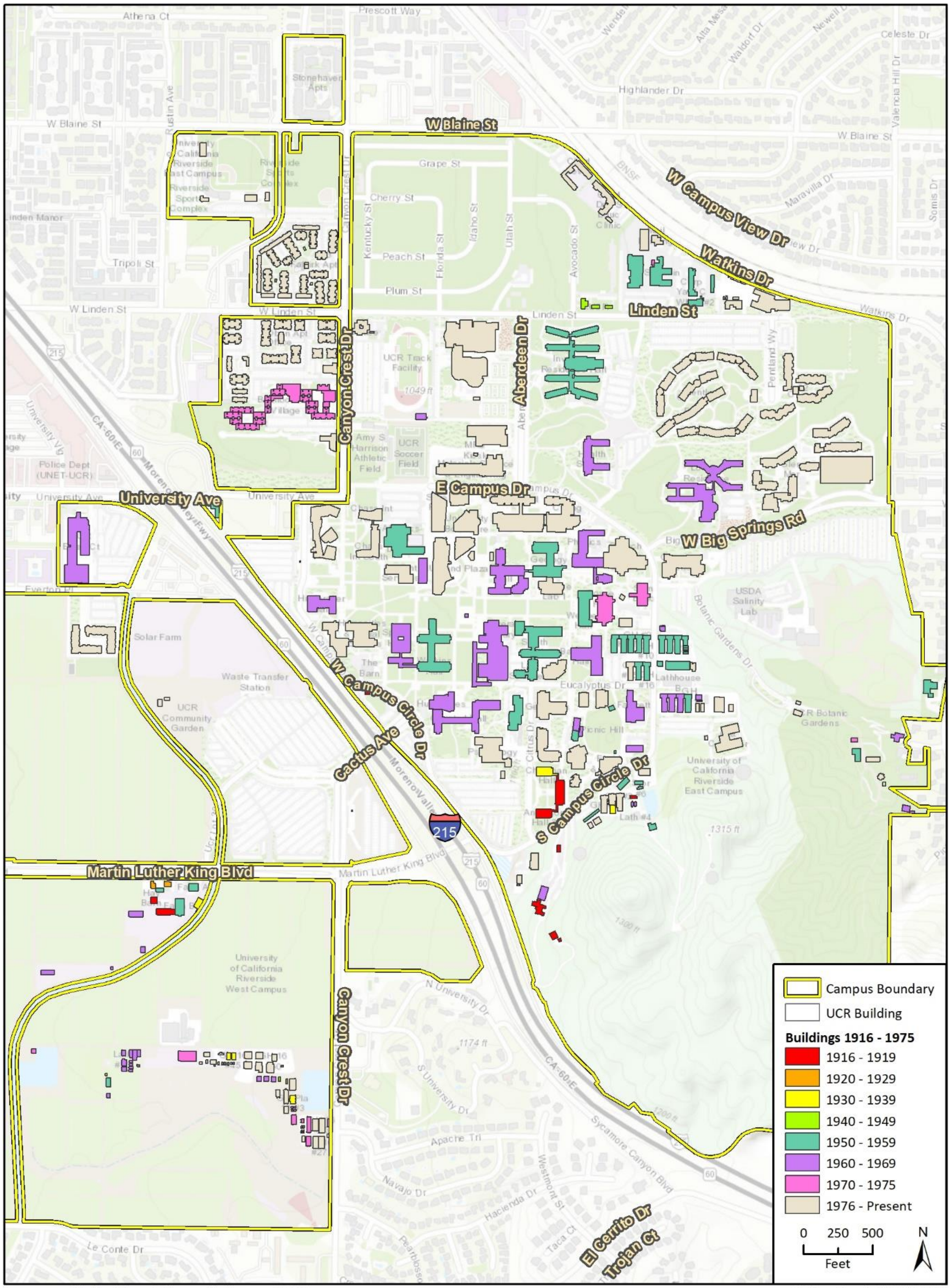
The following provides a summary of previously identified historic resources that are extant on the UCR campus as of June 2020.

Original Building Name (Current Name)	Date of Construction	Map Zone	Eligibility Criteria	Designated?
Horticulture Building (Anderson Hall)	1916/1931	5	NRHP, A/C; CRHR 1/3	Cal. Point of Historical Interest & Riverside Co. Historical Landmark
Teamster's Cottage (University Cottage)	1916	2	NRHP, A	No
The Barn Group (P-33-007877 and P-33-007878)	1917 - 2019	2	Ineligible (due to alterations)	N/A

Field Survey

On June 24, 2020, Ms. Howell-Ardila conducted a pedestrian- and windshield-level survey of UCR. The field survey included all permanent buildings, landscaping/hardscaping features that are 45 years of age or older (constructed through 1975) (Figure 4). Resources were documented in field notes and digital photography. During the initial field survey, three areas of the UCR campus were closed; these areas were subsequently photographed by UCR staff and photographs were shared with Rincon for inclusion in this report. Figure 4 identifies all facilities included in the survey, along with the potential long-range plans for properties under the LRDP (i.e., treatment, removal, or repurposing).

Figure 4 Survey Target Properties, 45+ Years of Age (constructed through 1975)



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Buildings Through 1975 2021-02-04

2 UCR Construction Chronology

The modern-day campus of UCR occupies over 1,100 acres, with dozens of buildings, research and support facilities, classrooms, housing, and facilities. The section provides an overview of UCR's growth at critical junctures in its history, from the early twentieth century through 1975. This provides a better understanding of historic patterns and trends in UCR's growth over time. In order to characterize over a century of history and construction at UCR, the following sections focus on the key extant buildings and facilities that were added during five principal eras/themes:

1. Development of the Citrus Experiment Station, 1916;
2. Founding of the College of Letters and Sciences in 1953;
3. Adoption of the Master Plan and campus expansion in 1955;
4. Elevation of UCR to a "General Campus" with the UC system in 1959;
5. Era of transition, 1967 to 1975.

The historic context and applicable themes of significance are presented in Section 3. Before exploring each era in detail, this section provides a general overview of the extant properties on campus. As of June 2020, the campus retains approximately 165 buildings, structures, and features constructed through 1975. A vast majority of these properties – over 80 percent – were constructed in the postwar period, as illustrated in Table 1.[1] The campus retains at least 10 properties reflecting its earliest phase of development, through the Citrus Experiment Station (1910 – 1919) as well as an equal number of properties reflecting the station's expansion through the pre-1945 period and prior to the establishment of the College of Letters and Sciences (1920 – 1949).

The West Campus retains facilities and buildings dating to the earliest days of the Citrus Experiment Station, as well as facilities still occupied by a portion of the agricultural lands and orchards near the Gage Canal, at the current-day Citrus Research Center and Agricultural Experiment Station (CRC-AES). In terms of the East Campus, the early years and the mid-century transition to a research university, are both evident. The East Campus core was constructed in a relatively short period of time, from the early 1950s through the mid-1960s, around the agricultural fields and facilities of the Citrus Experiment Station. The cohesiveness and unified architectural style of the campus core reflect this compact phase of design and construction.

Table 1 Overview of Dates of Construction, By Decade

Decade	# of Properties	% of Properties Constructed within the Specified Decade
1910 – 1919	10	6 percent
1920 – 1929	2	>1 percent
1930 – 1939	11	7 percent
1940 – 1949	5	3 percent
1950 – 1959	43	26 percent
1960 – 1969	53	32 percent
1970 – 1975	38	23 percent

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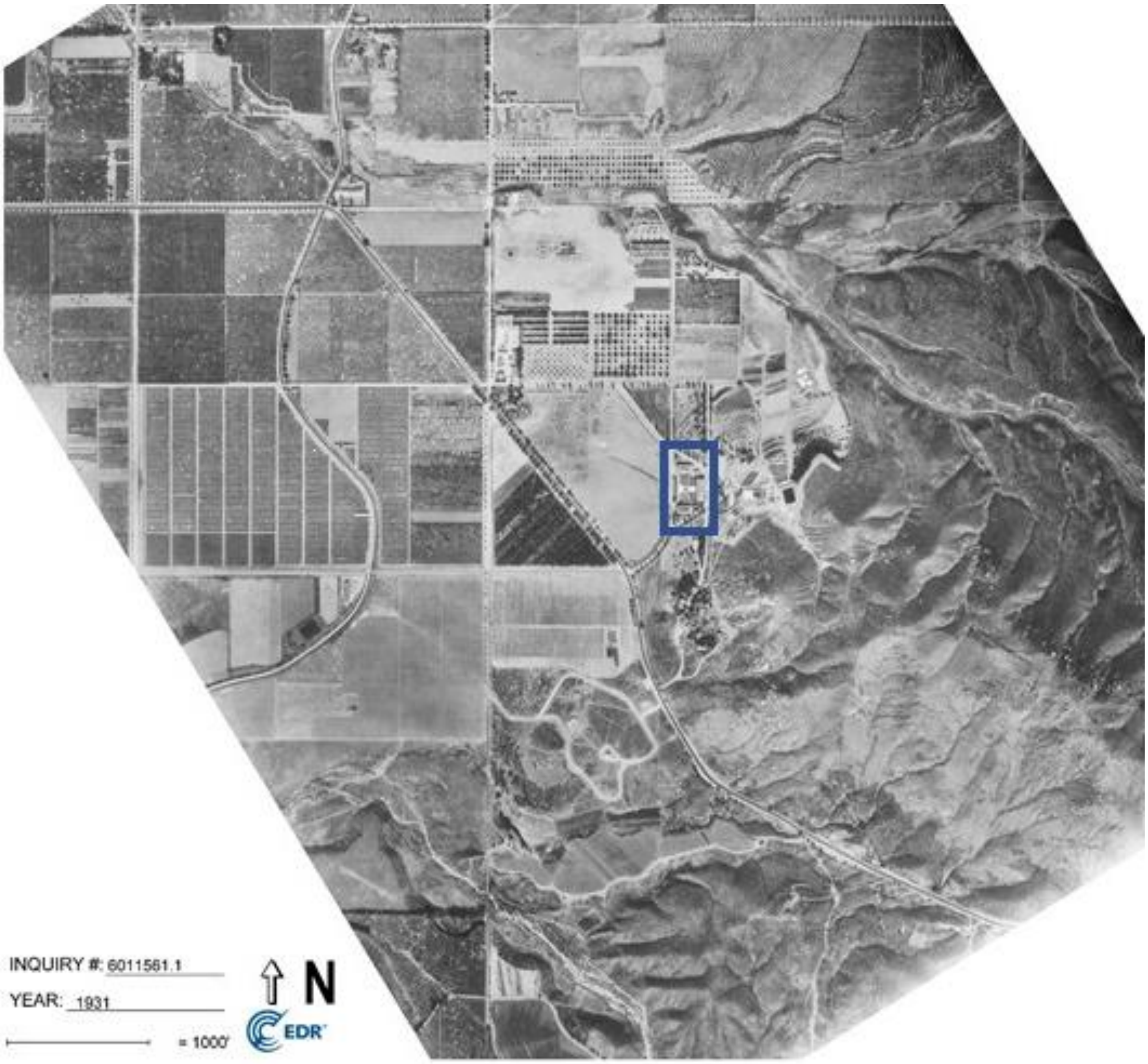
[1] Dates of construction presented in this report are drawn from UCR Facilities Management System (FMS) data.

2.1 Citrus Experiment Station, 1916

As noted above in Table 2, UCR retains nearly 30 properties from its earliest era of the Citrus Experiment Station. Beginning in the mid-1910s, the UC Riverside Citrus Experiment Station provided a multidisciplinary research center and clearinghouse for the study of citrus hybridization, crop maintenance, and productivity. The CRC-AES has been in continuous operation at UCR for over a century. This section provides an overview of a few of the key extant buildings and resources from this era. An overview of the setting and character of the Citrus Experiment Station in these early years is shown on a 1931 aerial photograph (Figure 5). As illustrated in this photo, the early station was surrounded by agricultural fields and orchards in each direction.

Figure 5 Setting and topography of the Citrus Experiment Station, as of 1931; the station headquarters including the Horticulture Building (Anderson Hall) are located in the lower right quadrant; the curvilinear swath through the left is the Gage Canal



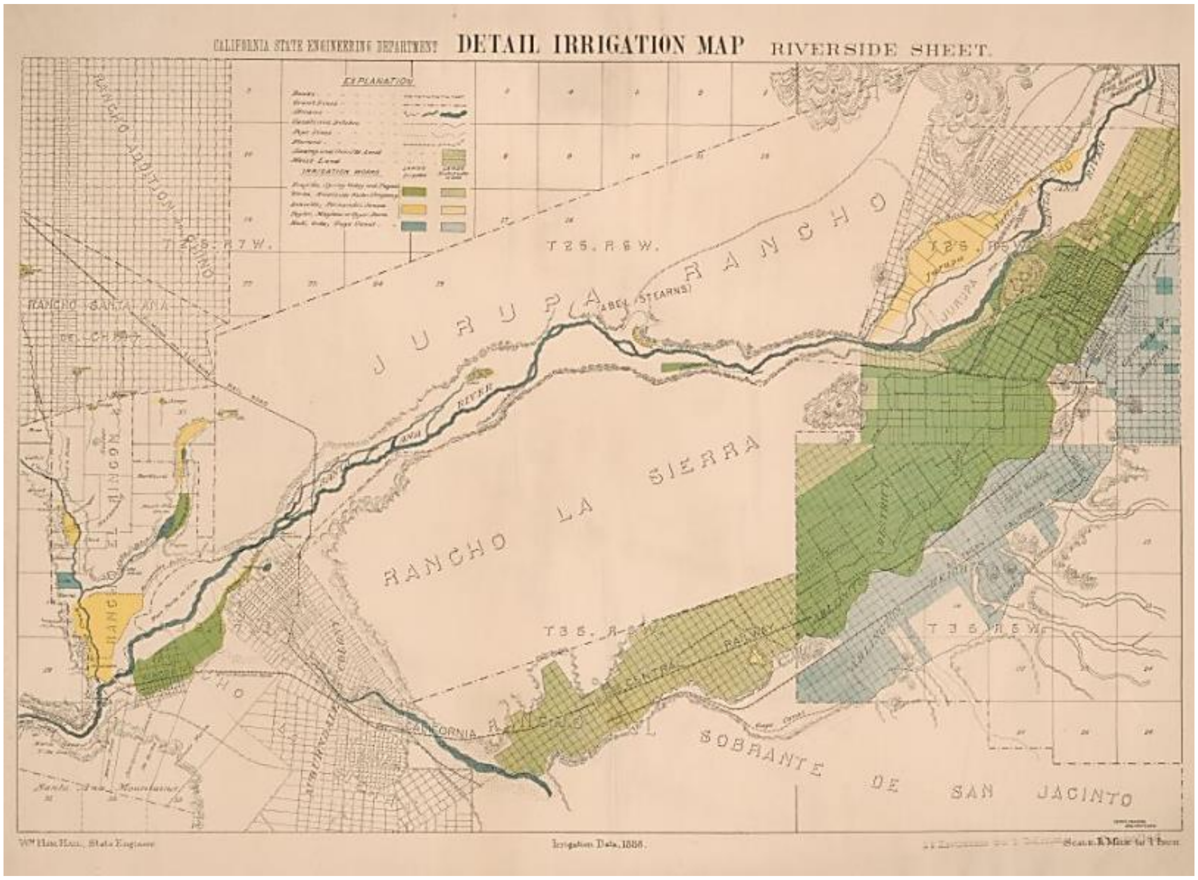
Source: Environmental Data Resources, 2020

Gage Canal

Nestled on a plain surrounded by mountains and bisected by the Santa Ana River, development of the Citrus Experiment Station Headquarters, and subsequently UCR, was made possible by the Gage Canal.

Engineered by its namesake Matthew Gage in 1884, the Gage Canal brought water to 160 acres in the area that would become UCR. Gage then extended his canal through the Arlington Heights area, providing irrigation for thousands of acres of citrus groves.[4] Partially as a result of these freshly irrigated fields, the city's population steadily climbed, as the community acquired a reputation for citrus and farming. Expansion occurred into the Northside area, located northeast of the city center, as well as eastward, an area known for its Chinatown.[5] An irrigation map from 1888 shows the Gage Canal across its extent (Figure 6). A photograph taken circa 1900 shows its original form, with palm trees lining its embankment (Figure 7). An undated etching by the Moss Engineering Company of New York shows a picturesque agricultural scene with a farmhouse "on the line of the Gage Canal" (Figure 8).

Figure 6 Irrigation Map, Riverside Sheet (1888)

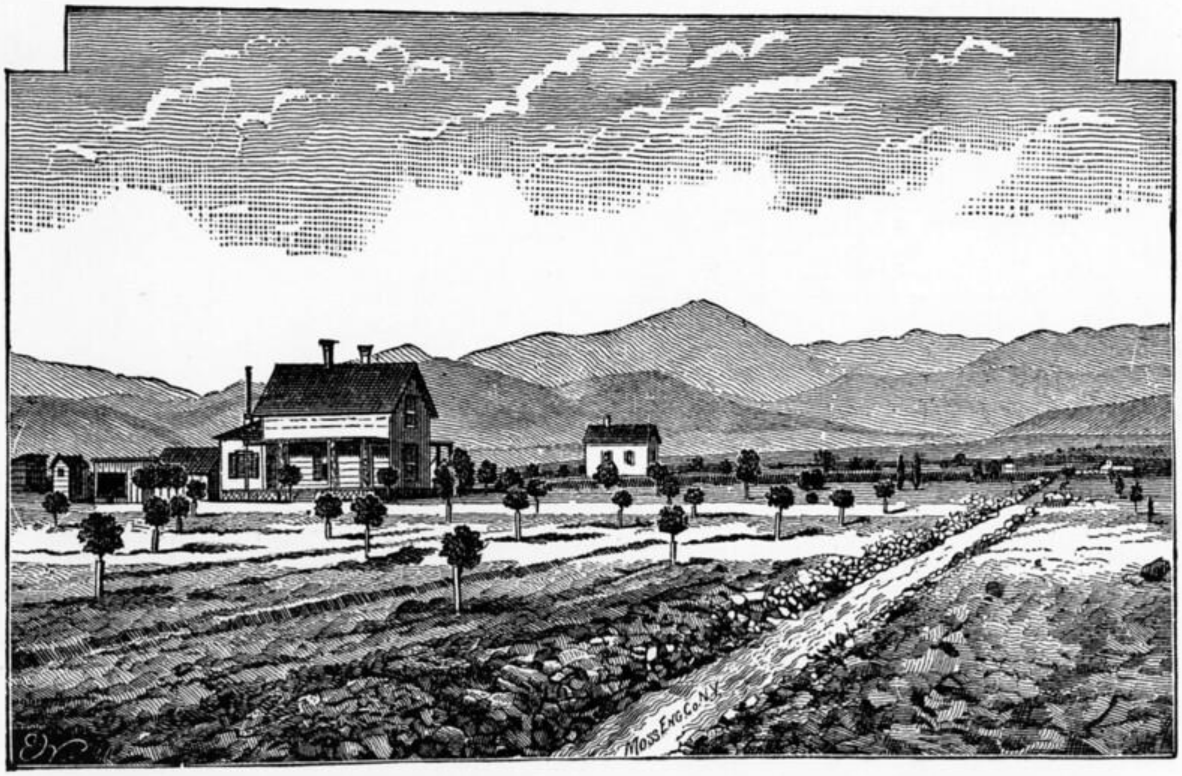


Source: Hurley-Wright Surveyors Map Collection, Loyola Marymount University

Figure 7 Gage Canal, Riverside, California (c. 1900)

Source: UCR Special Collections and University Archives

Figure 8 Etching of Gage Canal, N.D.



ON THE LINE OF THE GAGE CANAL.

Source: UCR Special Collections and University Archives on Flickr, Image 204_002_099

Citrus Experiment Station Headquarters: Horticulture Building (Anderson Hall 1; 1916), Irrigation Building (Anderson Hall 2; 1916), and Soils/Plant Nutrition Wing (Chapman Hall; 1931)

The signature building of the Citrus Experiment Station, the Horticulture Building (now Anderson Hall 1) was designed in 1916 by architects Lester H. Hibbard and H.B. Cody. Displaying a distinctive Spanish Colonial/Mission Revival style, this building is the largest of the original station, spanning over 23,000 square feet. The Horticulture Building, which was known as the main laboratory building, housed offices for the director as well as faculty and researchers, the library, laboratories for plant breeding and insect work, and the entomological collection (Figure 9). In 1916, Hibbard and Cody also designed the adjacent Irrigation Building (now Anderson Hall 2), to the south. In 1931, the Soils/Plant Nutrition Wing (now Chapman Hall) was added to the north to form a ‘U’-shaped complex (Figure 10 and Figure 11). The building was designed by well-known Riverside architect G. Stanley Wilson in a compatible Spanish Colonial/Mission Revival style.

Figure 9 Horticulture Building (Anderson Hall 1), 1916 (left) and Irrigation Building (Anderson Hall 2), 1916 (right), prior to 1931 addition of Soils/Plant Nutrition Wing (Chapman Hall)

Source: UCR Special Collections and University Archives

Figure 10 The Citrus Experiment Station Headquarters, 1916-1931, with the Horticulture Building (Anderson Hall 1; center), Irrigation Building (Anderson Hall 2; right), and Soils/Plant Nutrition Wing (Chapman Hall; left)

Source: Avery E. Field Photograph Collection, Rivera Library, Calisphere

Figure 11 An image from ca. 1920, with the Horticulture and Irrigation Buildings (Anderson Halls 1 and 2) visible in the background

Source: UCR College of Natural & Agricultural Sciences

Teamster's Cottage/University Cottage (The Cottage) and Palm Tree Grove

The Teamster's Cottage/University Cottage (now The Cottage) is located just south of The Barn Group. The home was designed in 1916 by Hibbard and Cody in a simple, utilitarian style. The residence was thought to have served as housing for Citrus Experiment Station staff. Adjacent to the home is a large, mature palm tree grove. The UCR 1964 Long-Range Development Plan noted the presence of this palm tree grove, observing that the grove had been "preserved through the years" and that plans were in place to retain the grove.[6] As such, it contributes to the setting of the 1916 home and reflects this early era of campus construction.

Director's Residence Grouping

Just south of the Citrus Experiment Station headquarters, the Director's Residence (now College Building South) and associated buildings were constructed in 1916, with designs by Hibbard and

Cody. The home was designed as a two-story, U-shaped building with a Spanish Colonial Revival/Colonial Revival style. This home would have been originally occupied by the station's first director, Herbert J. Webber. After the founding of UCR, the residence was converted to classrooms and offices; in 1965, a new building, the Cooperative Extension Building (now College Building North), was constructed next door, with a connecting breezeway.

While the residence itself appear to have been heavily modified over the years, it belongs to a small grouping of early intact properties intended for the Director's Residence, including a garden, a shed, and garage. Located east of the Director's Residence (College Building South), the garage exhibits some of the Colonial Revival elements of the residence. In addition, an intact garage/storage building dating to circa 1916 is located on the driveway to the Director's Residence (College Building South).

Superintendent's Cottage and Garage

Designed by architects Hibbard and Cody in 1916, the Superintendent's Cottage and Garage are located just southeast of the Director's Residence (College Building South). The residence is smaller in scale than the Director's Residence but appears more intact (Figure 12).

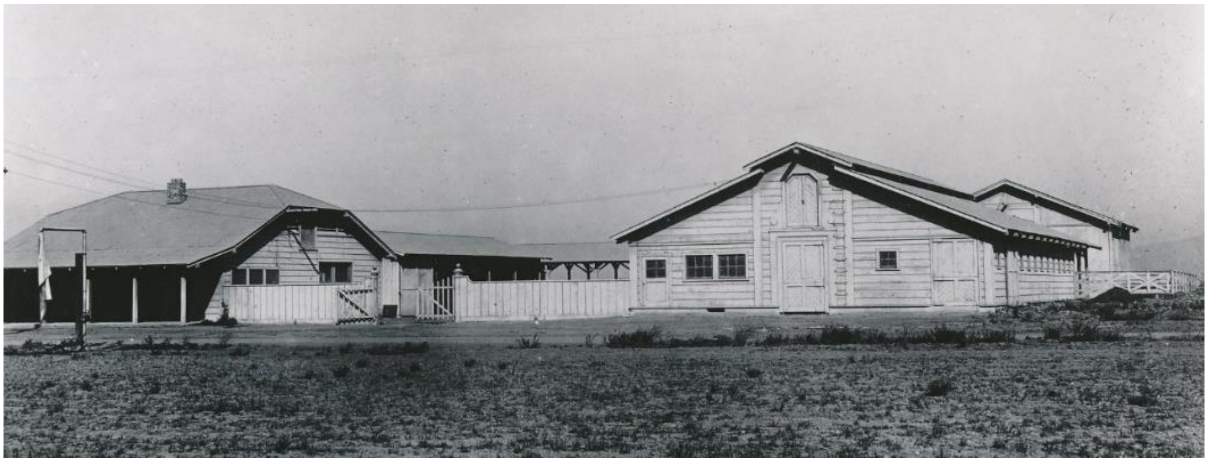
Figure 12 Aerial photo looking North, 1929, with Director's Residence (College Building South; center) and the Superintendent's Cottage and Garage (bottom right)

Source: UCR College of Natural & Agricultural Sciences

The Barn Group

Also constructed in 1917 was The Barn Group, which included: a horse stable, office/carpenter-shop, blacksmith-shop, hay barn, and two wagon sheds.[7] Some of the buildings were later converted into a dining hall, theater, and stable. A photograph from circa 1920 shows the original construction (Figure 13). The stable has been demolished; the dining hall has been renovated and expanded; a new faculty/staff dining building, campus meeting room, and restroom building have been constructed; and the theater has been renovated (construction was completed in spring 2020). The demolition, renovation, and expansion of facilities addresses the dining deficiencies in the southeast part of campus and enhances entertainment programming abilities.

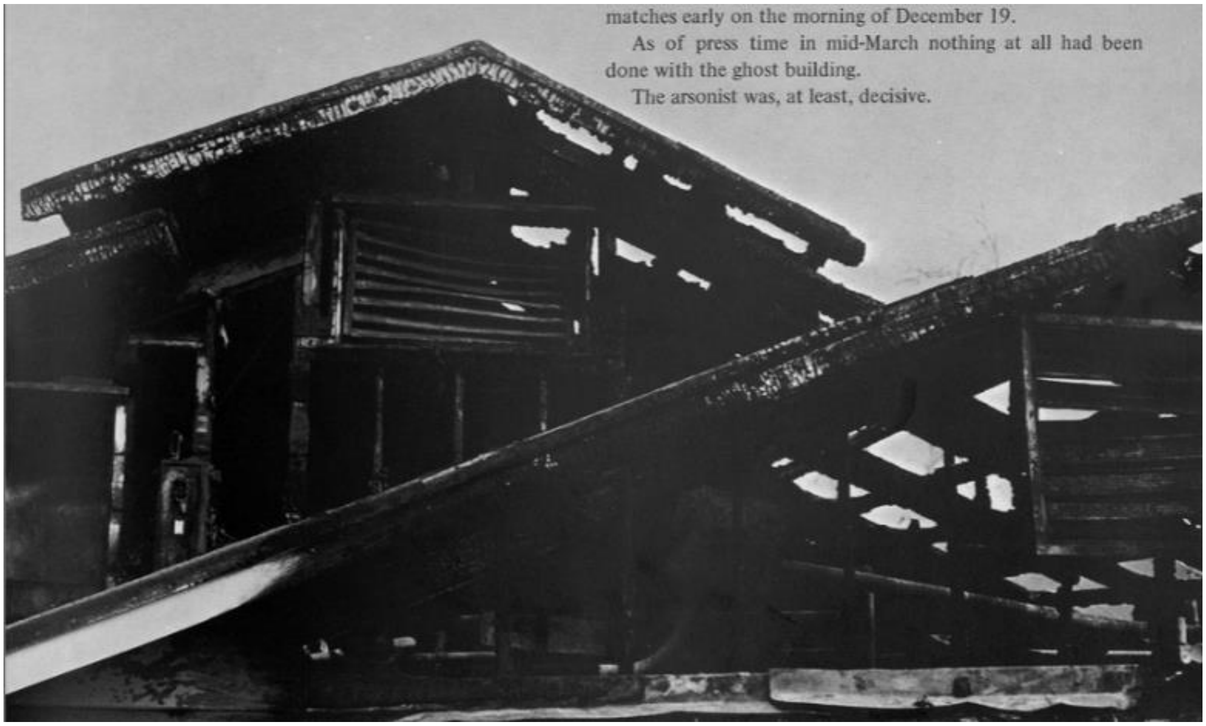
Figure 13 The Barn Group, Citrus Experiment Station, c.1920



Source: Paul P., KUCR.org

The Barn Group was partially destroyed by arson on December 19, 1969. The yearbook from that year includes a photograph of the damaged northern end building (Figure 14). It was subsequently “shored up”.

Figure 14 The Barn Group, after fire, 1970



matches early on the morning of December 19.

As of press time in mid-March nothing at all had been done with the ghost building.

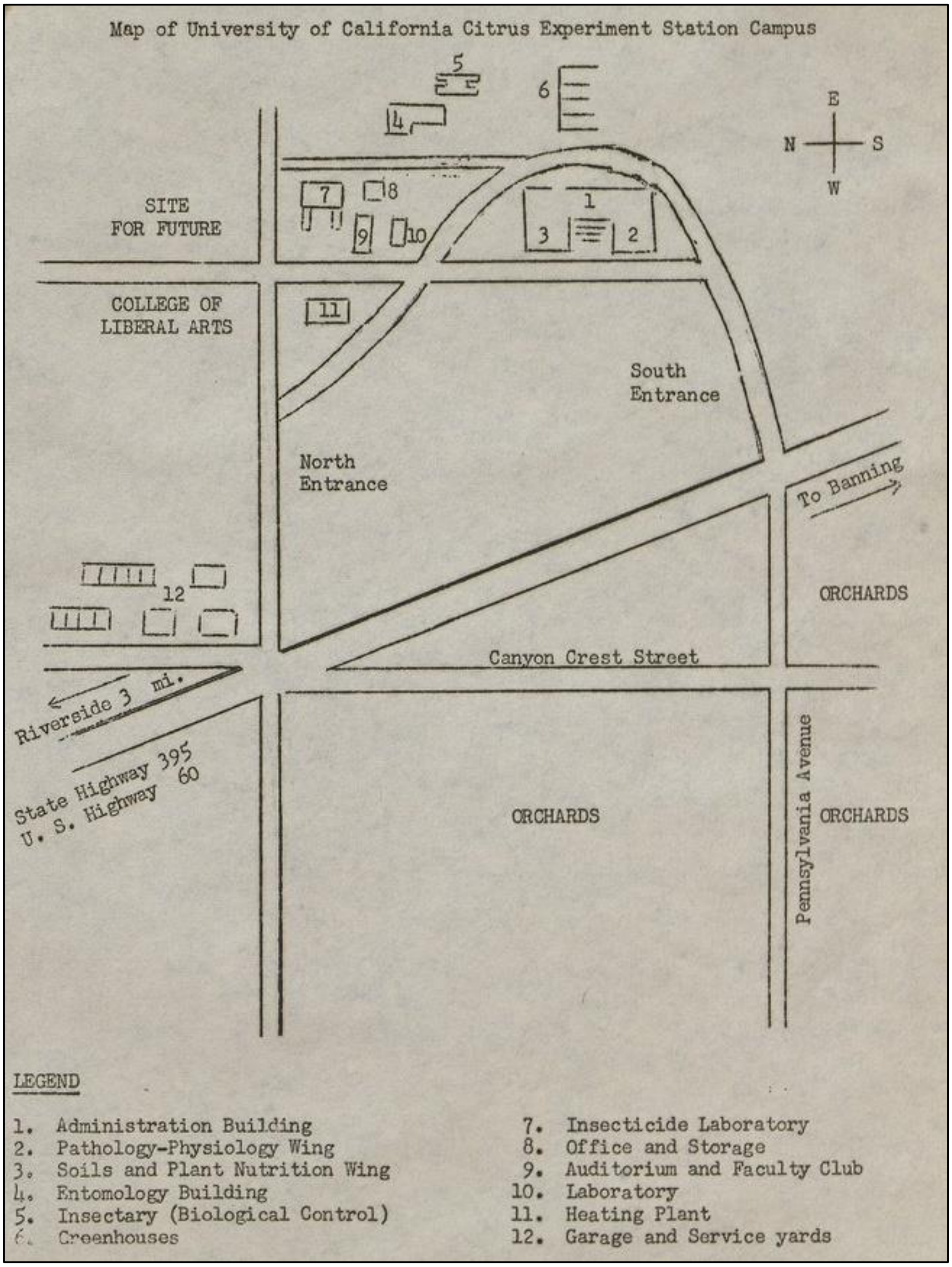
The arsonist was, at least, decisive.

Source: The Tartan Yearbook, Calisphere.org

2.2 UCR College of Letters and Sciences, 1953-1958

In the postwar era, prior to the founding of the College of Letters and Sciences, the Citrus Experiment Station consisted of roughly a dozen buildings and support structures, surrounded by orchards and agricultural outbuildings. Figure 15 provides an overview of the expanse of the station prior to the next major expansion: the 1954 opening of the UCR College of Letters and Sciences.

Figure 15 Map of UC Riverside's Citrus Experiment Station Campus, 1951



Source: University of California, Riverside, Special Collections and University Archives

This section provides an overview of this early construction campaign, which was organized around the construction of core buildings necessary for the establishment of a college. It also chronicles the earliest development of a student culture on the campus, and the notable architects who made an early stamp on the school.

Groundbreaking Ceremony

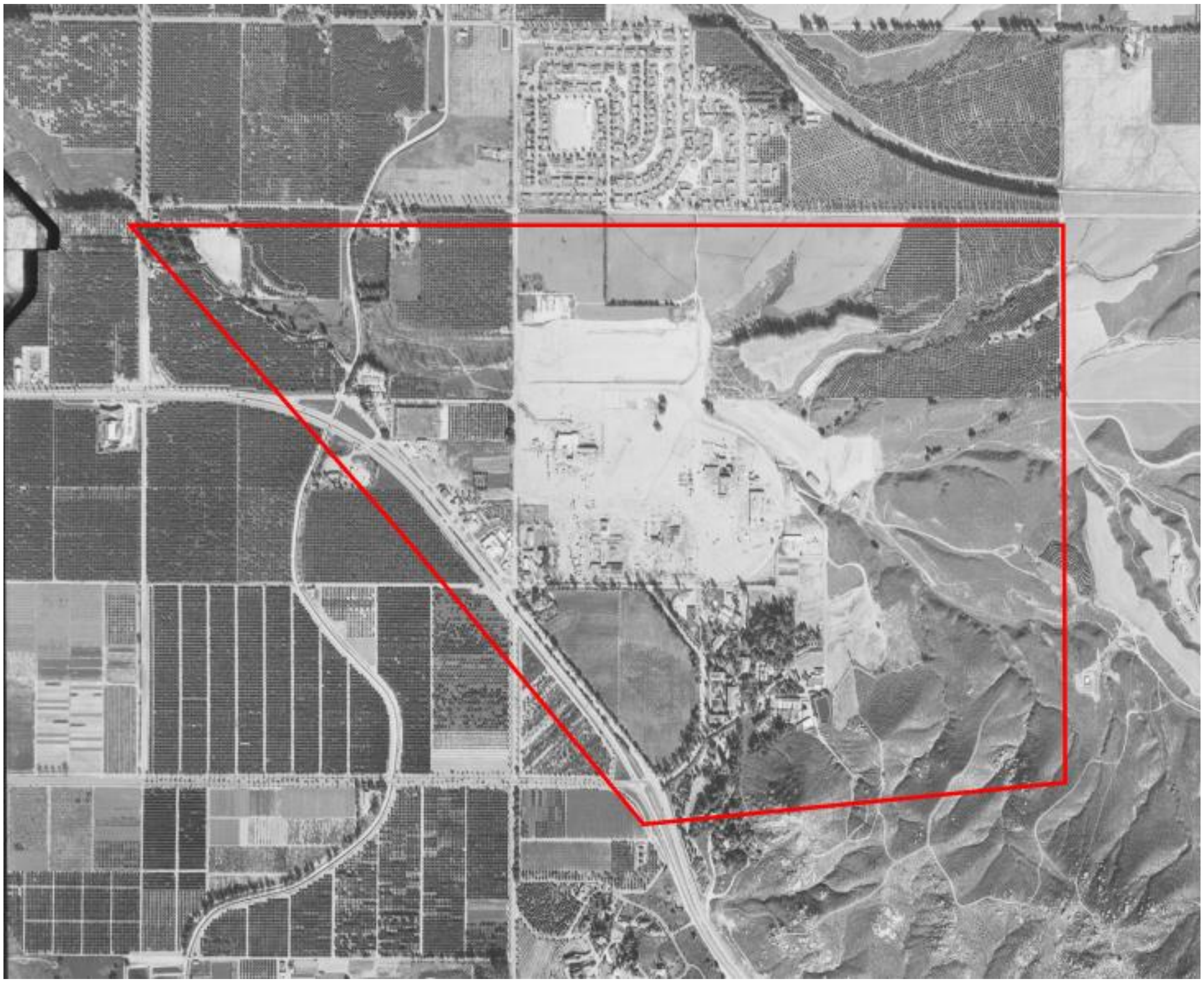
In 1952, UC Provost Gordon Samuel Watkins (who served in the post from 1949 to 1956) approved the construction of new facilities, mostly surrounding the Citrus Experiment Station. Following groundbreaking ceremonies in June 1952, construction began on the earliest core buildings (Figure 16). This group of buildings, which collectively reflect the earliest stage of construction at UCR, are all extant.

Figure 16 UCR groundbreaking ceremony, 30 July 1952

Source: UCR Library and Special Collections

An aerial photograph from 1953 illustrates the agricultural nature of the surroundings during the development of the campus (Figure 17). The citrus industry was still very much thriving during the early development of the campus. The core of the present-day East Campus is demarcated in red.

Figure 17 Aerial Photograph of UCR and Surrounding Vicinity, 1953



Source: Environmental Data Resources, 2020

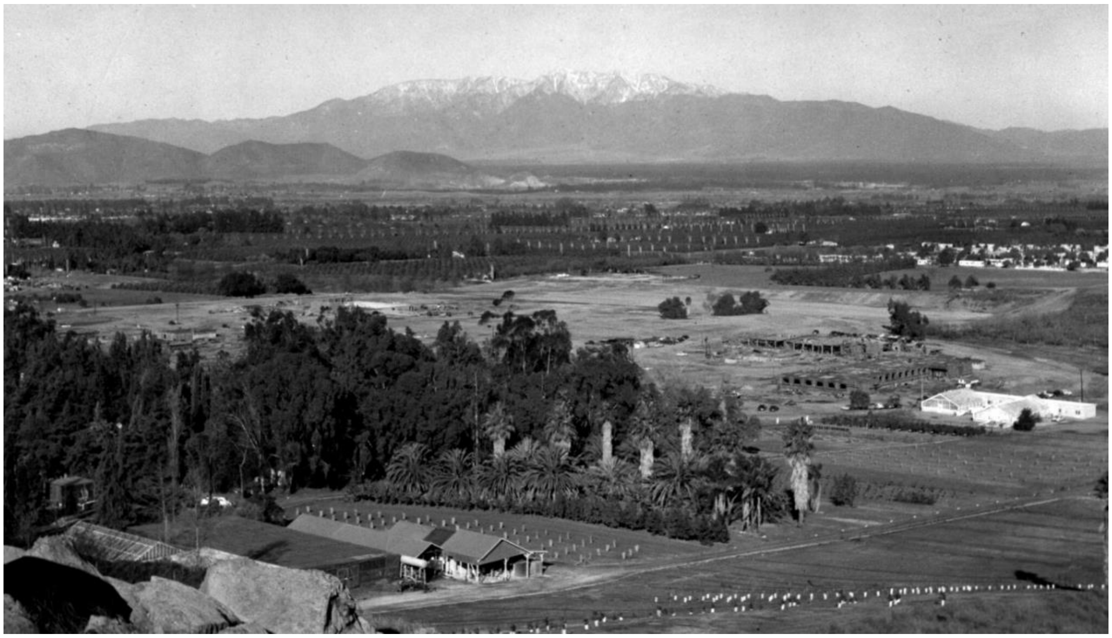
Modern Beginnings

The architects who designed UCR's earliest buildings represent a virtual who's-who of the best known, most celebrated Modernist architects in the region. The caliber of this team resulted in a collection of superb, distinctive examples of Mid-Century Modern design at UCR. It also reflected the university's intention of elevating its profile throughout the region.

Early buildings include the Physical Sciences Building (now Geology Building, 1953), designed by Bennett and Bennett of Pasadena; Social Sciences-Humanities Building (now Watkins Hall, 1953); Webber Hall (1954), designed by Clark, Frey and Chambers of Palm Springs; the Physical Education Building (now Athletics and Dance Building, 1953), designed by Arthur Froehlich of Los Angeles; and the Library (now Rivera Library, 1954), designed by the Glendale firm of Graham Latta. Additionally, the school hired Landscape Architect Ruth Shellhorn as the supervising landscape architect and responsible for the 1956 Landscape Master Plan. Shellhorn sought to emphasize and keep the naturally sloping topography of the campus, preserve the arroyos, and plant native and non-native trees throughout the campus[8] (additional information on these architectural firms is provided below, in Section 3.4, Associated Architectural Styles, Architects, and Design Professionals).

Photographs show the population of these buildings on the new college campus; a 1952 photograph depicts construction in the foreground (Figure 18), and a 1954 photograph gives a clear aerial of the school facing east, with the Physical Education Building (Athletics and Dance Building) in the foreground, Social Sciences-Humanities Building (Watkins Hall) to the right, and the Library (Rivera Library), Physical Sciences Building (Geology Building), and Webber Hall further afield (Figure 19).

Figure 18 The new campus under construction, 1952



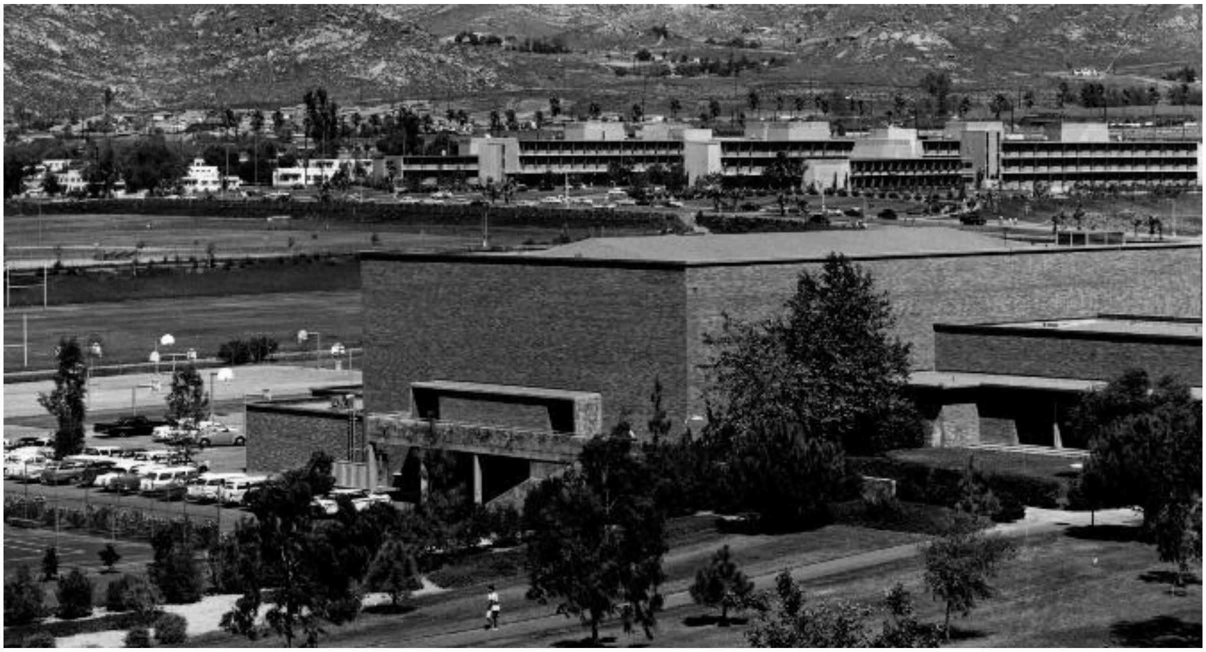
Source: UCR Special Collections and University Archives on Flickr, Image 282_003_184

Figure 19 The new campus in its inaugural year, 1954

Source: UCR Library and Special Collections

The Physical Education Building (Athletics and Dance Building), originally located in the southeastern corner of the campus, was constructed by Arthur Froehlich of Los Angeles in 1953. Photographs evidence the modern exterior and interior design of the building (Figure 20, Figure 21).

Figure 20 Exterior view of Physical Education Building (Athletics and Dance Building), N.D.



Source: UCR Special Collections and University Archives on Flickr, Image 282_003_203

Figure 21 Interior view of Physical Education Building (Athletics and Dance Building), N.D.

Source: UCR Special Collections and University Archives on Flickr, Image 282_003_206

Contemporary photographs of the Library (Rivera Library), completed by architect Graham Latta in 1954, offer further evidence of the distinctive exterior spaces and interiors of the new campus (Figure 22, Figure 23). Landscaping surrounding the building is varied, including both deciduous trees chosen by Shellhorn to provide shade in the hot summer months, and native succulents to conserve water usage. Shellhorn also worked with the architects to create the covered walkways that protected students from the sun as they traversed the campus.[9]

Figure 22 Library (Rivera Library) and Addition with Landscaping, c.1966

Source: UCR Special Collections and University Archives on Flickr, Image 282_001_052c

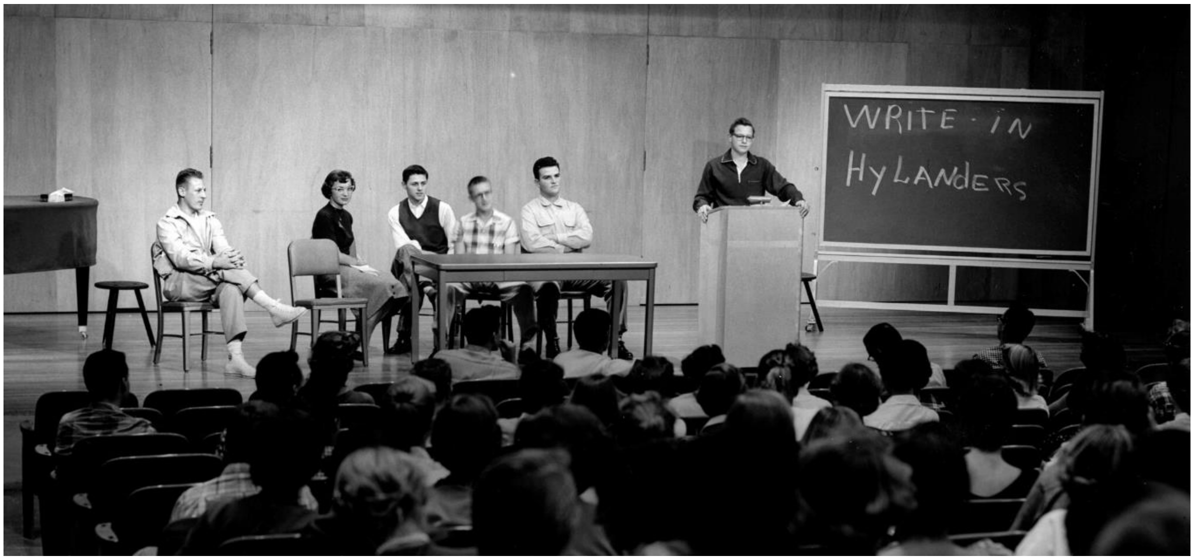
Figure 23 Interior of Library (Rivera Library), N.D.

Source: UCR Special Collections and University Archives on Flickr, Image 282_018f_002

Early Identity

With the college inauguration of 1954, five new buildings ushered in a population of 127 students and 65 faculty members. The College of Letters and Sciences quickly set to carve an identity for itself unique from surrounding colleges and universities. In 1955, the student body selected “Highlanders” as the school mascot (Figure 24). The mascot refers to the location of UCR in the highlands overlooking the city of Riverside. The yearbook was named *Tartan,* and the student newspaper was named *The Highlander.* The “Highland Lassies,” created to lift school morale at athletic games, was a dance group formed in 1955 (Figure 25).

Figure 24 Student body meeting to decide the UC Riverside mascot, 1954



Source: UCR Special Collections and University Archives on Flickr, Image 282_008_584

Figure 25 Highland Lassies, c. 1955

Source: UCR Special Collections and University Archives on Flickr, Image 282_008_588

Part of the school's new identity was a student-constructed concrete "C" on Box Springs Mountain overlooking the campus. The symbol was created as part of the UC tradition started by the UC Berkeley campus in 1905.[10] Situated approximately 1,500 feet above the campus, the concrete letter, part of a larger UC tradition, gained recognition as the largest concrete block letter on record. Measuring 132 by 70 feet, the letter quickly became a point of school pride (Figure 26).

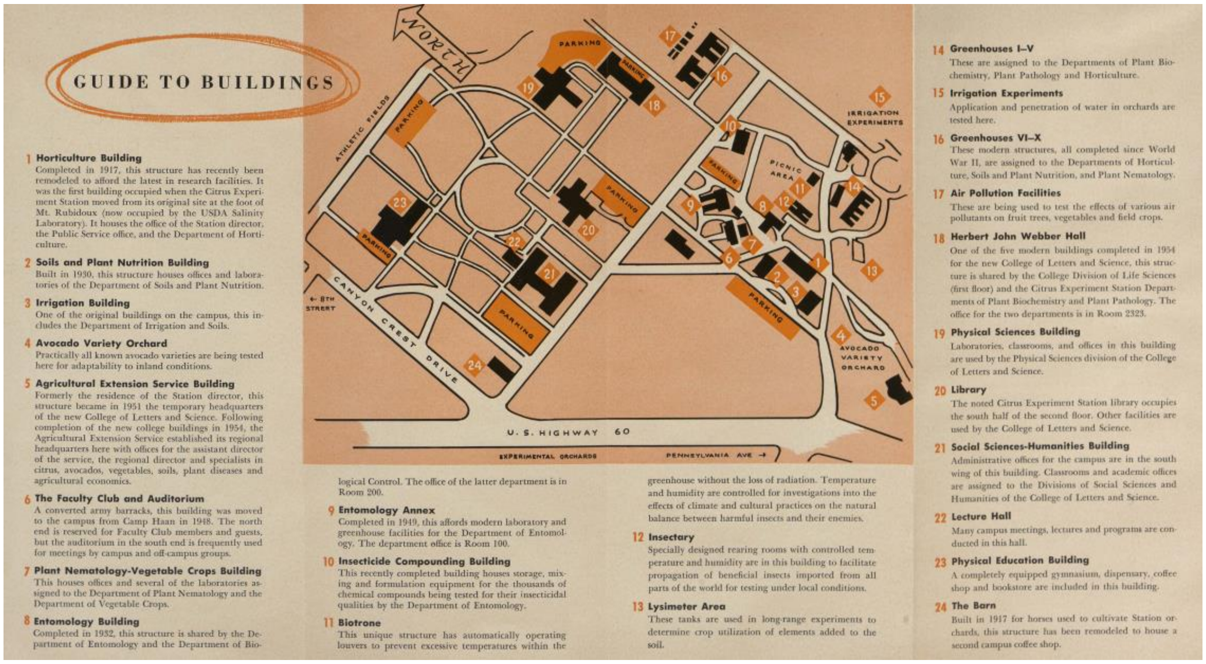
Figure 26 Construction of UC "C", c. 1955

Source: UCR Special Collections and University Archives on Flickr, Image 282_001_081

Master Planning and Expansion

Although the initial enrollment projections in 1954 were capped at 1,500, by 1955, those numbers increased to 5,000 students. In 1955, the celebrated architectural firm of Allison and Rible completed a Master Plan for the new school (Figure 27).[11]

Figure 27 Map of UCR Campus, 1955



GUIDE TO BUILDINGS

1 **Horticulture Building**
Completed in 1917, this structure has recently been remodeled to afford the latest in research facilities. It was the first building occupied when the Citrus Experiment Station moved from its original site at the foot of Mt. Rubidoux (now occupied by the USDA Salinity Laboratory). It houses the office of the Station director, the Public Service office, and the Department of Horticulture.

2 **Soils and Plant Nutrition Building**
Built in 1930, this structure houses offices and laboratories of the Department of Soils and Plant Nutrition.

3 **Irrigation Building**
One of the original buildings on the campus, this includes the Department of Irrigation and Soils.

4 **Avocado Variety Orchard**
Practically all known avocado varieties are being tested here for adaptability to inland conditions.

5 **Agricultural Extension Service Building**
Formerly the residence of the Station director, this structure became in 1951 the temporary headquarters of the new College of Letters and Science. Following completion of the new college buildings in 1954, the Agricultural Extension Service established its regional headquarters here with offices for the assistant director of the service, the regional director and specialists in citrus, avocados, vegetables, soils, plant diseases and agricultural economics.

6 **The Faculty Club and Auditorium**
A converted army barracks, this building was moved to the campus from Camp Haan in 1948. The north end is reserved for Faculty Club members and guests, but the auditorium in the south end is frequently used for meetings by campus and off-campus groups.

7 **Plant Nematology-Vegetable Crops Building**
This houses offices and several of the laboratories assigned to the Department of Plant Nematology and the Department of Vegetable Crops.

8 **Entomology Building**
Completed in 1932, this structure is shared by the Department of Entomology and the Department of Biological Control. The office of the latter department is in Room 200.

9 **Entomology Annex**
Completed in 1949, this affords modern laboratory and greenhouse facilities for the Department of Entomology. The department office is Room 100.

10 **Insecticide Compounding Building**
This recently completed building houses storage, mixing and formulation equipment for the thousands of chemical compounds being tested for their insecticidal qualities by the Department of Entomology.

11 **Biotrone**
This unique structure has automatically operating louvers to prevent excessive temperatures within the greenhouse without the loss of radiation. Temperature and humidity are controlled for investigations into the effects of climate and cultural practices on the natural balance between harmful insects and their enemies.

12 **Insectary**
Specially designed rearing rooms with controlled temperature and humidity are in this building to facilitate propagation of beneficial insects imported from all parts of the world for testing under local conditions.

13 **Lysimeter Area**
These tanks are used in long-range experiments to determine crop utilization of elements added to the soil.

14 **Greenhouses I–V**
These are assigned to the Departments of Plant Biochemistry, Plant Pathology and Horticulture.

15 **Irrigation Experiments**
Application and penetration of water in orchards are tested here.

16 **Greenhouses VI–X**
These modern structures, all completed since World War II, are assigned to the Departments of Horticulture, Soils and Plant Nutrition, and Plant Nematology.

17 **Air Pollution Facilities**
These are being used to test the effects of various air pollutants on fruit trees, vegetables and field crops.

18 **Herbert John Webber Hall**
One of the five modern buildings completed in 1954 for the new College of Letters and Science, this structure is shared by the College Division of Life Sciences (first floor) and the Citrus Experiment Station Departments of Plant Biochemistry and Plant Pathology. The office for the two departments is in Room 2323.

19 **Physical Sciences Building**
Laboratories, classrooms, and offices in this building are used by the Physical Sciences division of the College of Letters and Science.

20 **Library**
The noted Citrus Experiment Station library occupies the south half of the second floor. Other facilities are used by the College of Letters and Science.

21 **Social Sciences-Humanities Building**
Administrative offices for the campus are in the south wing of this building. Classrooms and academic offices are assigned to the Divisions of Social Sciences and Humanities of the College of Letters and Science.

22 **Lecture Hall**
Many campus meetings, lectures and programs are conducted in this hall.

23 **Physical Education Building**
A completely equipped gymnasium, dispensary, coffee shop and bookstore are included in this building.

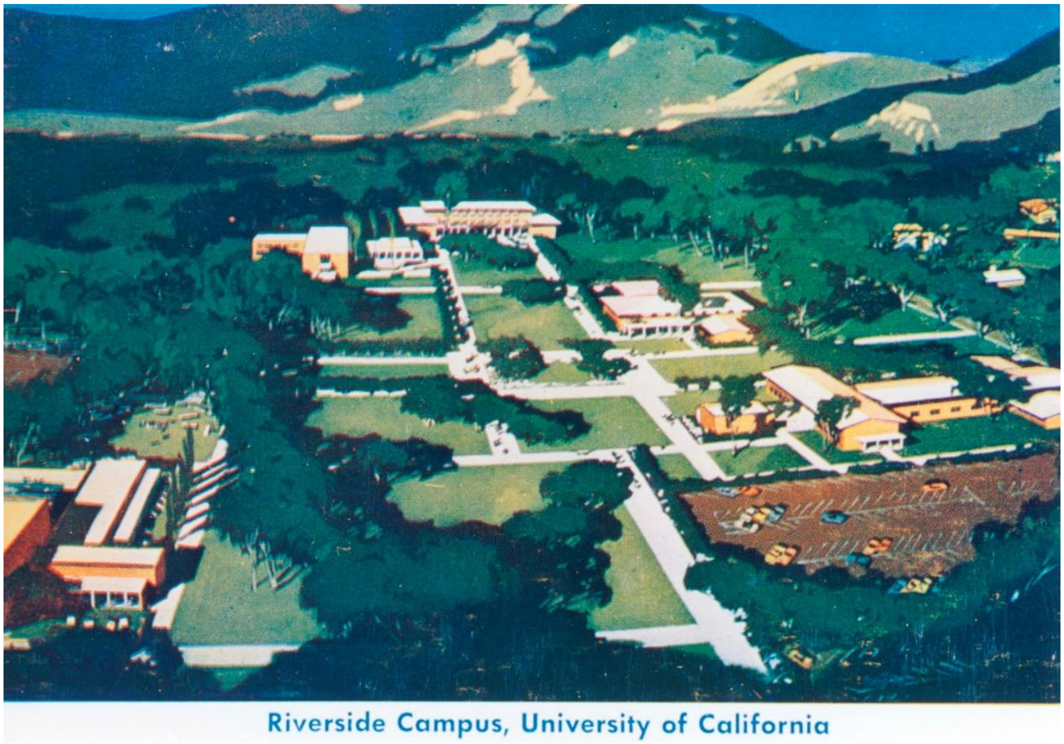
24 **The Barn**
Built in 1917 for horses used to cultivate Station orchards, this structure has been remodeled to house a second campus coffee shop.

Source: University of California, Riverside, Special Collections and University Archives

In a reflection of UCR's current configuration, the master plan dedicated the area west of U.S. Highway 60 (SR-60) to agricultural cultivation and experimentation and the area east of the freeway for the campus core. The East Campus Plan concentrated new construction around the six existing buildings: The Barn Group, Physical Science Building (Geology Building), Social Sciences-Humanities Building (Watkins Hall), Webber Hall, Physical Education Building (Athletics and Dance Building), and the Library (Rivera Library) .[12]

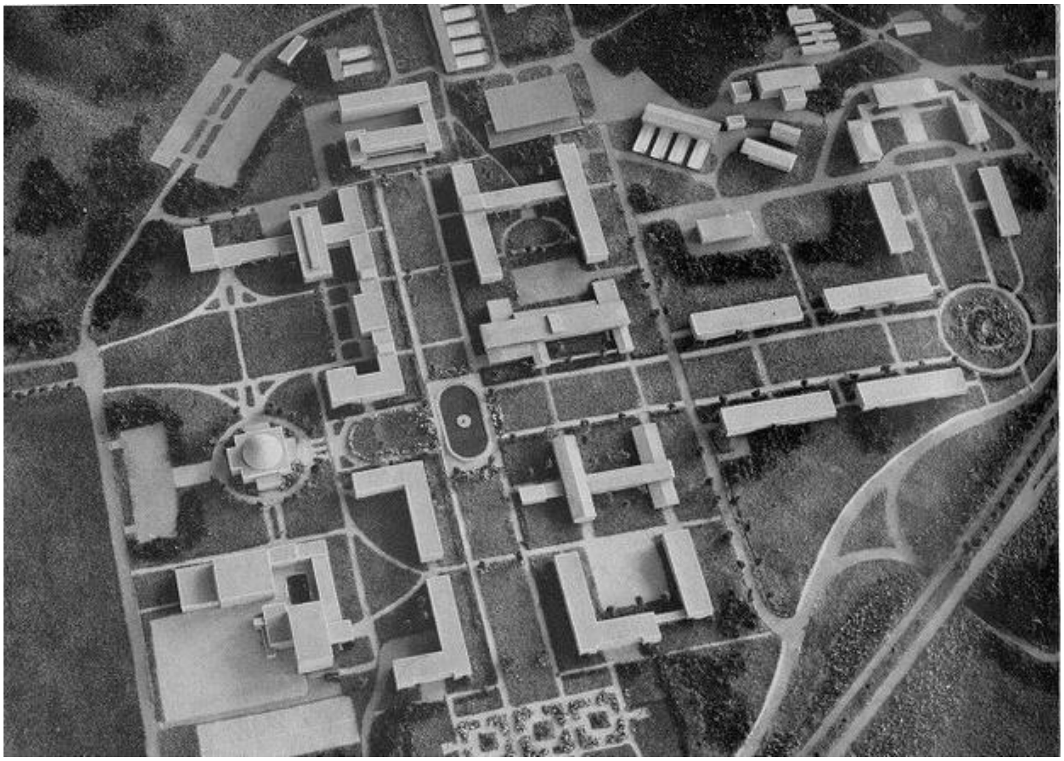
An undated rendering of the campus shows its appearance around this time, and a yearbook from 1956 boasts of the construction slated for the campus with the motto "the future… takes form" (Figure 28, Figure 29).

Figure 28 Map of UCR Campus, 1955



Source: UCR Special Collections and University Archives on Flickr, Image 282_018f_003

Figure 29 Projected Campus Plan, 1956



Source: UCR Yearbook, Calisphere, 1956

As the campus expanded with high-style Modernist buildings, students and facilities staff found ways to utilize spaces from the Citrus Experiment Station, as well. The Barn Group, for example, was redeveloped to serve as a dining hall, student center, and gathering space (Figure 30, Figure 31). To date, the stable has been demolished; the dining hall has been renovated and expanded; a new faculty/staff dining building, campus meeting room, and restroom building have been constructed; and the theater has been renovated (construction was completed in spring 2020). The demolition, renovation, and expansion of facilities addresses the dining deficiencies in the southeast part of campus and enhances entertainment programming abilities.

Figure 30 Students studying in The Barn, c. 1955

Source: UCR Special Collections and University Archives on Flickr, Image 282_018f_003

Figure 31 Exterior of The Barn, 1959

Source: UCR Special Collections and University Archives on Flickr, Image 282_002_118

Canyon Crest Housing Complex

In 1955, the new College of Letters and Sciences purchased the Canyon Crest housing complex from the federal government. Originally constructed as defense-worker housing during World War II, Canyon Crest offered a ready-made solution to UCR's early housing shortage during these years.

The Canyon Crest complex (of which a small handful of buildings remain) was built in 1941 to house military personnel and civilian defense workers at nearby Camp Haan and March Army Air Field. Converted to UCR student housing in the early 1950s, the Canyon Crest Housing Complex was roughly bounded by Blaine Street (north), Avocado Street (east), W. Linden Street (south), and Canyon Crest Drive (west). The remaining buildings include the long-time home of KUCR and Radio Aztlán.

Built in stages, the complex offered 275 units of modest, vernacular cottages, with uniform setbacks, sited on curving streets with a central lawn (in a reflection of the textbook ideas of suburban development in the postwar period).[13] Design professionals involved in the project included Los Angeles-based R.E. Campbell Company, who constructed half of the housing units, on a 17-acre parcel, for approximately $400,000.[14] In 1943, the Riverside County Housing Authority expanded the Canyon Crest Housing Complex to include a nursery school at 756 Linden Street. Other additions constructed during World War II included a community hall, grocery store, and various recreational clubs.[15] The housing complex remained open and operating through World War II.

Following the war, in 1947, the Riverside County Board of Supervisors initiated a transfer and repurposing of Canyon Crest for low-cost housing for WWII veterans, to be run by the County Housing Authority.[16] By the early 1950s, discussions regarding the fate of the housing complex were underway. In July 1955, the 53-acre property was transferred from the Public Housing Administration to the University of California Regents. With student populations booming, the neighborhood of Canyon Crest and its 275 units provided much-needed housing for UCR's many student and staff families.[17] Tenants occupying the units as of 1955 remained in their homes, and UCR students and staff were given first priority for subsequent vacancies.

The acquisition was celebrated by UCR administrators, who called it "'a major step toward our goal of becoming a residential college."[18] At the time, UCR's College of Letters and Sciences was in its second year but growing quickly. The new housing was deemed to be of "'immeasurable value' in the development of adequate housing facilities for the campus."

This historic photograph shows the characteristic tract character of the Canyon Crest Housing Tract in the 1940s (Figure 32).

Figure 32 Canyon Crest Housing Complex, 1943

Source: *Riverside Daily Press*, 1943 (Daly & Associates 2007)

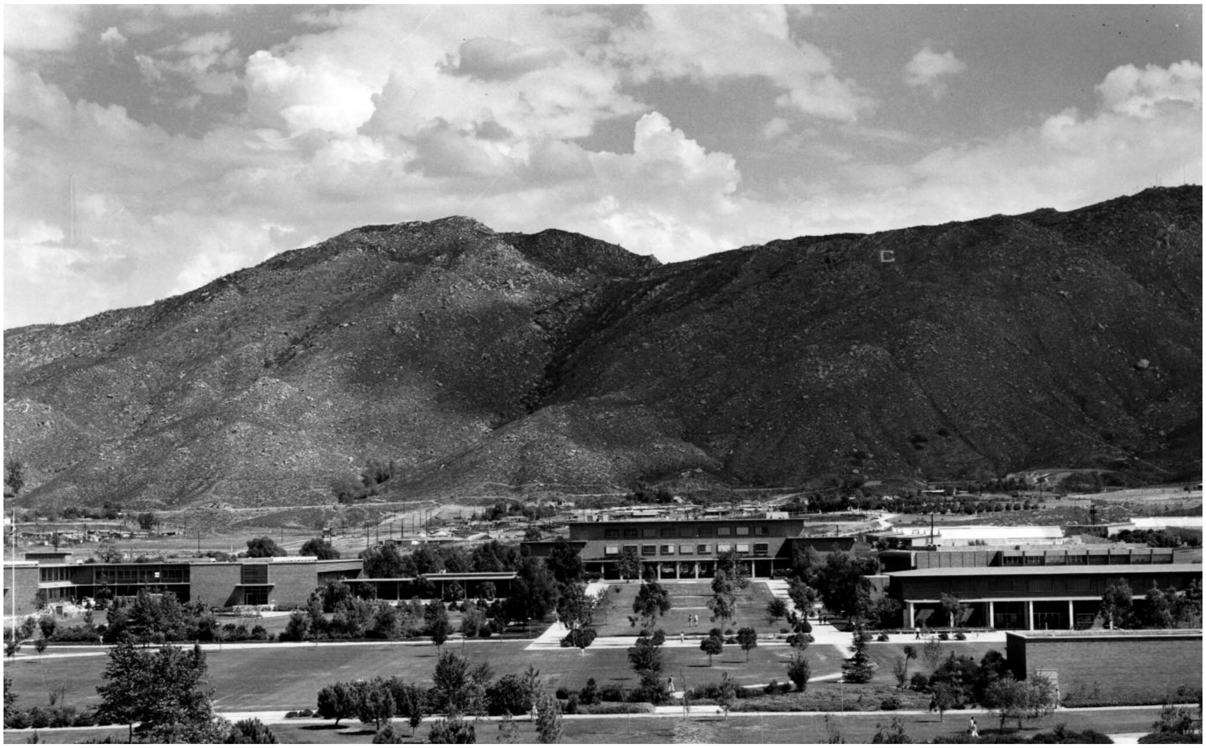
2.3 Creation of UCR "General Campus," 1959-1967

The next important catalyst for expansion of UCR occurred in 1959, when the UC Regents converted the fledgling College of Letters and Sciences into a "General Campus" within the UC system. This change implied that UCR would join the other major research institutions within the UC system, with a greatly expanded campus and facilities and a student body of up to 10,000. The new UC President Clark Kerr developed the California Master Plan for Higher Education, which designated Riverside and other UC schools as research institutions.[19] This new characterization of the school suited its early roots as an agricultural research institution.

As during the first phase of campus construction, the new facilities were designed by some of the region's most renowned practitioners of Mid-Century Modern institutional architecture. George B. Allison, Ulysses Floyd Rible, Albert Frey, A. Quincy Jones, Frederick E. Emmons, and William Pereira were just a few of the architects whose work defined the architectural character at UCR.

According to UCR facilities data, a total of 26 percent of UCR facilities were constructed in the 1950s, during the initial construction and master planning efforts. Once UCR was established as a General Campus, this expansion accelerated in the early to mid-1960s. Nearly one-third of UCR's extant facilities date to the 1960s (53 properties, or 32 percent). In subsequent years, UCR expanded outward, and new facilities gradually began filling in the campus core (Figure 33).

Figure 33 Aerial View of Campus, 1960



Source: UCR Special Collections and University Archives on Flickr, Image 282_003_217

Campus Growth

The need for new student housing grew in tandem with a rapidly expanding student population—to address this need, an expansive, multistory dormitory complex was constructed in the northeast portion of the campus. Designed by UCR master plan architects Allison and Rible, the Aberdeen-Inverness Residence Hall consists of two multistory H-shaped dorms, with a central services wing (Figure 34).

Figure 34 Aerial View of Aberdeen-Inverness Residence Hall Under Construction, c. 1959

Source: UCR Special Collections and University Archives on Flickr, Image 282_002_136b

Other basic student and campus management needs were soon addressed with the construction of the Allison and Rible-designed Administration Building (now Hinderaker Hall, 1960) and Corporation Yard (now Corporation Yard C and D Car Shelter, 1960) and the Health Service Building completed by Herman Ruhnau (1961).

In 1966, nationally renowned photographer Ansel Adams visited UCR and captured the striking, distinctive Modernist architecture on film. Iconic photographs of the Administration Building (Hinderaker Hall) and the Student Union’s fireplace are two examples of the sleek forms that came to characterize much of the school’s architecture in the 1960s (Figure 35, Figure 36).

Figure 35 Ansel Adams Photograph of Administration Building Arches, 1966

Source: The Regents of The University of California, Copyright 1967, 1978, 1990, 1994

Figure 36 Ansel Adams Photograph Student Union Fireplace, 1966

Source: The Regents of The University of California, Copyright 1967, 1978, 1990, 1994

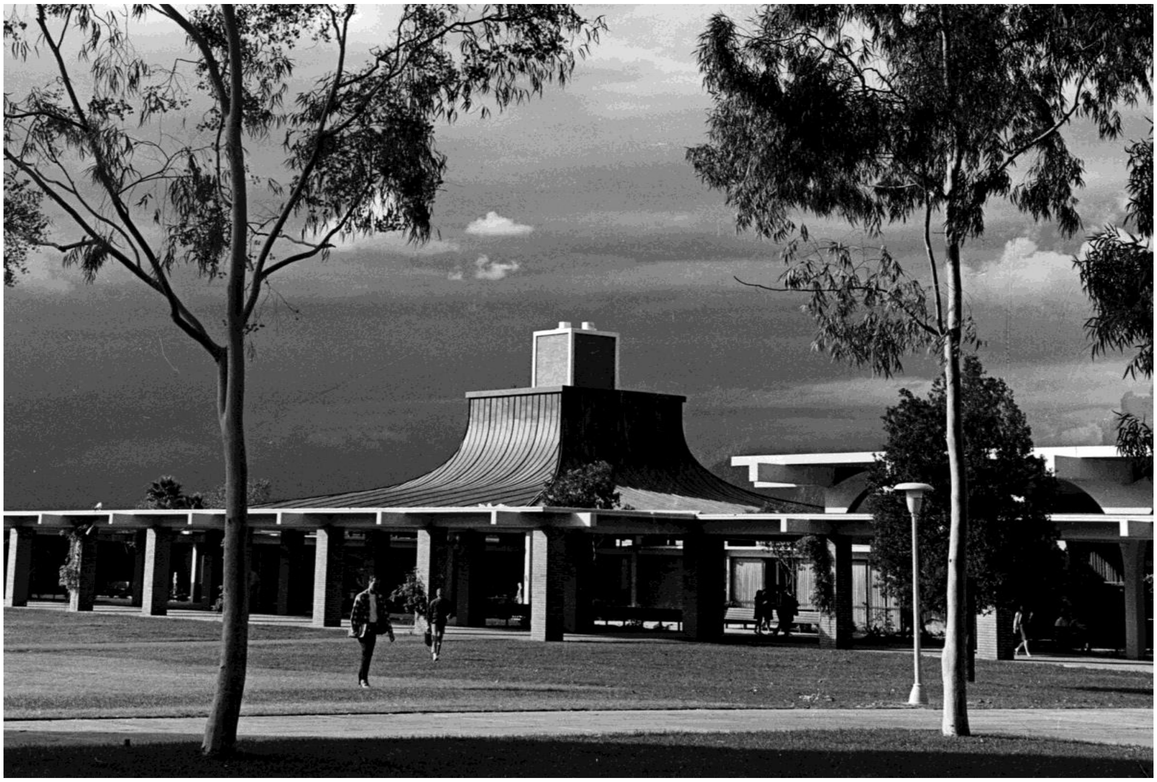
The UCR Bell Tower, was designed by Jones and Emmons in 1966 and has become one of the most emblematic buildings of the UCR campus (Figure 37). The building's sleek, elongated form serves as both architecture, wayfinder, instrument, and timekeeper. Consisting of 48 bells from the Paccard Bell Foundry in France, the 161-foot tower was dedicated on October 2, 1966 with a concert. To this day, UCR employs a University Carillonneur, a professional dedicated to working the carillon.[20]

Figure 37 Ansel Adams Photograph of the UCR Bell Tower, 1966

Source: The Regents of The University of California, Copyright 1967, 1978, 1990, 1994

In 1967, the Commons Building was constructed at UCR (Figure 38). The building housed the International Lounge, which was active by as early as 1968 (Figure 39). The building was demolished in 2005.[21] A 1966 photograph of the campus from the *Tartan* Yearbook shows the campus as it appeared at that time (Figure 40).

Figure 38 View of Commons Building, N.D.



Source: UCR Special Collections and University Archives on Flickr, Image 282_003_202

Figure 39 Students in the International Lounge, c. 1968

Source: UCR Special Collections and University Archives on Flickr, Image 282_018d_001

Figure 40 View of Campus, 1966

Source: Tartan Yearbook

Expansion of Citrus Experimentation and the Sciences

Even as UCR became a modern, large-scale university, its origins and character as the Citrus Experiment Station evolved alongside the expanding institution. In 1956, Herman Theodore Spieth succeeded Watkins as Chancellor and sought to integrate the campus and experimental station. At the same time, as the expanding liberal arts college was gaining an identity, the Citrus Experiment Station retained its own. By the time of UCR's conversion to a General Campus of the UC system in 1959, the fifty-year old Citrus Experiment Station had grown to 265 staff members, 115 academics, and 150 research technicians. Experimental fields and orchards still occupied large swaths of the West Campus. The station reported directly to the Office of the President, not the UCR Provost.

Spieth sought to change this, and in 1960 he founded the College of Agriculture, which combined the station with undergraduate and graduate teaching. In 1961, the UC Regents renamed the Citrus Experiment Station as the Citrus Research Center and Agricultural Experiment Station (CRC-AES).[22]The 1960s reflected this growing attention to the sciences at UCR and within a few years additional buildings were constructed to bolster this source of pride including the Life Sciences Building designed by William Pereira (1958; Figure 41) and the Entomology Building Addition completed by Herman Ruhnau (1960).

Figure 41 Aerial View of Life Sciences Building and Webber Hall, 1973

Source: UCR Special Collections and University Archives on Flickr, Image 282_018f_004

The school experienced overcrowding in the sciences shortly after its integration into the UC system. Between 1962 and 1964, in fact, UCR saw an increase of over 1,000 students with an accompanying rise in faculty and staff. Passage of Proposition 2, which included nearly $12 million for new buildings and equipment at UCR helped alleviate the financial burden of expansion. The construction of Life Sciences Unit 2 the Agricultural Sciences Buildings I & II (now Batchelor Hall) by Herman Ruhnau in 1965, and the Chemistry Building (now Pierce Hall) in 1966 would relieve the shortage of laboratory and office space at UCR.[23]

This era brought new laboratories and field buildings, as well as additions by Modernist master architects, A. Quincy Jones and Frederick E. Emmons to the 1966 Chemistry Building (Pierce Hall) and 1967 Agricultural Sciences Buildings I & II (Batchelor Hall). The school continued to gain a reputation as a center for science. In 1967, the first international Citrus Congress was held on campus, and in 1970 the National Society of Nematology meeting was held at UCR. Photographs from the 1950s and 1960s in the UCR archives frequently show various professors and students at work in the orchards or laboratories during this period of growth and exploration (Figure 42; Figure 43).

Figure 42 Soil and Plant Nutrition Faculty Member, N.D.

Source: UCR Special Collections and University Archives, Calisphere

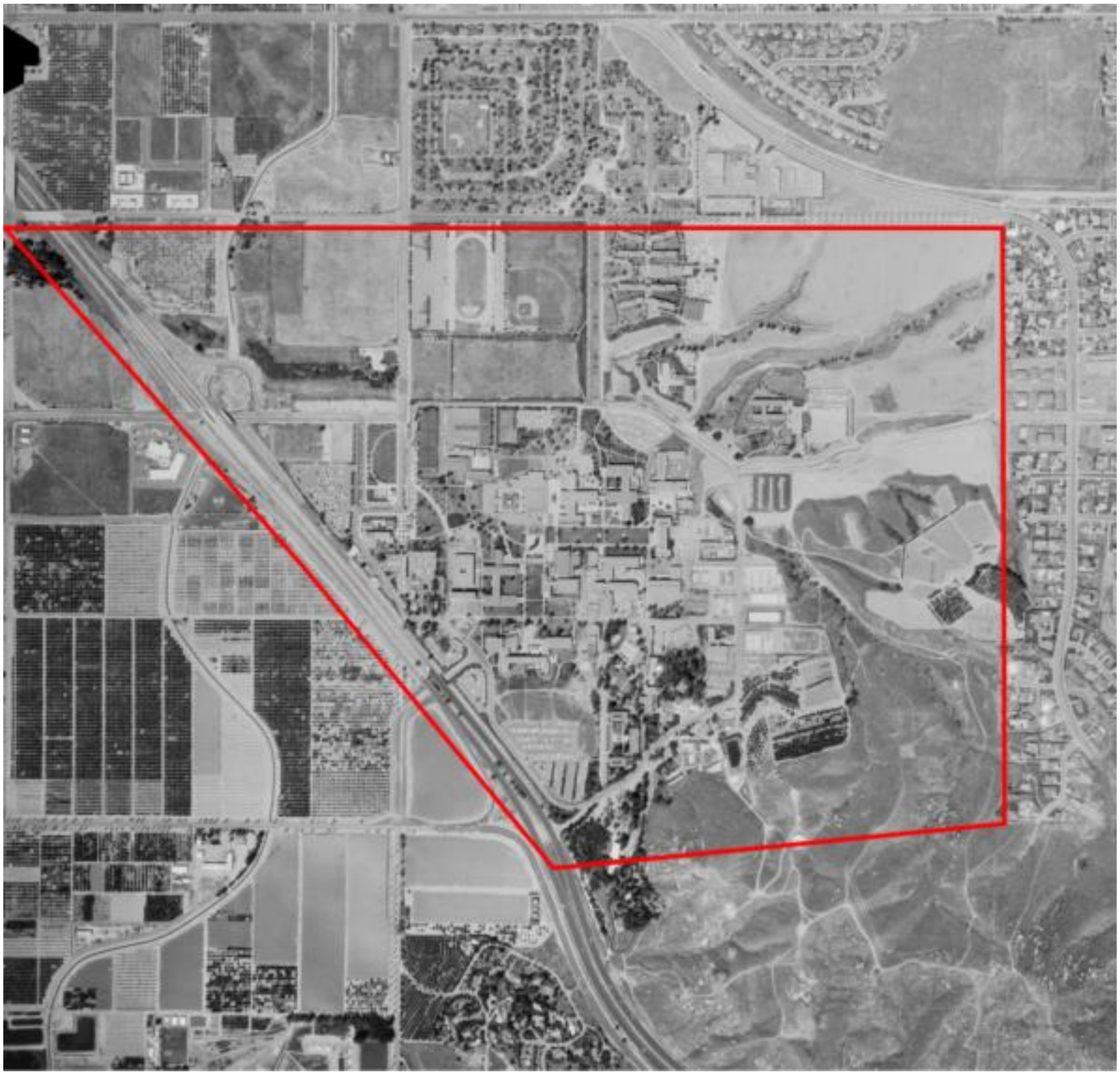
Figure 43 Chemistry Faculty Member in the Laboratory, N.D.

Source: UCR Special Collections and University Archives on Flickr, Image 282_014_1059a

During the 1960s, UCR continued to expand with various building campaigns. The enrollment ceiling was raised from 1,500 to 10,000 and then to 20,000 or more.[24] The building campaign and increased enrollment reflected the higher education boom of the 1960s.[25]

An aerial photograph from 1967 depicts the growth and infill of the school from its opening in 1954 (Figure 44). However, this steady expansion paused in the 1970s, as a dip in student enrollment slowed down construction and expansion.

Figure 44 Aerial Photograph of UCR East Campus and Surrounding Vicinity, 1967



Source: Environmental Data Resources, 2020

2.4 Era of Transition, 1968-1975

With the 1966 completion of the UCR Bell Tower and Commons Building (demolished in 2005), the stylistically diverse but unified campus core was complete. The phase of construction that followed allowed the university to continue expanding as needed, through the acquisition of new land or in-fill through the campus periphery.

A total of 38 buildings, or 23 percent, of UCR facilities were constructed between 1970 and 1975, fewer than the preceding two decades. A discussion of the reason for this slowdown in construction, notably a drop in school enrollment, as well as specific buildings constructed during this period are presented in this section.

Enrollment Decline and Construction Halt

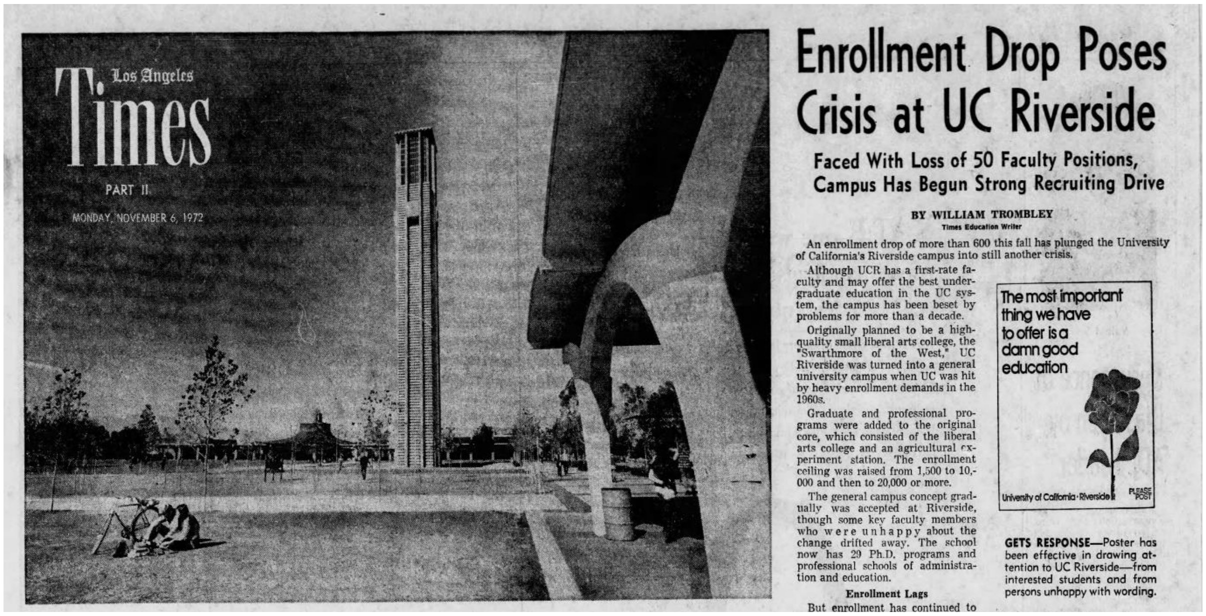
One reason for the slowdown in construction in the early 1970s was a general drop in enrollment. Between 1971 and 1972, enrollment at the school declined from 6,157 to 5,509 students. Lower enrollment set in motion contraction not only of building but of hiring, as the school considered laying off 50 to 350 faculty positions.

At the time, this drop was explained due to a number of factors. According to a *Los Angeles Times* article about UCR's population drop, the reasons for the enrollment decline included an increased tendency for young people to skip college, slower population growth, and the establishment of UC campuses at La Jolla and Irvine (Figure 45). It was especially the draw of these two UC schools that claimed to attract "thousands of potential Riverside students." [26] In addition to the school's inland location, it had gained a reputation for heat and smog. Additionally, approximately half of the students at the school were from the Riverside-San Bernardino area, which experienced a high unemployment rate and a low median income.[27]

In response to the enrollment drop, then-Chancellor Ivan Hinderaker initiated an aggressive recruitment campaign for the school headed by Ken Suid, Assistant Vice Chancellor for Undergraduate Development. A recruitment poster featured the slogan, "The most important thing we have to offer is a damn good education," and was mailed to 2,000 high schools and community colleges in California.[28]

Other recruitment methods included mailing out packs of playing cards containing loosely-based school facts, labeled "the UCR deck," and creating a hotline that prospective students could call for information. Hinderaker also expanded the academic program offered at the school. In 1972, he unveiled a plan that called for the establishment of professional schools in law and veterinary medicine and expansion of the fine arts programs. [29]

Figure 45 Los *Angeles Times*, caption reads "a quiet campus, a couple sits serenely on the north tower mall area at UC Riverside during the noon 'rush' hour," 1972



Los Angeles Times

PART II

MONDAY, NOVEMBER 6, 1972

Enrollment Drop Poses Crisis at UC Riverside

Faced With Loss of 50 Faculty Positions, Campus Has Begun Strong Recruiting Drive

BY WILLIAM TROMBLEY
Times Education Writer

An enrollment drop of more than 600 this fall has plunged the University of California's Riverside campus into still another crisis.

Although UCR has a first-rate faculty and may offer the best undergraduate education in the UC system, the campus has been beset by problems for more than a decade.

Originally planned to be a high-quality small liberal arts college, the "Swarthmore of the West," UC Riverside was turned into a general university campus when UC was hit by heavy enrollment demands in the 1960s.

Graduate and professional programs were added to the original core, which consisted of the liberal arts college and an agricultural experiment station. The enrollment ceiling was raised from 1,500 to 10,000 and then to 20,000 or more.

The general campus concept gradually was accepted at Riverside, though some key faculty members who were unhappy about the change drifted away. The school now has 29 Ph.D. programs and professional schools of administration and education.

Enrollment Lags

But enrollment has continued to

The most important thing we have to offer is a damn good education

University of California · Riverside

PLEASE POST

GETS RESPONSE—Poster has been effective in drawing attention to UC Riverside—from interested students and from persons unhappy with wording.

Source: Newspapers.com

Prospective students reacted well to the campaign, with over one thousand inquiring for more information on the school. Hinderaker clarified that West Coast students are often drawn to beach campuses, and that with the school's recruitment program is saying, "this is what we have to offer. Are you looking for location or for an education?"[30]

Despite the campaign's efforts, the next year saw a continued decrease in enrollment, dropping budgets, and dismissal of faculty and staff members (Figure 46). A 300-student decrease in enrollment was listed for 1973, and an anticipated dip of nearly 150 in 1974-1975. Fifty-two positions were cut from the school between 1973 and 1975, a loss of approximately 10 percent of the faculty; these were the first in a series of dismissals in the UC system caused by slim budgets and declining enrollments. Chancellor Hinderaker also trimmed his administrative staff. The chancellor received ample pushback from many professors during this period, who felt he had inflated anticipated enrollment numbers in the 1960s and was weakening the school's academic reputation.[31]

Figure 46 *Los Angeles Times*, UCR's "Troubled Campus," 1973

UC Riverside: New Pressures of '70s Hit Higher Education

Enrollment Loss, Cuts in Faculty and Budget Affecting Morale

BY WILLIAM TROMBLEY
Times Education Writer

Many of the problems now facing American higher education can be seen on a small scale on the University of California's Riverside campus.

Enrollment is sagging, budgets are dropping, faculty and staff members are being dismissed and the result of all this is low morale.

Some of UC Riverside's problems are unique. Heavy smog and its inland location make UCR less desirable to many students than the University of California's oceanside campuses at Irvine, Santa Barbara, Santa Cruz and San Diego.

High unemployment and a low median income level in the Riverside-San Bernardino area, from which UCR draws about half of its undergraduates, are other problems.

The campus has a somewhat blurred image in the public mind because its mission has been changed several times in recent years—from a small liberal arts college to a large, comprehensive university to, now, no one is quite sure what.

Boom Did Not Last

However, all of these local problems probably could have been solved, had the higher education boom of the 1960s lasted.

Between 1960 and 1970, UCR's enrollment increased from 1,573 to 5,717, and with the rise came new faculty positions and new academic programs.

But the good times ended. Enrollments began to taper off as Califor- what purpose college serves if it does not assure employment.

Buoyed by the optimistic demographic projections of the '60s and the expectation that an increasing percentage of high school graduates would seek higher education, University of California officials once expected to enroll at least 250,000 students by the end of this century. Several new campuses would be built. Thousands of professors would be hired.

UC Planners Worry

Now UC planners are worried about maintaining the nine existing campuses. No new ones are planned. Enrollment projections have been drastically reduced. Faculty members are being fired, not hired.

The impact of these problems, local and national, began to be felt at UC Riverside this year, when enrollment dropped about 600, to a total of 5,235. Another drop of about 300 is expected next year, followed by a dip of nearly 150 in 1974-75. This would lower UCR enrollment to about 4,800, the lowest since 1968-69.

Since budgets are tied closely to enrollments, this drop has had serious consequences.

Two weeks ago Chancellor Ivan Hinderaker told his faculty that 30 positions had been deleted from the 1974-75 campus budget by UC statewide planners, bringing to 52 the number lost in three years. This is about 10% of the total faculty.

To accomplish this cut, Hinderak-

TROUBLED CAMPUS—The Life Science quad area at UC Riverside presents attractive surroundings for classes. But the university is facing the same problems apparent in most higher education circles today — reductions in enrollment, the budget and teaching staff.

Times photo

Source: Newspapers.com

A new debate emerged from this period of decline: should the university return to its early roots as a small, high-quality liberal arts college and attached agricultural experiment station, or should it develop a small institution specializing in science and technology, with a move away from humanities and social sciences? Or, should the school remain a general university campus of modest size, with attention on undergraduate academics and strong graduate programs. As Dean Donald T. Sawyer commented in 1973,

> Riverside hasn't failed. We started out to be a modest-sized place that gives rigorous training and, damn it, we've succeeded… We don't have an active social life. We don't offer the action of Berkeley. But we do a good job with undergraduates in a personalized way, and we have built in graduate education at very small expense… The state can support one modest-sized campus of high quality and this is it.[32]

Indeed, students reported their approval of the smaller class sizes and more contact with professors. The architecture and setting of the campus also remained a draw, and one student who gave tours at the school recounts how visitors were amazed by its beauty.[33]

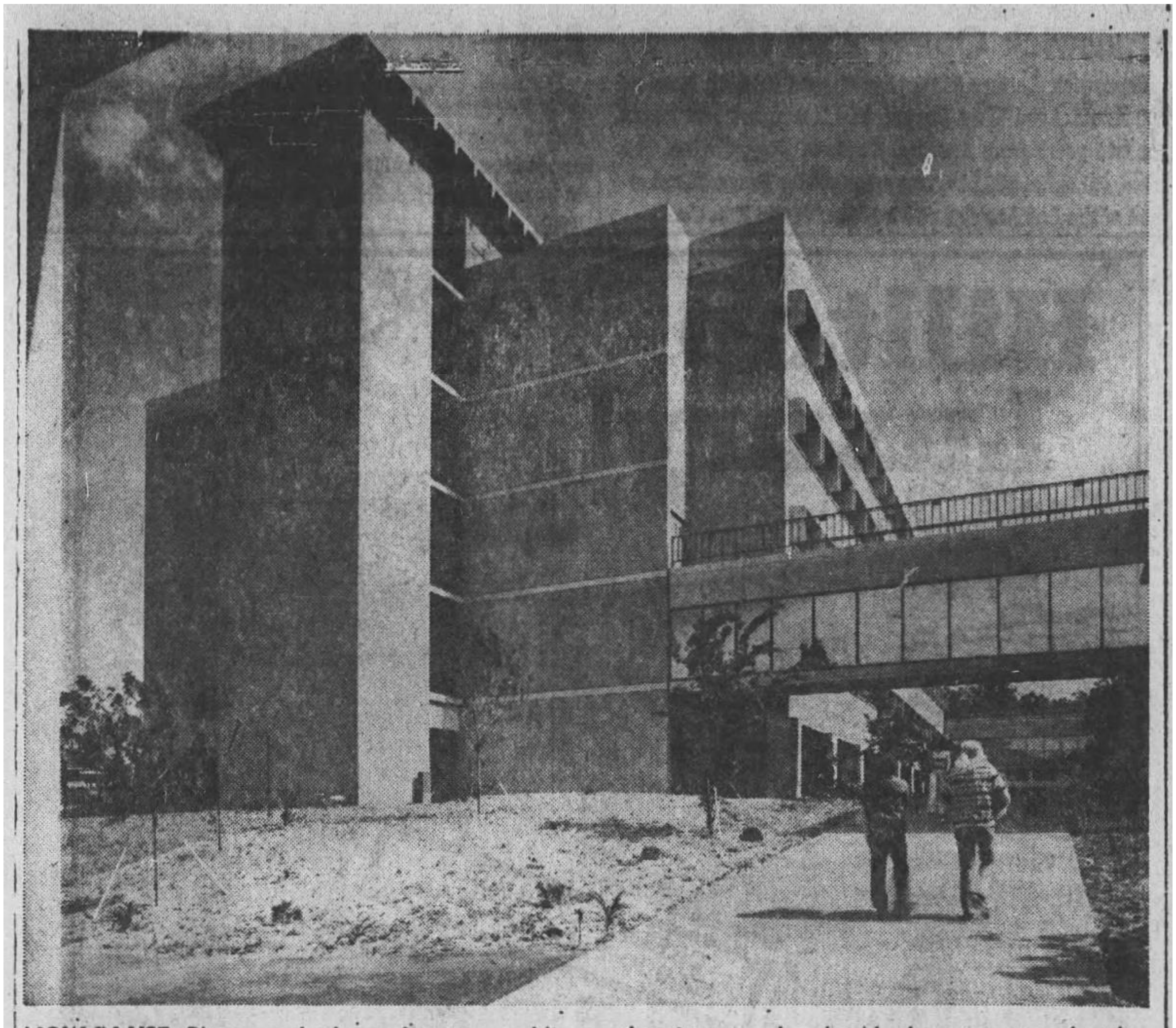
In 1974, the UC Regents approved a proposal to direct the state system's future growth to UCR and four additional UC campuses at Irvine, Santa Barbara, Santa Cruz, and San Diego. The proposal called for UCR enrollments of 6,000 by 1978 and 6,300 by 1983. The enrollment for 1973 was 5,143. Verne Orr, Governor Ronald Reagan's financial assistant, suggested halting any future development of the campus at UCR: "I wouldn't say they've overbuilt, but neither do we see the need for much new building."[34]

Resumed Construction

UCR saw its first increase in students and a resumption of construction in 1974-1975, when enrollment increased by 150 students compared to the prior year.[35] The college saw the addition of several buildings on campus, although this campaign did not rival the construction growth of the earlier two decades. In 1974, six greenhouses, a pumphouse, and volatile liquid storage building (on the site of the Citrus Experiment Station) were added to the campus. Boyce Hall and the Computer Statistics Building (now School of Medicine Education Building), located in zone 4 on the eastern periphery of the campus core, were also constructed in 1974. Boyce Hall was named after D. Alfred M. Boyce, who joined the Citrus Experiment Station in 1927, and became head of the entomology department in 1943 and director of the station in 1952.[36]

In 1975, a five-story addition was completed for Webber Hall. The Riverside firm of Ruhnau-Evans-Ruhnau-Associates completed the’ design and construction was overseen by the Steed Brothers of Alhambra. A photograph of the building in the *Los Angeles Times* shows the five-story addition to Webber Hall (Figure 47).[37] A corporation yard compressed gas storage building was also constructed that year.

Figure 47 *Los Angeles Times*, Webber Hall “Now in Use,” 1975



NOW IN USE—Photograph shows five-story addition to Webber Hall at UC Riverside, housing biochemistry and related departments. Another new building contains facilities for computers.

Source: Newspapers.com

In 1975, UCR acquired Bannockburn Village, a 1970-built 730-resident apartment complex, to house its married students. Built by Chrysler Realty, a subsidiary of the car manufacturer, at a cost of $4.8 million, the complex was purchased by UCR for $3 million. The complex featured 14 studio units, 86 one-bedroom units, and 50 two-bedroom units. The acquisition of Bannockburn Village more than doubled available married student housing, from 261 apartments in the Canyon Crest housing complex to 411 units total. At the time of purchase, UCR had the highest percentage of married students of all nine UC campuses.[38]

3 Focused Historic Context and Setting

In accordance with best practice and National Park Service guidance, properties must be evaluated within their historic context to ensure a thorough application of the eligibility criteria. The National Register defines context as "a body of information about our history according to the stages of development occurring at various times and places."[39] Theme, place, and time are the basic elements that define historic context.

The context statement incorporates stages of physical development, including the evolution of building forms and architectural style, as well as highlighting facets of industries or events.

Historic context is also linked to the built environment through the concept of property type. A property type is "a grouping of individual properties based on a set of shared physical or associative characteristics. Physical characteristics may relate to structural forms, architectural styles, building materials, or site type. Associative characteristics may relate to the nature of associated events or activities, to associations with a specific individual or group of individuals." [40] Historic contexts, therefore, become a useful tool for gauging the relative importance and integrity of properties.

In order to provide a contextual framework for assessments of UCR properties, this section provides the historic setting and context information for the campus and its general surroundings, divided chronologically and according to significant themes. This context identifies important themes and milestones that are reflected in the built environment at UCR (some aspects of Riverside's history are also included, but this section is not a full historic context statement of the City). Property types that might embody or reflect each context are described below.

Given UCR's history and built environment, the contexts and themes that apply to the campus include the following four contexts, along with themes and subthemes:

- Context #1: Early Settlement and Development in Riverside
  Theme: Citrus Industry and Citriculture in Riverside
  Subtheme: The UC Riverside Citrus Experiment Station

- Context #2: Riverside's Postwar Boom, 1945-1975
  Theme: Postwar Institutional Expansion in Riverside
  Subtheme: Founding of the University of California, Riverside

- Context #3: Social and Cultural Development, 1954-1975
  Theme: Civil Rights Movement and Student Activism at UCR, 1960-1975
  Theme: Initiatives in Cultural Diversity, Ethnic Studies, and Student Support

- Context #4: Architecture and Design, 1916-1975
  Theme: Mission Revival/Spanish Colonial Revival style
  Theme: Mid-Century Modernism in Riverside

Context #1:

Early Settlement and Development in Riverside

Theme: Citrus Industry in Riverside

Subtheme: UC Riverside Citrus Experiment Station

- **Description:**
  The Citrus Experiment Station set the stage for the institution that would become UCR and made an immeasurable contribution to the success of the citrus industry in Riverside as well as the region and California. Properties examined under this context and theme/subtheme will be considered for eligibility as significant reflections of the Citrus Experiment Station.
- **Eligibility Criteria:**
  NRHP: A; CRHR: 1; NRHP: B; CRHR: 2
- **Property Types:**
  Buildings, offices, fields, storage facilities/outbuildings; can include individual buildings, and/or cultural landscapes. The type of cultural landscape most relevant for UCR and the Citrus Experiment Station is the Historic Vernacular Landscape ("a landscape that evolved through use by the people whose activities or occupancy shaped that landscape. Function plays a significant role in vernacular landscapes. Examples include agricultural landscapes."[2]
- **Significance:**
  Buildings, cultural landscapes, or historic districts strongly associated with the Citrus Experiment Station may be eligible for federal or state listing under Criteria A/1. Those properties with a strong association to an individual who played in significant role in the Citrus Experiment Station might qualify under Criteria B/2.
- **Eligibility Standards:**
  To be eligible under Criteria A/1, properties must show a strong association with the Citrus Experiment Station. To be eligible under Criteria B/2, the property should show a strong association with a prominent researcher, administrator, or employee of the Citrus Experiment Station.

[2] See US Department of the Interior, September 1994, National Park Service Preservation Brief 36, "Protecting Cultural Landscapes: Planning, Treatment and Management of Historic Landscapes," Charles A. Birnbaum, ASLA. Available at: http:// https://www.nps.gov/tps/how-to-preserve/preservedocs/preservation-briefs/36Preserve-Brief-Landscapes.pdf.

Context #2:

Riverside's Postwar Boom, 1945-1975

Theme: Postwar Institutional Expansion in Riverside

Subtheme: Founding of the University of California, Riverside, 1953-1975

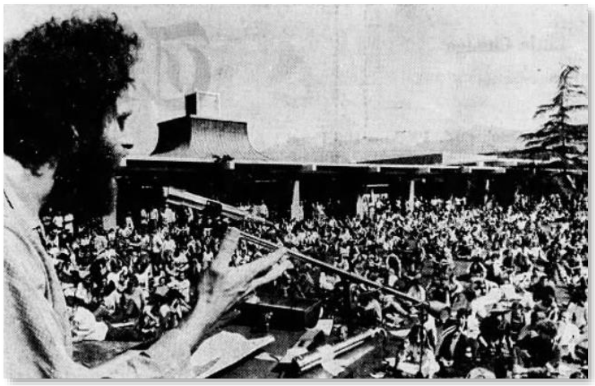
- **Description:**
  As part of Riverside's exponential postwar growth, the founding of UCR reflected a broad expansion of institutions/educational facilities throughout the City and region, as schools and universities grew to accommodate a rapidly expanding student population. Properties examined under this context and theme/subtheme will be considered for potential eligibility as reflections of this significant pattern of postwar institutional development in Riverside.

- **Eligibility Criteria:**
  NRHP: A; CRHR: 1; NRHP: B; CRHR: 2

  Property Types:
  Buildings, offices/classrooms, support structures, storage facilities/outbuildings; can include historic districts and/or cultural landscapes reflecting a unified site plan and design and associated landscaping and hardscaping features

- **Significance:**
  Buildings, historic districts, or cultural landscapes strongly associated with the postwar institutional expansion of Riverside and the opening decades of UCR may be eligible for federal or state listing under Criteria A/1. Those properties with a strong association with an individual who played in significant role in the university's founding, development, or achievements might qualify under Criteria B/2.

  Eligibility Standards:
  To be eligible under Criteria A/1, properties must show a strong association with the postwar institutional expansion of Riverside and the opening decades of UCR. To be eligible under Criteria B/2, the property should show a strong association with a prominent individual who played in significant role in the university's founding, development, or achievements.



Context #3:

Social and Cultural Development, 1953-1975

Theme: Civil Rights Movement and Student Activism at UCR

- **Description:**
  During the 1960s and into the 1970s, American universities were the site of widespread activism, protest, and organizing during the Civil Rights Movement. Properties examined under this context and theme/subtheme will be considered for potential eligibility as reflections of this significant pattern of events and sociocultural development in Riverside.
- **Criteria:**
  NRHP: A; CRHR: 1; NRHP: B; CRHR: 2
- **Property Types:**
  Buildings, offices/classrooms; outdoor gathering spaces; recreational facilities; historic districts or groupings of properties that reflect or embody this theme
- **Significance:**
  Buildings/structures, outdoor spaces, historic districts, or cultural landscapes that are strongly associated with the Civil Rights movement and era of student activism at UCR may be eligible for federal or state listing under Criteria A/1. Those properties with a strong association with an individual who played in significant role in the university's founding, development, or achievements might qualify under Criteria B/2.
- **Eligibility Standards:**
  To be eligible under Criteria A/1, buildings, outdoor gathering spaces, or other properties must have a strong association with the Civil Rights Movement and era of student activism. The association might be related to a significant event or an organization. Those properties with a strong association with an individual who played in significant role in the Civil Rights Movement and era of student activism might qualify under Criteria B/2.

Context #3:

Social and Cultural Development, 1953-1975

Theme: Initiatives in Cultural Diversity, Ethnic Studies, and Student Support

- **Description:**
  Throughout California, a focal point for activists was diversifying the curriculum by creating ethnic studies programs. Established in the late 1960s, UCR's Black Studies and Chicano Studies departments were among the earliest in California. These programs made significant academic contributions and became catalysts for change. Based on the long-time discrimination faced by residents of color in Riverside, these programs provided invaluable support to students of color, many of whom were first-generation college attendees.
- **Criteria:**
  NRHP: A; CRHR: 1; NRHP: B; CRHR: 2
- **Property Types:**
  Buildings, offices/classrooms; outdoor gathering spaces; recreational facilities; historic districts or groupings of properties that reflect or embody this theme
- **Significance:**
  Buildings/structures, outdoor spaces, historic districts, or cultural landscapes that are strongly associated with the theme may be eligible for federal or state listing under Criteria A/1. Those properties with a strong association with an individual who played in significant role in this theme might qualify under Criteria B/2.
- **Eligibility Standards:**
  To be eligible under Criteria A/1, buildings, outdoor gathering spaces, or other properties must have a strong association with this theme. The association might be related to a significant event or organization. Those properties with a strong association with an individual who played in significant role in this theme might qualify under Criteria B/2.

Context #4:

Architecture and Design, 1916-1975

Theme: Mission Revival/Spanish Colonial Revival Style
Theme: Modernism in Riverside

- **Description:**
  UCR is home to buildings, structures, and landscapes dating from the early through the late twentieth century. The campus has a handful of extant properties constructed as part of the renowned Citrus Experiment Station as well as one of the most distinctive collections of Mid-Century Modern facilities in Riverside County. Properties examined under this context will be considered for potential eligibility as, among other things, distinctive, outstanding examples of their architectural style, as the work of a master architect/designer/builder, or as a rare property type.
- **Criteria:** NRHP: C; CRHR: 3
- **Property Types:**
  Buildings/structures, outdoor spaces, historic districts and associated site design features, landscaping/hardscaping and circulation corridors, or cultural landscapes
- **Significance:**
  Buildings/structures, outdoor spaces, historic districts and associated site design features, landscaping/hardscaping and circulation corridors, or cultural landscapes that exhibit quality of design through distinctive features or that represent an excellent, intact example of the style at UCR may be eligible for federal or state listing under Criteria C/3.
- **Eligibility Standards:**
  To be eligible under Criteria C/3, the resource would exhibit quality of design through distinctive features and/or represent an excellent, intact example of the style at UCR.

The following sections provide the background for each of these contexts.

3.1 Context #1: Early Settlement and Development in Riverside

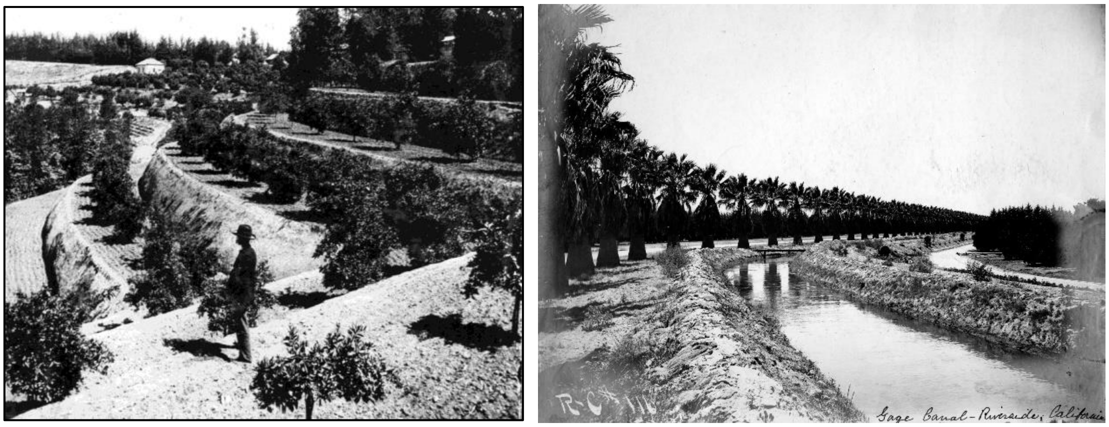
Theme #1: Citrus Industry and Citriculture in Riverside
Subtheme: The UC Riverside Citrus Experiment Station

The Citrus Experiment Station – now known as the Citrus Research Center and Agricultural Experiment Station (CRC-AES) – has operated from UCR for over a century. UCR retains facilities and buildings dating to the earliest days of the Citrus Experiment Station.

The area that now encompasses UCR falls within the City's University Neighborhood area, near the slopes of Box Springs Mountain. Situated northeast of Riverside's original townsite, this expanse of the City consisted primarily of agricultural fields and citrus groves at the time of the City's founding in 1870. Adjacent to the University Neighborhood to the west and southwest are the two of the City's oldest neighborhoods, Eastside and Victoria, which were the home of expansive citrus groves, packing houses and plants, as well as neighborhoods and communities, as early as the late nineteenth century.

Following Riverside's establishment, the new community needed irrigation for its growing population as well as its acres of groves and fields. One of the earliest and most significant engineering advances in this respect—the Gage Canal—traversed the area now occupied by UCR. In 1884, Matthew Gage constructed the 20-mile canal to bring water to the newly established village of Arlington Heights, another early area of settlement in the City (Figure 48).[41] The availability of water helped spur Riverside's expansion, not only for new residents, drawn to the emerging employment centers, but also for acres of groves and agricultural fields.

Figure 48 Citrus fields (left), ca. 1890, and Gage Canal, (right) circa 1900



Source: Los Angeles Public Library and UCR Special Collections and University Archives

During these founding years, one of the most significant events for Riverside was the introduction of the Washington Navel Orange. Imported from Brazil by the United States Department of Agriculture, the navel orange was brought to Riverside in 1873 by Eliza and Luther Tibbets. Within five years, "the Washington navels were winning prizes, and Riverside instantly became the model citrus landscape."[14]

After the introduction of the Washington Navel Orange, the crop transformed Riverside and the surrounding region. By 1880, an expansive citrus industry was already well established. Much of

Riverside was covered or surrounded by orange, lemon, and lime groves. As of 1882, among the half-million orange trees throughout California, 50 percent were growing in Riverside.[42]

The rise of the citrus industry, along with the establishment of the Southern California Fruit Exchange, helped Riverside expand exponentially through the 1880s. The small town quickly became one of the state's most prosperous and productive agricultural communities. In addition, as historian Carey McWilliams observed, the citrus boom gave rise to a new social class, the "aristocrats of the orchards", who ultimately dominated political, social, and economic life in Riverside.15

With the rise of citrus-culture, the workforce also expanded greatly. From the beginning, citrus work meant long hours, physically demanding work, and low wages. The earliest citrus laborers in Riverside had been the local Native American population. By the 1880s, Chinese immigrants had become the main source of citrus labor, working as pickers, packers, and irrigators. As increasingly restrictive immigration laws first slowed then halted Chinese immigration, Riverside citrus producers turned to Japanese immigrants. Japanese citrus laborers began in the early 1890s. By 1900, nearly 3,000 Japanese laborers were employed in Riverside in the citrus industry alone. Riverside also had a sizable Korean workforce, who participated in citrus work and seasonal labor; the Korean settlement, on the edge of Eastside near Cottage and Pachappa, was one of the earliest Korean settlements on the US mainland. The original site of the Korean settlement, Pachappa Camp, is now a City Point of Cultural Interest, designated in December 2016.

In the early twentieth century, a new wave of anti-immigrant sentiment, this time aimed at the Japanese, drove them out of the citrus labor market throughout California. Mexican laborers came to replace Chinese and Japanese laborers as the majority workforce. By the end of the 1910s, Mexican immigrants had "replaced all other ethnic laborers in California's citrus districts" and became "the nucleus of the industry's workforce from 1919 up to the [late twentieth century]."[43] New arrivals and workers settled in neighborhoods near the groves and packinghouses, such as the Eastside, Casa Blanca, and Arlington Heights neighborhoods, located west and southwest of UCR. Casa Blanca, which is named for the nearby estate of Harry Lockwood (which was an imposing *casa blanca*, or white house), is one of the oldest Latino communities in California.

Through the years, the presence of expansive, vital ethnic communities, such as the Mexican-American community, continued to exert a significant influence in the cultural, social, and political life of the City. The origins of many of these communities were rooted in this early twentieth century influx as Riverside was in its most rapid period of expansion. Later, in the 1960s, during the Civil Rights Movement, UCR became home to one of the nation's first university-level Chicano studies programs. Some of the first graduates of the program, and pioneering Mexican-American faculty members, grew up in the early citrus *colonia* and neighborhoods of Riverside.

Founding Years and the Citrus Experiment Station

During these years, the citrus industry experienced rapid, expansive success as well as some daunting challenges. Principal among them was the challenge of invasive pests and diseases that damaged or killed crops.

Riverside's Citrus Experiment Station was created through legislation drafted by State Assembly member Miguel Estudillo and local grower John Henry Reed.[44] For growers statewide, the Citrus Experiment Station became a critically important clearinghouse for citrus-related research, including topics such as how to understand and mitigate plant disease, nutritional deficiencies, insects, pests, and other challenges to the health and productivity of citrus groves. The research center helped growers remain competitive as the citrus market became more diversified, with increasing citrus trade from Florida, northern California, Puerto Rico, and South Africa in the early twentieth century.

Agricultural research centers emerged in the US in the mid-nineteenth century with federal passage of the Morrill Act, which allowed the government to donate public lands for the establishment of agricultural colleges. In 1887, the Hatch Act further established Agricultural Experiment Stations (AES) in each state. Prior to Reed and Estudillo's legislation, the University of California had already established AES branches in Berkeley and Davis.

In 1906, the University of California Regents began construction on the third AES branch in Riverside. A year later, in February 1907, the Riverside Citrus Experiment Station began operations. In 1907, in order to help growers to fight crop diseases, the California State legislature established an experimental orchard and research facility near Riverside's Mt. Rubidoux. Initially administered by the University of California, Berkeley's College of Agriculture, the research center initially focused on citrus crops and how to address and mitigate threats. In 1912, given the industry's importance and the facility's success in its opening years, the University of California announced plans to expand the UC Riverside Citrus Experiment Station, to make it "an institution adequate to the great industry whose problems it was established to solve."[45]

Within a few years, however, the need for a larger facility, with a broader scope of study, was already evident. In 1913, an advisory committee was tasked with finding a site that could accommodate more crops, larger orchards, as well as new research and office facilities and housing. When the City of Riverside offered the university a 370-acre site adjacent to Gage Canal, the advisory committee accepted; the Gage Canal continues to traverse the West Campus and the present-day facilities of the Citrus Experiment Station are extant on East Campus (Figure 49). With facilities designed by Los Angeles architects Lester H. Hibbard and H.B. Cody, the Citrus Experiment Station opened in March 1918. For the signature buildings of the Citrus Experiment Station, Hibbard and Cody opted for a distinctive Spanish/Mission Revival style.

Figure 49 Horticulture Building (Anderson Hall 1) and West Campus orchards, ca. 1920

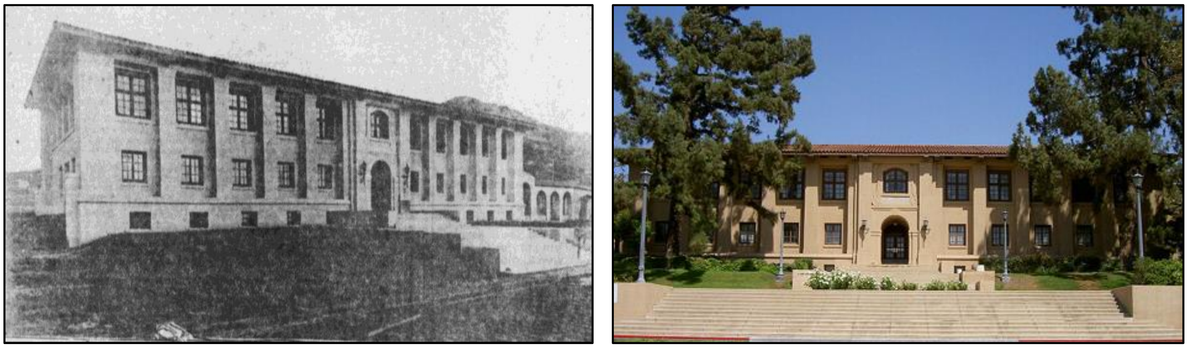
Source: UC Riverside, Library, Special Collections and University Archives

In addition to an expansion of the facilities, this investment included hiring a nationally recognized expert, Dr. H.J. Webber, as the station's director. Webber had served in the US Department of Agriculture and as a faculty member at Cornell University. He was "regarded as among the chief of pomological authorities in the country" and "to get the best man and retain him, it would be necessary to build up an opportunity and an institution commensurable with his talents."[46]

Under Webber's leadership, the Citrus Experiment Station quickly became known as a focal point for research in a range of problems facing farmers and growers. After Webber joined the station as director, he oversaw additional expansions of the facilities, which by 1914 staffed 18 personnel with an annual budget of $60,000.[47] In 1917, Webber moved the facility four miles east to its present location; at the time, on an expansive 475-acre parcel. During this time, the Citrus Experiment Station focused its efforts on creating fertilizer that deterred pests, improving citrus rootstocks, cultivating new varieties of citrus, and preventing plant diseases.[48] The center researched topics such as irrigation and soil sciences, breeding and hybridization, diseases and various injuries of trees including citrus, date, avocado, and walnuts, as well as the omnipresent problem of pest and disease control.

In 1917, a new $125,000 complex was added to the station. Designed by Los Angeles architect Lester H. Hibbard, the new facilities included the horticulture building, director's home, and Barn Group (Figure 50; Figure 51). According to the *San Bernardino News,* the architectural character of the new facilities "suggest[ed] the Spanish inheritance of California, through their graceful lines, tiled roofs, plastered façade, and picturesque open arcades from building to building. Everything is planned as part of a group capable of expansion by future generations."[49]

Figure 50 Horticulture Building (now Anderson Hall 1) in 1918 (left) and ca. 2000 (right)



Source: Los Angeles Daily Times, 14 March 1918, and UC Riverside

Figure 51 Overview of the Citrus Experiment Station; a third addition (Soils/Plant Nutrition Wing [now Chapman Hall]) was constructed in 1931 to form the current U-shaped complex

Source: http://memory.loc.gov/pnp/habshaer/ca/ca1600/ca1674/photos/036482pv.jpg.

With the continuing primacy of the citrus industry in the regional and statewide economies, the UC Riverside Citrus Experiment Station expanded in scope and profile, looking to other countries for solutions to problems faced by local farmers and publishing research results and guidance. In the 1920s, faculty conducted research and advised growers on how to address an invasive fungus that precipitated the decay of lemon crops, for example.

In 1930, station professor Dr. H.S. Reed, a plant physiologist, took a year to travel to Spain to study the citrus industry, North Africa and Sicily to "investigate conditions," and to the University of Geneva, where he served as a guest faculty member.[50] During the Great Depression, the station continued to expand; in 1930/1931, a new Soils/Plant Nutrition Wing (now Chapman Hall; one of three signature landmarks for the Citrus Experiment Station) as well as an Insectary Building and Entomology Building were constructed.

The station quickly became renowned as a center for citrus research around the world, with its three principal objectives: (1) to conserve and evaluate citrus types and relatives; (2) to provide a resource of citrus genetic diversity for research; and (3) to extend knowledge about citrus diversity.[51]

As the region suffered the effects of the Great Depression, the health of the citrus industry partially helped buoy the local economy. During the Great Depression, the UC Riverside Citrus Experiment Station did its part to support the industry by offering classes in citriculture to local growers. Through these courses, the facility presented the latest recommendations of the college of agriculture of the University of California, concerning orchard management problems and practices. Subjects discussed include fertilization, soil management, irrigation, and soil values. The station also sought to develop a satisfactory pest control program.[52]

The multidisciplinary faculty and associates at the time included facility director L.D. Batchelor; J.B. Brown, irrigation specialist at the College of Agriculture at Davis; W. Eberling and Stanley Flanders from the station's entomology division (Flanders would later serve as director of the station). The team also included specialists in soil technology (with Professor C.F. Shaw from UC Berkeley), entomology (with Professor H.J. Quayle), physiology (with Professor P.H. Rohrbaugh of the UC Riverside Citrus Experiment Station), as well as farm advisors and county assessor officials. A campus map from 1951 illustrates the Citrus Experiment Station footprint and facilities prior to the establishment of UCR in 1954 (Figure 15).

By 1953, for its part, the Citrus Experiment Station had also grown from 30 to 1,000 acres and from 18 to 265 staff members and faculty.[53] At the time of its development, agricultural fields, mostly planted with citrus, still characterized much of the land to the north, west, and south of the school.

As of 1953, one year prior to the opening of the new College of Letters and Sciences, the station employed a cross-disciplinary team of scientists studying invasive insects and diseases hampering the citrus crop and mitigation methods (Figure 52). One area of research involved identifying "predator parasites" that would overtake the insects plaguing citrus crops.[54] Scientists in the biological control department travelled to North Africa, Japan, and Italy, for example, in order to study citrus diseases and find (and bring home) parasites capable of reducing insect populations. In this way, by the time UCR was founded in 1954, the institution already enjoyed a national and international reputation for its work across a number of disciplines.

Figure 52 Dr. Stanley E. Flanders, UC Riverside Citrus Experiment Station, 1953

Source: The San Bernardino Sun, 30 April 1953

As the postwar building boom began eroding former agricultural lands throughout California, the Citrus Experiment Station began leasing over 11 acres of farmland of the Limoneira Company, a long-time citrus producer in Santa Paula, County of Ventura. As groves gave way to housing, researchers at the station used the Limoneira farmland to explore and address "the production and marketing problems that will be created by the shift of citrus away from coastal areas in the next 10 to 20 years."[55] This of course was prescient; Santa Paula was selected for this work for its climatic zone, which represented a departure from the subtropical areas that had been the focus of the citrus industry.

Through subsequent decades, the Citrus Experiment Station continued to respond to evolving challenges, with an increasingly diversified team of specialists and scientists. Drawing on decades of work by the Citrus Experiment Station, UCR's entomology department became one of the top five such departments in the United States.

With its experimental orchards and collections primarily spanning an over 22-acre site in UCR's West Campus, the Citrus Experiment Station has conducted its work under the auspices of the College of Natural and Agricultural Sciences since 1974; the college was created through a merger of physical sciences and biological/agricultural sciences. The research collections of the UC Riverside Citrus Experiment Station are now housed in the UC Riverside Libraries.

The Citrus Experiment Station, now known as the Citrus Research Center and Agricultural Experiment Station (CRC-AES), is still home to "one of the world's most extensive citrus diversity collections," with approximately 1,000 types of citrus trees (two trees per type) on over 22 acres of the UCR campus.[56] In a testament to its continuing significance for citrus growers around the world, the Citrus Research Center and Agricultural Experiment Station (CRC-AES) received a $3.5 million grant in early 2019 to fund research into an invasive disease known as citrus greening disease

(Figure 53). The Citrus Research Center and Agricultural Experiment Station (CRC-AES) still occupies the same swath of fields it has for over half a century, with an eclectic variety of buildings and support structures, through UCR. The Gage Canal still cuts a diagonal swath through the area, as it has since the late 19th century.

Figure 53 Chancellor Rivera celebrating the Citrus Experiment Station's 75th anniversary, 1982, with Bob Soost (left) and James Cameron (right); Tracy Kahn, Citrus Variety Collection curator, with a Valentine pummelo, a grapefruit-like hybrid developed at UCR, 2019

Source: UC Riverside Library, Special Collections/University Archives and UCR News, 14 March 2019

3.2 Context #2: Riverside’s Postwar Boom, 1945-1975

Theme: Postwar Institutional Expansion in Riverside
Subtheme: Founding of the University of California, Riverside, 1954-1975

In the postwar period, as noted previously, the Citrus Experiment Station continued to expand its research mission as well as its faculty and facilities. In Riverside and throughout Southern California, though, the shortage of university spaces and higher education opportunities had reached acute levels. The population boom as well as the influx of returning GIs, ready and able to study under the American GI Bill, tested these limits.

For the University of California system, the postwar years strained already overburdened schools. In 1944, U.S. President Franklin D. Roosevelt established the Servicemen’s Readjustment Act, commonly known as the G.I. Bill of Rights. One major component of this bill was a stipend for college tuition:

> [The bill] gives servicemen and women the opportunity of resuming their education or technical training after discharge, or of taking a refresher or retrainer course, not only without tuition charge up to $500 per school year, but with the right to receive a monthly living allowance while pursuing their studies.[57]

The bill funded 7.8 million veterans total, with many of them enrolled in higher education programs in California.[58] Four hundred universities and colleges in California were approved for the program, with over fifty percent of veterans attending fifty of the approved schools. The presence of the Citrus Experiment Station provided a logical location for a new university; its expansion to a satellite College of Letters and Sciences of the UC system also reflected a broad expansion of institutions/educational facilities throughout the City.

This founding of the College of Letters and Sciences in Riverside was significant news not just for the city, but also for the region and state. Throughout California’s institutions of higher learning, demand far outpaced availability in the postwar period. The problem was even more severe in the Inland Empire, with only a small handful of four-year universities in the extended region. A new four-year, research-focused university affiliated with the UC system was a significant step toward answering the increased demand for higher education.

Given the level of growth and expansion in Riverside itself, the community came together in the postwar period to form the “Citizens University Committee,” a booster group that brought together members of the Chamber of Commerce, local teachers, political organizations, and Riverside citizens, in order to advocate for expanded higher-education offerings in Riverside. The group worked to convince UC Regents and state officials that Riverside should house a new campus. In 1948, California Governor (and future US Supreme Court justice) Earl Warren granted $2 million in funding for the new liberal arts college, on the grounds surrounding the Citrus Experiment Station.

In February 1954, as the new College of Letters and Sciences prepared to welcome students, the *Riverside Daily Press and Enterprise* published a special supplemental edition celebrating the new school.[59] With messages from the presidents of universities and institutions throughout California—including Stanford University, the Henry E. Huntington Libraries, Pomona College, University of Redlands, and Occidental College in Los Angeles—the supplement reflected the wider significance of a new four-year College of Letters and Sciences. In his message, Chief Justice Warren noted that he had signed the original legislation for Riverside’s new university when he was California’s governor.

In Riverside, UCR's opening also had great importance for the local community. At the time, Riverside County residents had only a few nearby universities to attend. The University of Redlands and Pomona College would have been among the nearest such colleges. In a community that had formed around the region's citriculture economy, having a local university was invaluable.

University of Redlands President George Armacost noted this, as well, writing "We believe the opening of the College of Letters and Sciences on the University of California campus at Riverside will stimulate many young people from Riverside and San Bernardino counties to attend college who otherwise would neglect further educational training after high school. Having another institution of higher learning in our vicinity will stimulate a great interest in and appreciation of cultural activities."[60]

In 1948, as noted above, Govern Earl Warren signed a $2 million plan for a new, undergraduate liberal arts college in Riverside. The first UCR Provost, Gordon Watkins, established four divisions of the College of Letters and Sciences: humanities, social sciences, physical sciences, and life sciences, and the college was born.

Development of the main campus at UCR was initiated in 1952. Between 1953 and 1955, six new buildings were added to the campus, mostly situated north of the extant Horticulture Building. These buildings served the newly established UCR School of Agricultural Sciences. On February 15, 1954, the school officially opened with 65 faculty members and 127 students, as illustrated in a yearbook photograph and newspaper article from that year (Figure 54; Figure 55).[61]A campus map from 1955 depicts the growth and expansion that occurred at the campus as the school was expanded and opened (see Figure 27). During UCR's first year, the college had a total of 127 enrolled students (as of 2018, student enrollment stood at approximately 24,000).

Figure 54 First class at UCR, Tartan Yearbook, 1954

Source: UC Riverside, Library, Special Collections and University Archives

Figure 55 *Riverside Daily Press* supplement, February 1954, celebrating the inaugural semester at the new College of Letters and Sciences

THE UNIVERSITY IS GREAT AND ALSO LARGE

Since it was chartered by the State Legislature in 1868, the University of California has probably grown more rapidly than any similar institution in the country.

Today it consists of eight campuses, plus many lesser centers of instruction, research and public service in many parts of the State. One, the Los Alamos Scientific Laboratory, is in New Mexico.

Fulltime enrollment exceeds 30,000 students. Parttime students, under extension programs, total another 100,000. There are 12,000 faculty members and other employes. In all these respects it is one of the world's largest universities.

It also enjoys a reputation as one of the most distinguished. Usually it is included among the first five universities in America for quality of faculty and for facilities for instruction and research.

Of all the colleges in the country, the University of California has the largest number of Nobel prize winners among its faculty. It has the best facilities for instruction and research. It has the largest number of faculty members who have won Guggenheim fellowships, the second largest membership in the National Academy of Sciences. It was ranked second among American universities by the American Council on Education in the number of distinguished departments it maintains.

Chartered, 1868

It was on March 23, 1868, that Governor H. H. Haight signed the Legislative act creating the University. The date is celebrated each year on all campuses as the Charter anniversary.

The beginning incorporated three separate movements that were already underway, one having started in private initiative, one in Federal action, and one in State action.

A group of Congregationalists and Presbyterians led by Rev. Henry Durant opened the Contra Costa Academy in Oakland in 1853 and two years later incorporated as the College of California. In 1857 the College began negotiating for a tract of land north of Oakland. (Ten years later the townsite near this campus was given the name of Berkeley.)

The Federal action began in 1853 when Congress offered the State 46,000 acres of land for a "seminary of learning." In 1862 by the Morrill Act Congress offered another 150,000 acres to establish an "agricultural, mining and mechanic arts college."

The State constitutional convention in 1849 incorporated into the constitution a provision for a State university.

The College of California contributed all its lands and buildings in Oakland and Berkeley when the State took specific action to start its university. The State accepted the Federal gift of public land in addition to

DR. ROBERT GORDON SPROUL
President, University of California

the other campuses, and state-wide vice presidents for business affairs, agriculture and University Extension.

Permanent faculty members of the University are proposed by chairmen of departments, approved by deans of colleges and faculty committees, recommended by the president of the University and appointed by the Regents.

Unique Organization

To facilitate the administration of academic matters, the Regents have authorized an Academic Senate (including teachers from the rank of instructor to professor) which is divided into two sections, northern and southern.

The Academic Senate, subject to the approval of the Regents, determines the conditions for admission, for certificates, and for degrees. It authorizes all courses of instruction in the academic and professional schools and colleges (except the Law schools) and exercises general supervision of the discipline of students in cooperation with the deans and other administrative officials of the University.

This plan of administration is unique, and has the name of "California Plan" on other university campuses.

Approximately 88 per cent of all University of California fulltime students are residents of California. The remainder come from other states of the Union and from some 75 foreign countries. Currently there are almost 1700 foreign students enrolled.

Students who are residents of California pay an incidental fee of $37 per semester on the Berkeley and Los Angeles campuses or $35 on other campuses (which covers laboratory expenses, library facilities, gymnasium equipment, health services, graduation expenses and other items). Out-of-state students pay this fee in addition to a tuition fee of $150 per semester.

Student Initiative

In 1902 students of the University of California were granted what was then a unique privilege of self-government in student matters. Through students corporations, generally with graduate supervision, they manage athletic programs, bookstores, cafeterias, publications and other businesses.

Since it was established the University has granted approximately 200,000 degrees and certificates. Alumni associations are functioning on the Berkeley, Davis, Los Angeles, San Francisco and Santa Barbara campuses. A representative of the alumni sites as an ex-officio member of the Board of Regents. Many other alumni have been appointed members or ex-officio members from other capacities.

In addition to the eight campuses, the University sponsors teaching, research and public service programs in many parts of the State. This includes the

and local government, research and reports on business problems and presentation of cultural programs to the public.

The Los Alamos Scientific Laboratory in New Mexico is operated by the Regents of the University under contract with the U.S. Atomic Energy Commission

Most of the schools and installations of the University are an integral part of it, including two law schools. Two, Hastings College of Law and California School of Fine Arts, are connected with the University as "affiliates." Both of these are in San Francisco.

GREETINGS TO UC's COLLEGE AT RIVERSIDE

Chief Justice Warren:

SUPREME COURT OF THE UNITED STATES
Washington 13, D. C.
CHAMBERS OF THE CHIEF JUSTICE

Editor, Daily Press and Enterprise,
Riverside, California.

Chief Justice Warren

Dear Sir:

Although I am no longer in California, it is a matter of great satisfaction to me to know that the College of Letters and Science on the University of California campus at Riverside will open with classes next February.

The fact that this campus was established during my administration, and that I not only signed the bill providing for it but also urged its passage as well as appropriations to bring it to its present status will always be a matter of satisfaction to me.

I wish for the Riverside campus of the University of California every success. The interests of the people of Riverside gives assurance of such success. I am sure that it will measure up in every respect to the accomplishments of the parent organization.

Sincerely,
EARL WARREN.

Chief Justice Earl Warren of the U.S. Supreme Court is pictured as governor of California, in 1949, signing the building appropriation bill for the new College at Riverside. State Senator Nelson Dilworth appeared to be pleased.

Distinguished Neighbor

UNIVERSITY OF REDLANDS
Redlands, California
OFFICE OF THE PRESIDENT

Editor, Daily Press and Enterprise,
Riverside, California.

Dr. Armacost

Dear Sir:

We believe the opening of the College of Letters and Science on the University of California campus at Riverside will stimulate many young people from Riverside and San Bernardino counties to attend college who otherwise would neglect further educational training after high school. Having another institution of higher learning in our vicinity will stimulate a great interest in and appreciation of cultural activities.

The University of Redlands congratulates the citizens of Riverside for their alertness in securing a division of the University of California for their city. We hope we shall have many friendly and cooperative associations between our respective institutions in the years ahead.

Sincerely yours,
GEORGE H. ARMACOST,
President.

'Closest Cooperation'

POMONA COLLEGE
Claremont, California
OFFICE OF THE PRESIDENT

Editor, Daily Press and Enterprise,
Riverside, California.

Dr. Lyon

Dear Sir:

Pomona College welcomes the opening of the new College of Letters and Science of the University of California at Riverside, and extends every good wish for its future. This unit of our great State University will be of inestimable benefit to the growing population in the area east of Los Angeles. The advantages of a university education are being brought to many people who otherwise would be denied them.

The strength of higher education in California lies in a balance between the tax-supported and the independent and church-supported institutions. We at Pomona look forward to the closest cooperation with the University of California at Riverside in all of our respective spheres of operation.

In addition to our institutional greetings we send warmest personal wishes to Provost Watkins and his faculty. During his years at UCLA we have had the privilege of working with Dr. Watkins in the develop-

'My Best Wishes'

STANFORD UNIVERSITY
Stanford, California
OFFICE OF THE PRESIDENT

Provost Gordon S. Watkins,
University of California,
Riverside, California.

Dr. Sterling

Dear Provost Watkins:

As the College of Letters and Science prepares for the opening of classes, I should like to extend my very best wishes to you personally and to your faculty and students.

We at Stanford welcome the College of Letters and Science to the college and university family in California and look forward to the same friendly and cooperative relationships with your institution that exist between Stanford and other branches of the state system of higher education.

Sincerely,
J. E. WALLACE STERLING.

cc: Mr. Howard Hays, Jr.
Editor, Daily Press and Enterprise,
Riverside, California.

'Cordial Welcome'

HENRY E. HUNTINGTON LIBRARY & ART GALLERY
San Marino 9, California
OFFICE OF THE DIRECTOR

Dr. Pomfret

Dear Provost Watkins:

The Huntington Library and Art Gallery wishes to add its cordial welcome to the Riverside Campus of the University of California. It anticipates that the Library will benefit from its contacts with the fine faculty that Dr. Gordon S. Watkins has assembled. The University of California is to be congratulated in bringing its great educational services to the fast-growing Riverside area. It can truly be said of the State of California that no boy or girl lacks the opportunity of gaining an education commensurate with his abilities and talents. Here indeed is democracy in education.

JOHN E. POMFRET, Director.

Gov. Goodwin Knight

STATE OF CALIFORNIA
Governor's Office
Sacramento 14

Editor, Daily Press and Enterprise,
Riverside, California.

Gov. Goodwin J. Knight

Dear Sir:

I am happy to extend greetings and best wishes to the people of the Riverside area and to the students and faculty upon the inauguration of classes at the new College of Letters and Science on the Riverside Campus of the University of California.

Anyone closely associated with the arts of government soon comes to recognize that the continued advancement of the American way of life depends upon the education of our young people. Freedom cannot long survive in a society which neglects the education of its youth.

Being cognizant of this, we in California can take justified pride in the phenomenal growth of our great State University to its present position of international eminence embracing thousands of students on eight campuses.

Those who attend the new College of Letters and Science at Riverside have the opportunity to add to the established traditions of their University in a fine new College. They will have the advantages accompanying affiliation with one of the world's great institutions of learning in addition to those which go with a smaller campus where instruction and participation can be given greater individual emphasis.

It has been an established policy to provide physically attractive settings for the various units of the University of California. The location of the Riverside Campus in the beautiful Santa Ana Valley, within sight of some of our State's most majestic mountains, is an outstanding example of this policy.

Sincerely,
GOODWIN J. KNIGHT,
Governor of California.

Requirements for Graduation

One hundred twenty units of college work are required for graduation. Of these, approximately 60 will be completed prior to admission in the upper division. At least 36 of the units taken after advancement to the upper division must be in upper division courses. At least 54 units must be completed after admission to the upper division. Students will be required to be in residence at the College for two successive semesters prior to receiving the degree of Bachelor of Arts.—UCR Catalogue.

Source: *Riverside Daily Press and Enterprise*, 15 February 1954

3.3 Context #3: Social and Cultural Development, 1954-1975

This context, covering social and cultural development, provides a framework for identifying and evaluating buildings, landscapes, spaces and places at UCR that might have an association with the identified themes.

The survey identified three properties/features thus far with an association with the contexts/themes described in Context #3. These properties are (1) Costo Hall; (2) Costo Hall's Chicano Civil Rights-era mural by Chano Gonzalez; and (3) and the headquarters of KUCR, the home of Radio Atzlan, a pioneering Chicano music program since the early 1980s.

This section describes the framework -- in terms of the context, themes, subthemes, and eligibility standards – that should be applied in subsequent evaluations.

Theme: Civil Rights Movement and Student Activism at UCR, 1960-1975

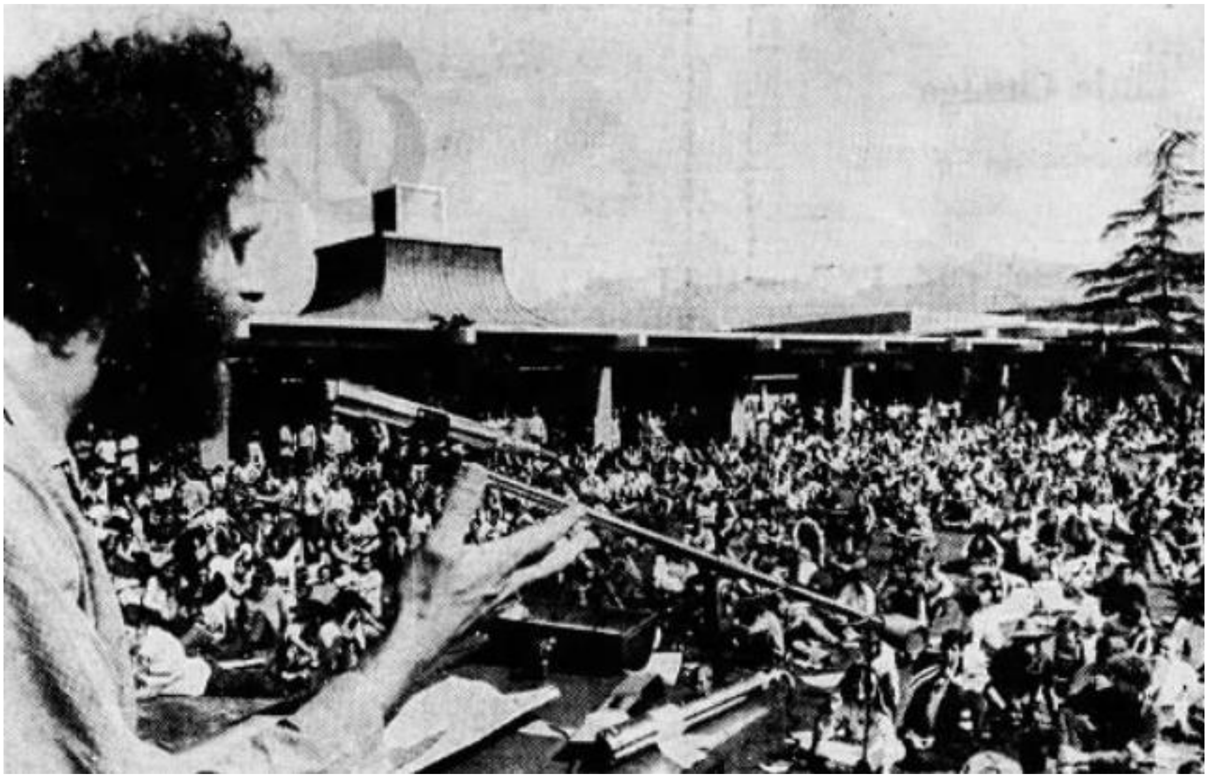
During the 1960s and into the 1970s, American universities were the site of widespread activism, protest, and organizing during the Civil Rights Movement. Properties examined under this context and theme/subtheme will be considered for potential eligibility as reflections of this significant pattern of events and sociocultural development in Riverside.

Anti- War and Political Protests

In the mid-to-late 1960s, students at several UC schools engaged in activism, particularly in protesting the war in Vietnam. Whereas some of these protests were met with force, such as when then-California Governor Ronald Reagan ordered state and city police to break up a protest at UC Berkeley's People Park in May 1969, many others were peaceful.[62]

Circa 1968, UCR students organized the "Riverside Student Mobilization Committee," which was a group dedicated to holding vigils and public demonstrations against the Vietnam War. It appears the committee was active through the late 1960s. In the fall of 1969, more UCR students joined the debate. On October 15, 1969, over 3,000 students and faculty attended an anti-war rally on UCR's mall.[63] The peaceful moratorium included a speech by activist Mario Savio of the 1964 UC Berkeley Free Speech Movement (Figure 56). According to reports of the event, Savio "called for an end to the cold war of the last 50 years and a continuing national organization for those who oppose the Vietnam War."[64] Debates on US involvement in the war continued at UCR into 1970.

Figure 56 Mario Savio gives speech in front of the Commons Building at UCR, 1969



Source: San Bernardino County Sun, 1969

On March 10, 1970, California Governor Ronald Reagan launched a re-election bid for the governship, with the “fight against smog” as part of his platform. He visited UCR a day later on March 11, 1970 to learn about the school’s air pollution research center at the Fawcett Laboratory. That spring day, over 300 students met the governor’s arrival on campus by holding signs that read “Four years is enough,” and “Keep UC Free.” [65] A handful of students laid down in the access road to the lab to immobilize the governor’s procession. A reported group of over 50 Riverside police officers, campus police, and Riverside County sheriff’s deputies cleared the road, purportedly using physical force to remove students (Figure 57).[66] Four students were reported to have pushed police back and were later suspended.[67]

The governor was transported to the laboratory where he attended an hour-long presentation before leaving the campus. The 1970 *Tartan* yearbook later recounted the event in an article titled, “Of Stereotypes, Of Tarnish,” exploring the event from the viewpoints of police, students, and faculty. The article ends with the assertion that “Fawcett proved—really as no other incident this year—what happens when stereotypes are allowed to juggernaut, when poor planning feeds on itself.”[68]

Figure 57 Police during Protest, 1970

Source: Tartan Yearbook, 1970

However, social activism did not end on the UCR campus with the departure of Governor Reagan. A little over a month later, on April 30, 1970, President Nixon announced the US invasion of Cambodia. UCR responded to this declaration by organizing a “cultural revolution” with rock bands starting on May 4th on the campus Mall. Organizer and graduate student Irv Hall was recorded as saying “we are going to liberate the University… we are going to take it over and turn it into a commune.”[69] The event included numerous speeches and, ultimately, a march from the campus to the Riverside County Court House, where police escorted students holding a banner that read “Liberated Territory” (Figure 58).

The following day, on May 5th, a large demonstration occurred as an estimated 300 to 400 students marched through Robert G. Sproul Hall (Sproul Hall), Social Sciences-Humanities Building (Watkins Hall), the Humanities Building, the Cafeteria, and the Administration Building (Hinderaker Hall).[70] The group of students eventually marched to the City Council chambers, where at the time, students felt that local councilmen “refused to take an official stand” regarding the invasion (Figure 59).[71]

In response to the student protests at various UC schools, Governor Reagan shut down all campuses for four days. At UCR, students, professors, non-students, and townspeople all gathered to answer phones and petition the signatures of people on anti-war petitions.[72]

Figure 58 Students hold “Liberated Territory” sign at Riverside County Court House, 1970

Source: Tartan Yearbook, 1970

Figure 59 Students before the City Council and holding signs on UCR campus, 1970

Source: Tartan Yearbook, 1970

Theme: Initiatives in Cultural Diversity, Ethnic Studies, and Student Support

As has been well documented, the Civil Rights Movement signaled an era of change across American society, with universities serving as important centers for activism. One focal point for student and faculty activism was establishing programs for ethnic studies that provided scholarship and focused curricula as well as student support programs. Ultimately, this movement was national, but it had its origins in Californian universities.[73] UCR's ethnic studies and student support programs were among the earliest to emerge in California.

After their inception in California, many ethnic studies programs were cut back or disbanded in the 1970s when schools experienced budget reductions. Most recovered, and by the 1990s there were over 700 ethnic studies programs and departments in the US.[74] While a number of Californian universities were launching programs in the late 1960s, Riverside's specific history vis-à-vis its long-time communities of color, as well as the student population once the university was founded, were powerful catalysts for change and the establishment of enduring ethnic studies and student support programs at UCR.[75]

Background for Ethnic Studies in Riverside

From its earliest years, Riverside has long been home to large, cohesive Latino and African-American communities, among other communities of color. In the pre-1945 era, these communities faced entrenched discrimination and segregation. This extended to all areas of life, employment opportunities, housing options, as well as public places such as parks and pools, theaters and schools, restaurants and restrooms.

By the postwar period, advances made during and after World War II brought new opportunities for communities of color. Efforts to organize and advocate for civil rights, equal access and opportunities gained momentum. While a generational divide existed, with young people more open to and comfortable with vocal activism and, when necessary, active confrontation, this broader sense of empowerment took hold. This shift ended up affecting all areas of life for Riverside's communities of color in the postwar era.

In terms of UCR, from its earliest years, the school had a significant proportion of first-generation college students. In the late 1960s, when UCR joined the UC system as a "General Campus," Chancellor Ivan Hinderaker brought together a committee, including scholars and professors of color, to discuss and design an ethnic studies curriculum for UCR. As a result of these meetings, the committee recommended the establishment of two separate programs: Black Studies and Mexican American Studies. In the spring of 1970, the Academic Senate approved both programs.

Although the school addressed some needs, some students felt that the programs were constantly in danger of being cancelled. As reported by the African Student Program, in the 1980s:

> Frustrated with the continual absence of minority faculty members and their campus-wide alienation, the Black Students United, the Movimiento Estudantil Chicano de Aztlán (MEChA), and the Native American Student Association formed the Tri-Council coalition to protest the academic review and eventual dismantling of the Black and Chicano studies programs. The participation by these student organizations exposed the isolation felt by minority students and reinforced the solidarity between 'Black and Brown' students at UC Riverside.[76]

At present these programs, as well as others, have been expanded by UCR. The African Student Programs, Asian Pacific Student Programs, Chicano Student Programs, Women's Resource Center, Native American Student Programs, LGBT Resource Center, and Undocumented Student Programs are all housed in Costo Hall. The Middle Eastern Student Center is located in the Highlander Union Building. In 1993, UCR was the first campus in California to have professionally staffed LGBT resource office.

These programs, and the rich diversity of UCR, continue to this day. UCR has the highest African-American student population in the UC system, and "about half of UCR's first-year students—and nearly 80 percent of Latinos—were first-generation college students in 2009."[77] In 2010, nearly 40 percent of undergraduates were Asian, 31 percent Latino, 16 percent white, and 8 percent black.[78].

These sections provide a brief introduction to the Black Studies Department (and associated student group, the Black Student Union), the Chicano Studies Department (with its student group, Chicano Student Programs), and the Native American Studies Department.

While there are other related departments, this section is intended as a primer to the topic, to provide a starting point for evaluating properties within the context of the Civil Rights Movement and UCR initiatives in cultural diversity, ethnic studies, and student support.

Black Studies Department

As noted above, the Black Studies Department was created in late 1969 by a special committee led by Chancellor Ivan Hinderaker. Although the program did not constitute an Ethnic Studies Program, they were both grassroots efforts led by students and faculty. At the time, ethnic studies programs were beginning to emerge, as students and faculty members capitalized on the momentum of the Civil Rights Movement to address the long-time policies of segregation and the exclusion of African American studies from the national curriculum. With the establishment of new programs in ethnic studies—in this case, Black Studies—new faculty created varied course offerings and programs of study, spanning the disciplines of political science, history, literature, culture, politics, and the arts.

Maurice Jackson, a member of the Sociology Department, served as the first chairman of the Black Studies Department.[79] Another early faculty member, and chair, of the Black Studies Program was Dr. Carlton Rowland Bovell, a professor of microbiology and the first tenured African-American professor at UCR (and among the first in the UC system).[80]

In the fall of 1969, shortly after creation of the department, a Black Student Union (BSU) coalition petitioned the Chancellor for creation of a funded program for the department that could be controlled by its students and faculty directly. The Chancellor denied the request, although he is recorded as acknowledging that increased self-control over newly established departments "was a recent pattern followed on some other college and university campuses."[81]

In 1970, Hinderaker announced the "metamorphosis" of Black Studies into an interdisciplinary program and the resignation of Jackson. Faculty and student responses to the change were mixed.[82] An article in the 1970 Tartan yearbook recounts the dissolution of the department and ends with: "At the end of the summer, there still hung in the Social Sciences-Humanities Building (Watkins Hall) a sign announcing BLACK STUDIES DEPARTMENT. May it hang there until the reality approximates the fiction."[83]

In 1979, under the leadership of founding Director Kathryn Jones and Vice Chancellor for Student Affairs Louis Leo, the Black Student Programs was created, prior to its inclusion in the Ethnic Studies Program.[84] As former Chair of the Chicano Studies Department Dr. Carlos Cortés recounts:

> In 1984, Black and Chicano Studies were merged by the Academic Senate into a new Ethnic Studies Program. This occurred despite opposition by the entire Black and Chicano Studies faculty. That summer I was asked to chair the committee that created a structure for the new Ethnic Studies initiative. I did so because I wanted to salvage Ethnic Studies, even though I had opposed the forced merger. The Ethnic Studies department continues to this day with a full graduate program.[85]

Maurice Jackson, Founding Chair of the Black Studies Program, 1969-1970

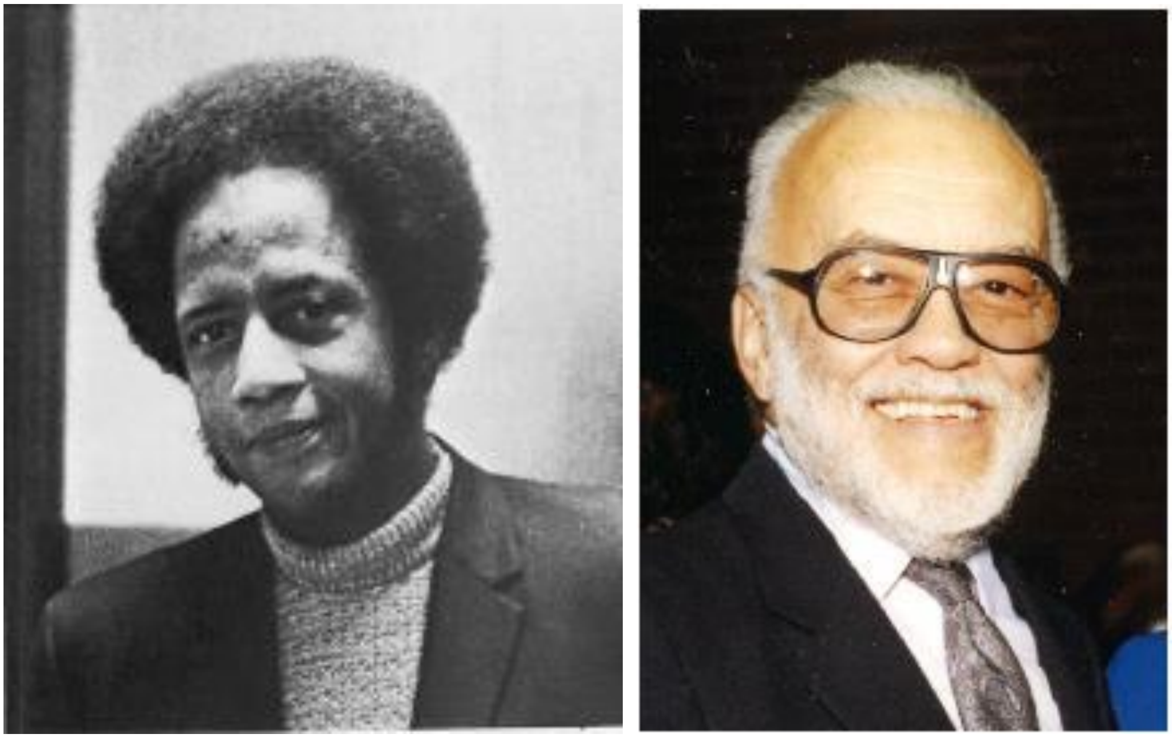
Maurice Jackson was an internationally renowned black scholar in the field of sociology who served as the first Chair of the Black Studies Program from 1969 to 1970, prior to its transfer to an interdisciplinary program. Jackson received his BA, MA, and PhD from the University of California at Los Angeles prior to beginning his career as a Lecturer at UCR in July 1965. He became a full-time professor in 1980. A scholarship fund dedicated in Jackson's honor recounts his "life-long passion [for] the elimination of racism in society."[86] Jackson taught classes in Social Psychology, Ethnic Relations, and Sociological Theory of Ethnicity and Racism. After serving as founding Chair of UCR's Black Studies Department, Jackson serves as the first executive specialist for women and minorities for the American Sociological Association (ASA), Chair of UCR's Ethnic Studies, and Vice President of the National Council on Aging (NCOA; Figure 60).

Carlton Rowland Bovell, Chair, Professor, and Vice Chancellor

Through his long career at UCR, Professor Bovell "was a champion of increasing diversity and representation of racial and ethnic minorities at UCR."[87] In addition to serving as the Chair of the Black Studies Program, Professor Bovell "was instrumental in the establishment of the first Chair for American Indian studies in the UC system at UC Riverside in 1986, the third such program in the country at that time."[88] When he began teaching at UCR in 1957, Professor Bovell quickly earned a reputation as one of UCR's most dynamic teachers. When he won the Distinguished Teaching Award in 1969, his colleagues in the Academic Senate noted that his lecture courses 'terminate with spontaneous student ovation.' In 1981, then Chancellor Tomas Rivera said of Professor Bovell's teaching: 'He has demonstrated teaching excellence…and he offers a humanistic perspective on educational issues. He has been among the most respected teachers and faculty leaders in UCR's short history.'[89]

Bovell left UCR to become an assistant vice president for the University of California but returned in 1981 as the school's new vice chancellor.[90] In 1984, when Chancellor Tomas Rivera passed away, Professor Bovell served as Acting Chancellor. He was a nationally renowned scholar and served as Chair of the UC Academic Council for many years, among his many contributions (Figure 60).

Figure 60 UCR Professors and Maurice Jackson (left; 1925-1987) and Carlton Rowland Bovell (right; 1924-2019)



Source: Tartan Yearbook, 1970; *Press-Enterprise,* 2019

Black Student Union

In 1968, graduate student Charles Jenkins and approximately 60 students founded the Black Student Union. The Black Student Union, led by Jenkins, was officially recognized by UCR circa 1972 (Figure 61, Figure 62). It appears in archival newspapers as "Black Students United" and "Black Student Activities," during this time.[91]

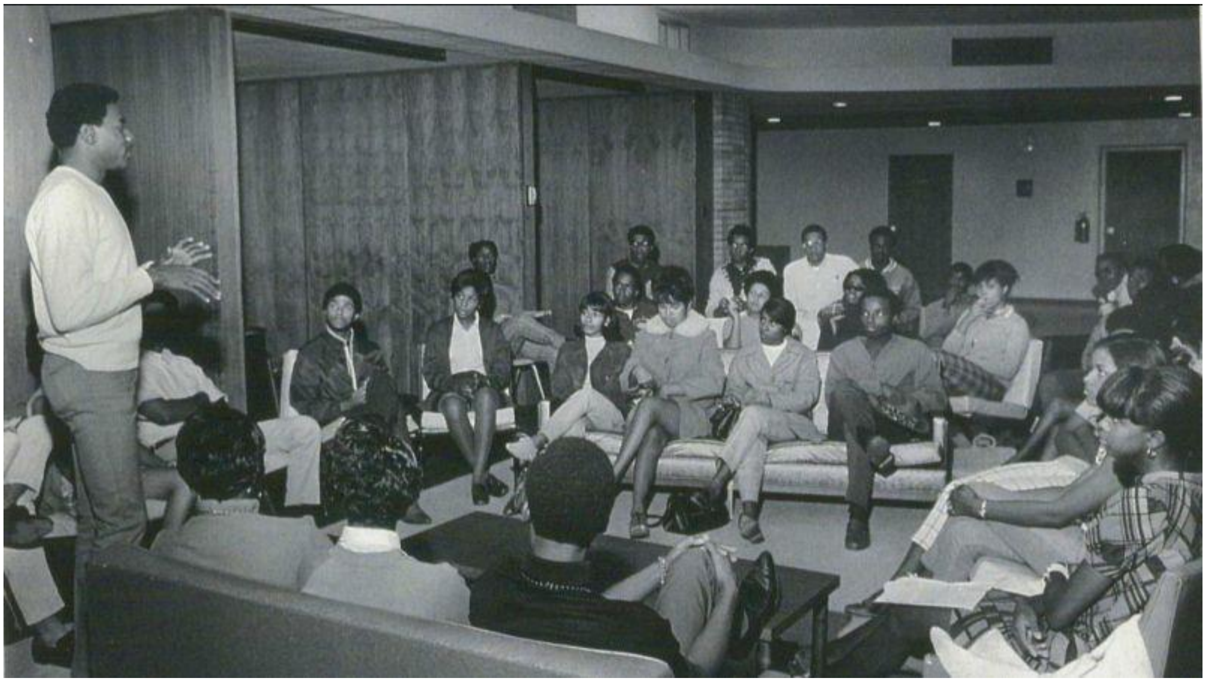
The group met at a university-owned house located off campus, known as the "Black House." The house was burned by arson on March 14, 1972.[92] That same year, students started a newspaper titled Black Voice News. Dr. Paulette Brown-Hinds, a graduate student who served as a publisher of the newspaper remembers that "it was created by students on campus… they wanted to take control of their own narrative."[93] The newspaper's mission statement echoes this sentiment, claiming that since its creation it has "given voice to the voiceless and shined a light on systemic inequalities and disparities."[94]

The Black Student Union created the Black Student Theatre and adopted five National Pan-Hellenic Council organizations (fraternities and sororities) in the mid-1970s. It remains an active part of the university community to present.[95]

Figure 61 Black Student Union Central Committee Members, 1969

Source: Tartan Yearbook, 1970

Figure 62 Black Student Union President Charles Jenkins addresses group, N.D.



Source: African Student Programs, N.D.

Chicano Studies Department

The Chicano Studies Department (originally the Mexican American Studies Department) was founded in late 1969 as a sister department to Black Studies. In this era, as noted above, calls had been increasing for the establishment of an ethnic studies curriculum and department. UC Riverside had become a center for early Chicano student activism, in a movement that gained momentum in the mid-1960s. The UC Riverside chancellor at the time, Ivan Hinderaker, took note of this mounting pressure nationwide and at UC Riverside, as well, as calls for an ethnic studies department had also been made by the local chapter of the United Mexican American Students (UMAS) group. By 1969, the time had arrived to move forward.

On July 1, 1969, the new Mexican-American Studies program at UC Riverside was officially launched, with classes beginning in the fall semester. With this, UC Riverside became one of the first universities in the United States to establish a Mexican-American Studies program.

One early faculty member and department chair was Dr. Carlos E. Cortés.[96] A scholar of Brazilian history, Dr. Cortés joined UC Riverside in January of 1968.[97] Born in 1934 to a Mexican-American father and Anglo-American mother, Cortés grew up in Kansas. His grandfather came to the United States in the 1910s to escape the tumult of the Mexican Revolution. During his college career, Cortés completed degrees at the University of California, Berkeley (Bachelor of Arts in Communications and Public Policy, 1956); Columbia University (Master of Science in Journalism, 1957); The American Institute for Foreign Trade (Bachelor's Degree, 1962); and the University of New Mexico (Master of Arts Degree in Portuguese and Spanish, and Doctoral degree in History in the late 1960s). In January 1968, when he accepted the faculty position at UC Riverside, Cortés became one of two Mexican-American faculty members at the university, along with Eugenio Cota-Robles, a microbiologist hired in 1958.

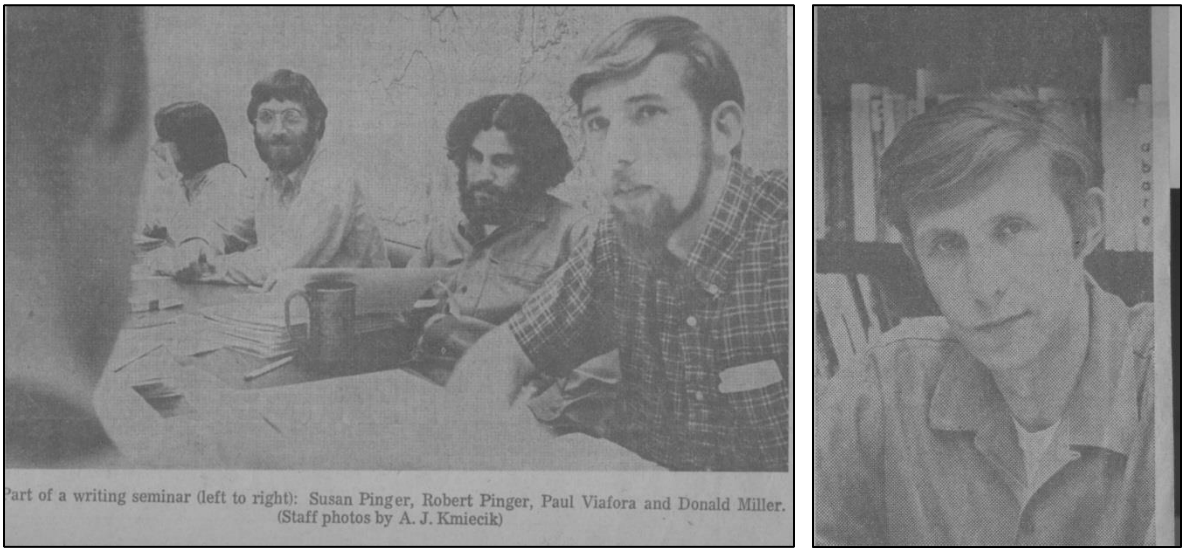
When the department began, Cortés recalled, the broader field was still in its infancy. There was no Chicano studies field per se, no classic texts or literature, on which to establish the new curriculum. This tabula rasa presented an opportunity to fashion an original approach. As designed by Cortés and his colleagues, the objective became providing a collaborative, cross-departmental program, with units, courses, and perspectives by a wide range of scholars and specialties, including historians, sociologists, writers, and psychologists. Cortés and other faculty and administrators also looked to other pioneering Chicano studies departments in California (in San Diego, California State University, Los Angeles, and California State University, Northridge). In the early 1970s, Cortés designed UC Riverside's first Ethnic and Area Studies requirement for the College of Arts.

With a student body drawn primarily from the Inland Empire and surrounding desert communities and with Riverside's rich, century-old Mexican-American heritage to draw on, the timing and place for UC Riverside's Chicano Studies Program were ideal. The department at UC Riverside became a hub for Chicano scholarship and activism. Student work and faculty research recuperated the myriad stories of the Latino experience in the region. For his Chicano history course, Cortés assigned a project for students to explore and document their own family histories, including oral histories with family members, photographs, and background research.

Under the leadership of Cortés and other faculty, the output of undergraduate and graduate students in the UC Riverside Chicano Studies Department was as voluminous as it was influential. Where there had been little or no scholarship on topics specific to the Latino experience throughout (and beyond) the Inland Empire, students and faculty of the Chicano Studies, ethnic studies, and other departments explored a range of topics on the Mexican-American experience in the region, not only contributing to but helping define the broader field of Chicano studies.

The first Chicano Studies chair was Dr. Cota-Robles, who served in the role from 1969 to 1970; Dr. Alfredo Castaneda served as chair from 1970 to 1972. In 1972, Dr. Cortés was named chairperson of the department, a role he held until 1979 (Figure 63). His goal for the department was to "provide service to students, community at large, not only local; and to the university. We want to prepare students to learn and develop skills to work in the community."[98] Cortés clarified that "the department is not an ideological builder but that student activism can tie in with their area of study."[99] In later years, Dr. Cortés also participated in the establishment of the Costo Chair on Native-American Studies and the Tomás Rivera Chair.

Figure 63 Carlos Cortés and UCR graduate students, 1971



Source: Courtesy of Riverside Public Library

Chicano Student Programs

UC Riverside's Chicano Student Programs department was founded in 1972, at the request of new Chicano Studies Department chair, Dr. Cortés. When Cortés was appointed as department chair, he recalled, his one condition was that a dedicated staff and department be established for an accompanying Chicano student services division.[100] At the time, UC Riverside had 345 Latino students; by 2012, that number had grown to over 6,100 Latino students, or approximately one-third of the total student population.[101]

Chancellor Hinderaker agreed, and UC Riverside Assistant Dean of Students, Alberto Richard Chavez, was selected to establish and run the Chicano Student Programs department (Figure 64). Chavez went on to lead the program, which provided a "home away from home" for Chicano students, for 15 years, until 1986.[102] For nearly 50 years, Chicano Student Programs has sponsored a wide variety of outreach and community building events and houses over 20 student-run organizations. In the early years, the Chicano Studies Department and Chicano Student Programs occupied adjacent office spaces in the second floor Library South Wing of the Rivera Library. One remnant of the early offices of the Chicano Studies Department and Chicano Student Programs is a 1975 wall-length mural by local artist Chano Gonzalez. Funded through a National Council of Arts grant, the mural is a rare surviving work reflecting the early years of the Chicano Civil Rights Movement in Riverside.

Figure 64 Alberto Chavez, UC Riverside Chicano Student Programs director, circa 1975 (left); Chicano Student Programs mural (right)

Source: "Chicano Leaders Seek Probe into City Hiring," n.d. and UC Riverside Chicano Student Programs

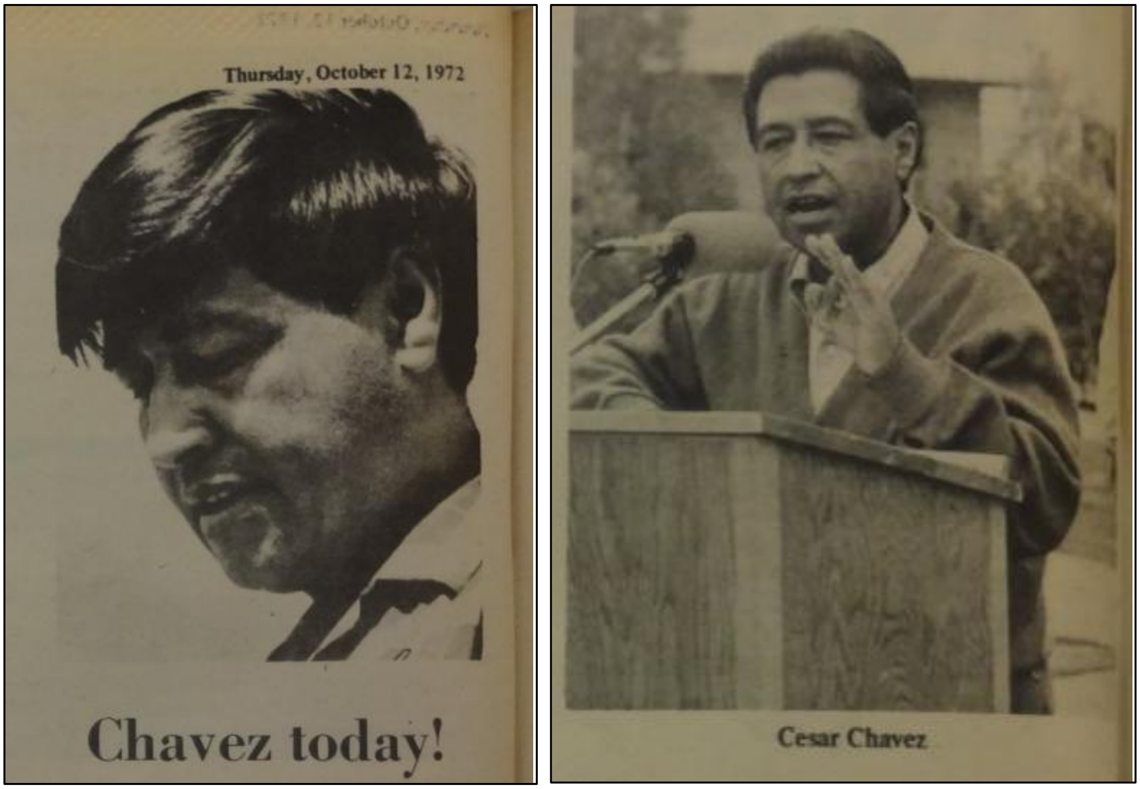
After the Chicano Student Programs office relocated, the mural was preserved, removed, and reinstalled at the current program offices in UC Riverside's Costo Hall. Together, the Chicano Studies Department and Chicano Student Programs have provided an important academic and social network that has supported and nurtured generations of UC Riverside Latino scholars. Other Latino faculty members who participated in these early years were Dr. Cota-Robles and Dr. Marigold Linton. Drs. Cota-Robles and Linton were cofounders of the Society for the Advancement of Chicanos and Native Americans in Science.

Since its founding in 1972, the Chicano Student Programs and affiliated MECHA has produced a student newspaper, *Nuestra Cosa* (Our Thing); newspaper archives are housed in the Rivera Library.

One enduring symbol of the Chicano Student Program's work over the years is Radio Aztlán at KUCR. Founded in 1982 and still broadcasting out of one of the 1941 Canyon Crest properties, Radio Aztlán features a wide range of Chicano music and artists. The show began in 1982 when the UCR radio station manager Louis Van Den Berg approached then-director of Chicano Student Programs, Alberto Chavez, with a plan to diversify the station's programming. This is one of a handful of surviving buildings/places on campus that embody this contextual theme. Radio Aztlán (88.3 FM in Riverside) continues to broadcast throughout the greater Inland Empire.

In the 1960s, UC Riverside became a center not just for Chicano scholarship but also Chicano civil rights. In November 1968, Cesar Chavez spoke at UC Riverside (Figure 65). Chavez again visited UC Riverside for a talk on October 12, 1972 on the Carillon Mall, in opposition to a proposition on the state ballot at the time to establish restrictions for agricultural workers strikes and boycotting activities.

Figure 65 Cesar Chavez at UCR'S Carillon Mall, October 1972, in MECHA-sponsored event



Source: *The Highlander*, October 12 and October 19, 1972, cited from Ramirez, 2018, pp. 228-229

Tomás Rivera, Chancellor, University of California, Riverside, 1979 to 1984

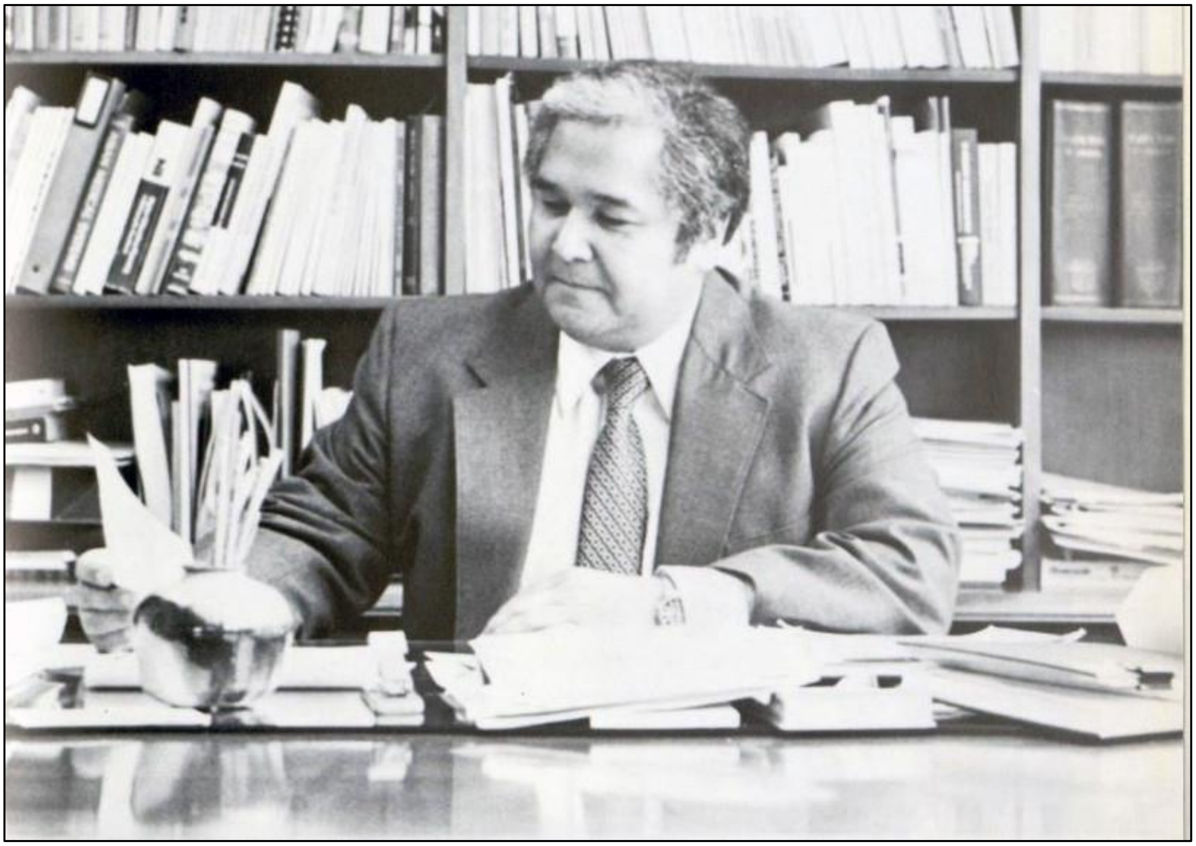
UC Riverside was home to another major milestone for the University of California system. In 1979, the University of California system appointed its first non-Anglo-American chancellor, Tomás Rivera, who led UC Riverside until his death (at the age of 49) in 1984. A native of Texas born in 1935, Rivera was the son of Mexican migrant farm workers. He received his education at Southwest Texas State University, where he received his Bachelor of Science and Master's of Science in Education, and at University of Oklahoma, where he received a doctorate in Romance Literatures. The Rivera Library served as the first home to the Chicano Studies Department and Chicano Student Programs office.

In 1979, Tomás Rivera was appointed chancellor of the university, becoming the first Mexican-American, or member of a marginalized group, to hold such a position in the UC system (Figure 66, Figure 67). He was also the university's youngest chancellor at 43 years old. Rivera was described by UC President David Saxon as a "poet, teacher, and an administrator with a very impressive record of achievement."[103]

Figure 66 Tomás and Concepción Rivera, ca. 1980 (left); Rivera (second from right), speaking to President Ronald Reagan, Committee on Higher Education, 1983 (right)

Source: University of California, Riverside, Special Collections and Calisphere

Figure 67 In 1985, UCR renamed the main library to Rivera Library, in honor of Chancellor Rivera, the university's first Mexican-American chancellor



Source: University of California, Riverside, Special Collections

Native American Studies

Although a more recent addition than Black Studies and Chicano Studies, the Native American Studies programs at UCR were pioneering in their own way. Native American scholars, activists, and husband and wife, Rupert (a Cahuilla descendent) and Jeannette Costo (a Cherokee descendent) were instrumental in founding and financing the Native American Studies program. Rupert Costo was a national figure in the Native American Civil Rights movement and founder, along with Jeannette, of the San Francisco-based American Indian Historical Society in 1964. A group dedicated to improving education and cultural development for American Indians, Rupert Costo served as president of the historical society until it was dissolved in 1986.[104]

In 1987, the Rupert Costo Endowed Chair in American Indian History became the world's first such chair endowment devoted to Native American scholarship. A donation from the Costos established UC Riverside's Costo Library of the American Indian, which UCR credits as "one of the collection's paramount strengths, consisting of about 7,000 volumes and more than 9,000 documents, pamphlets, tape recordings, slides and artwork."[105] The Costo Historical and Linguistics Research Center was also made possible by the Costos' support. UCR was the first in the UC system to establish an office dedicated to Native American student support, known as the Native American Student Programs (NASP). It hosts a pow wow each year (Figure 68).

In 1990, the Native American studies program was a concentration area, and students could earn a B.A. in ethnic studies with an emphasis in Native American studies. In 1995, a B.A. in Native American studies within ethnic studies department was made available to students. By 1998, Ph.D. and M.A. degrees in Native American History were established through the history department.[106] UCR is the only school in the UC system to offer this PH.D. degree.[107] The student services building (1965), was renamed "Costo Hall" in honor of Jeanette and Rupert Costo in 1994.[108]

Figure 68 UCR Pow Wow, 2012

Source: UCR Today

3.4 Context #4: Architecture and Design: Associated Architectural Styles, Architects, and Design Professionals

Theme: Mission Revival/Spanish Colonial Revival style

UCR's Citrus Experiment Station includes a number of intact, distinctive examples of Spanish Colonial Revival/Mission Revival architectural styles, designed by well-known architects practicing in the region.

During the era of the establishment of the Citrus Experiment Station, Spanish Colonial Revivalism was emerging as an extremely popular architectural style throughout the state. During this time, as the architectural profession transitioned away from the Beaux Arts Classicism that had dominated the profession through the turn of the century, architects in Southern California in particular looked to regional precedent and identity for stylistic cues and a more indigenous architectural expression.

Beginning with efforts to restore California's missions in the late nineteenth century, the region's climate and Hispanic heritage figured prominently in these new directions. The Mission Revival vocabulary, most popular between 1890 and 1920, drew inspiration from Southwestern missions. Identifying features include curved parapets and red tiled, low-pitched roofs. Arches were used liberally, and wall surfaces commonly displayed smooth stucco. The Spanish Colonial Revival flourished between 1915 and 1940, reaching its apex during the 1920s and 1930s. This movement was catalyzed by architect Bertram Goodhue's 1915 designs for Panama-California Exposition in San Diego. The Spanish Colonial Revival style became one of the most popular idioms for a range of building types. Architects and builders embraced the style, which was employed for many residential, commercial, and institutional properties, including college campuses.

The rise in popularity of the Spanish Colonial Revival style also coincided with the transition in school and campus design toward a more domestic scale, with lower massing and open, expansive campuses. With its emphasis on arcaded corridors and patios, the Spanish Colonial Revival style fit this movement particularly well.

Spanish Colonial Revival buildings tend to be asymmetrical and sheathed with smooth stucco. Roofs generally consist of gabled, gabled and flat, and (less commonly) hipped roofs, clad in red clay tiles. Arched openings, whether for windows, doors, or gates, are a textbook feature. Secondary materials—including wood, wrought iron, and polychromatic tile—provide decorative accents. Windows are generally wood framed or metal, with molded wood surrounds or lintels.

TYPICAL CHARACTER-DEFINING FEATURES:

- Stucco-clad walls (usually smooth finish); occasionally might have brick or cast stone
- Asymmetrical design
- Use of towers, turrets, or cupolas
- Low-pitched gabled/hipped roof with red clay tiles or flat roof, occasionally with parapets
- Shallow eaves or deeper eaves, lined with exposed carved wood brackets
- Arched openings for windows, doors, and use of arcades
- Secondary materials can include wrought iron, polychromatic tile, and cast stone
- Exterior patios and courtyards

Theme: Modernism in Riverside

UCR is home to one of the most cohesive and distinctive collections of modernist design in Riverside. The architects who designed UCR's mid-century campus represent a virtual who's-who of the region's well known and celebrated Modernist practitioners. The caliber of this team resulted in a collection of superb examples of Modernist design at UCR. It also reflected the college's intention of elevating its profile throughout the region.

Some of the first modernist buildings added at UCR include the Physical Sciences Building (now Geology Building, 1953), designed by Bennett and Bennett of Pasadena; Social Sciences-Humanities Building (now Watkins Hall, 1953); Webber Hall (1954), designed by Clark, Frey and Chambers of Palm Springs; the Physical Education Building (now Athletics and Dance Building, 1953), designed by Arthur Froehlich of Los Angeles; and the Library (now Rivera Library, 1954), designed by the Glendale firm of Graham Latta (the architect for Greenhouses/Headhouses #6-10). The Physical Education Building (Athletics and Dance Building) was constructed by Arthur Froehlich of Los Angeles in 1953.

Buildings on the UCR campus eligible under this context/theme would generally exhibit an intact, distinctive example of their architectural style. The modernist architectural movement that flowered in the postwar period in the United States included a number of different variants and approaches, but they all generally fall under the umbrella of Modernist design. The following section describes a few of the stylistic approaches represented in UCR's collection of Modernist buildings.

Mid-Century Modernism

The broad category known as Mid-Century Modernism includes a range of styles and approaches, from the machine-age aesthetic of the International Style to the organic, regionally inflected modernism of Frank Lloyd Wright. The Modern movement in architecture represented a break from period revivalism and an approach that emphasized style over function. Although the origins were in the 1920s, Mid-Century Modernism emerged in earnest during the building boom of the post-World War II era. More of an architectural vocabulary than a style, the various strains of Mid-Century Modernism became the norm throughout the United States, with Southern California being a well-known center for regional modernism.

Mid-Century Modernism emphasized functionality, with high-quality materials simply treated, as well as indoor-outdoor integration through the use of adjacent patios, low door thresholds, generous expanses of full-height windows. Post-and-beam construction, often realized in wood or, less often in Southern California, steel, is a typical component of Mid-Century Modernism. These buildings often have wide, cantilevered eaves, balanced on contrastingly thin spider-leg or post supports.[109] When applied to educational facilities, Mid-Century Modern design often featured sheltered arcades, which served to move hallways outdoors and unify the buildings of the campus.

TYPICAL CHARACTER-DEFINING FEATURES

- Horizontal design composition and massing; generally one to two stories
- Simple, geometric volumes
- Flat or shed roof, often with wide, cantilevered overhangs
- Exterior materials include stucco, brick, or concrete
- Modular design and planning
- Aesthetic qualities derive from use of simply treated materials and excellent craftsmanship

- Direct expression of structural systems, often in wood or steel post-and-beam
- Lack of historicizing ornament
- Generous expanses of fenestration, including bands of grouped multi-light windows
- Extensive use of sheltered exterior corridors, with flat or slightly sloped roofs supported by posts, piers, or pipe columns

Examples at UCR: Social Sciences-Humanities Building (Watkins Hall); Costo Hall

New Formalism

Emerging in the mid-1950s, New Formalism represented a return to monumentality, symmetry, and historicism in architectural design. Championed by architects such as Edward Durell Stone, New Formalism was a form of Late Modern architecture that became popular through the 1960s. The style proved particularly popular for larger-scale institutional buildings that were not well suited to the low-slung, post-and-beam vocabulary that characterized Mid-Century Modernism.[110] Aesthetically, New Formalism referenced Classical architecture, but in an abstracted manner. In this way, New Formalism represented a streamlined, Modern version of historical styles and scale.

As numerous architects in Southern California adopted the style, New Formalism became the preferred style for numerous civic, religious, educational, and private institutions including city halls, auditoriums, churches, and banks. Local practitioners who became known for their New Formalist architects include A. Quincy Jones, Philip Johnson, the firm of Skidmore Owings & Merrill, Millard Sheets, William Pereira, and Edward Durell Stone.[111,112]

TYPICAL CHARACTER-DEFINING FEATURES

- Symmetrical plan and façade
- Flat roofline with prominent, overhanging eaves and cornices and broad fascia
- Emphasis on clean geometries and singular volume
- Use of travertine, cast stone, marble and/or concrete
- Smooth wall surfaces
- Large screens of perforated concrete, concrete block or metal panels
- Colonnades, plazas, or elevated podiums; use of full-height columns or pilasters
- Stylized entablatures

Examples at UCR: Life Sciences Building; Olmstead Hall; Library (Rivera Library); Sproul Hall; Webber Hall

3.4.1 Architects

The following architect biographies are excerpted from historic preservation documents from the Cities of Riverside, Palm Springs, and Pasadena. These include the *City of Riverside Modernism Context Statement, City of Palm Springs Citywide Historic Context Statement & Survey Findings,* and *Cultural Resources of the Recent Past Historic Context Statement, City of Pasadena.*[113] Additional local examples of architects' work have been added, if applicable.

Allison & Rible

George B. Allison and Ulysses Floyd Rible formed Allison and Rible in 1944 and worked together through the 1960s.

> Allison was born in India in 1904. He was educated at the Carnegie Institute of Technology and earned a bachelor's and master's degree in architecture from the University of Pennsylvania in 1925 and 1926 respectively. He worked as a draftsman in various architecture offices in Philadelphia and New York before moving to Los Angeles. Rible was born in Chicago in 1904. Both men were actively involved in the American Institute of Architects (AIA). Allison served as the president of the Southern California Chapter of the AIA in 1948. Rible was the president of the State Board of Architectural Examiners (1955-56) and the regional director of the AIA district that included California, Hawaii, and Nevada. The master plan and original buildings for Claremont McKenna Men's College were among their earliest works. From then on the firm specialized in educational buildings ranging from elementary schools to universities. In addition, they designed many buildings for Pacific Telephone and Telegraph and the County of Los Angeles. Their largest commissions during the 1950s were the master plans for UCR, Cal Poly San Luis Obispo, and Los Angeles City College and various buildings on those campuses. In 1958, Rodney Robinson and Raymond Ziegler joined the firm and the name was formally changed to Allison, Rible, Robinson and Ziegler. In 1969, Leo Daly Architects absorbed the firm.
>
> In 1955, Allison and Rible prepared a master plan for UCR. The Pomona Freeway (SR-60) bisects the 1,200-acre campus. It was decided that the area west of the freeway would continue to be devoted to agricultural experimentation, while the east side would be devoted to academic departments, student housing, and administrative services. The plan for the East Campus, as it was called, incorporated the six existing buildings, which were constructed just a few years prior. The existing Webber Hall became the terminus of an east-west axis, with Rivera Library, Watkins Hall, and Geology Building along it.[114]

Local examples: Aberdeen-Inverness Residence Hall, UCR (1959); Administration Building, UCR (Hinderaker Hall, 1960); Corporation Yard, UCR (1960); Retail Building, 3689 Arlington Avenue (1961)

Bennett and Bennett

Pasadena-based architectural partnership of Cyril Bennett and his son Robert Bennett.

> J. Cyril Bennett moved to Pasadena from Chicago as a child and attended Pasadena High School. Upon graduation he began his architectural training with Charles and Henry Greene, where he stayed for three years. In 1908, he worked into office of local firm Marston & Van Pelt. Turning down a chance to study architecture at Cornell, Bennett instead took an extension course at University of California and prepared to take the State Board of Architecture exam. He opened his first practice in 1914, was partnered with Fitch Haskell from 1923 to 1934, and then resumed private practice. During the Depression, he was put in charge of the Federal Housing Bureau for the Pasadena area. In 1937, he became the head of the Tournament of Roses. In 1945, he formed a partnership with his son Robert to design the expansion of the Pasadena Junior College (now PCC). Early local projects include the Raymond Theater (1920), Pasadena Masonic Temple (1926), Glenarm Power Plant (1928), Pasadena Civic Auditorium (1932), and several new building facades when Colorado Boulevard widened (1929).[115]

Local Examples: Physical Sciences Building, UCR (Geology Building, 1953)

Clark and Frey

In 1939, John P. Clark and Albert Frey formed a partnership. From 1952 to 1957, Robson Cole Chambers worked and the firm, which was renamed Clark, Frey and Chambers. Clark left the firm for a solo practice in 1958.

> John Porter Clark, AIA, was born in Fort Dodge, Iowa, in 1905. He studied architecture at Cornell University, and then moved to Pasadena to work in the architectural firm of Van Pelt & Lind. In 1932, he established the firm's office in Palm Springs and designed a number of buildings in the desert for them. Clark met Albert Frey when he came to Palm Springs to design the Kocher-Samson building, and collaborated with him on several projects.[116]
>
> Frey was born in 1903 in Switzerland. He graduated from the Institute of Technology in Winterthur, Switzerland in 1927. After working as a draftsman for Le Corbusier in Paris (1928-1929), he moved to New York in 1930. Between 1931 and 1932, Frey worked for William Lescaze. Between 1935 and 1937, he partnered with William Porter Clark and they practiced under Van Pelt and Lind in Pasadena. Frey moved back to New York and worked for Philip Goodwin until 1939 when he moved permanently to Palm Springs. His most noteworthy work is in Palm Springs.[117]

Local examples: Science Sciences-Humanities Building, UCR (Watkins Hall, 1954) as Clark & Frey; Webber Hall, UCR (1954) as Clark & Frey; Red Cross Building, 8880 Magnolia Avenue (1961) as Frey & Chambers.

Hibbard and Cody

Lester H. Hibbard and Harold B. Cody held a partnership from circa 1915 to 1920.

Lester H. Hibbard was born in Missouri and received bachelor's and master's degrees from the University of California Berkeley in architecture in 1909 and 1911 respectively. Hibbard worked as a draftsman for Myron Hunt and Elmer Grey in Los Angeles from 1910 to 1912, before joining with Cody to form a partnership circa 1915 until Cody moved in 1920. He then went on to operate his solo practice in Los Angeles until he joined with Robson Cole Chambers from roughly 1948 to 1958.[118]

> Harold Bryant Cody is the son of Charles Paxton Cody, a British architect who immigrated first to Canada and then to Pennsylvania. After his graduation from the University of Pennsylvania in 1910, Harold Bryant Cody moved to Los Angeles and apprenticed at Parkinson & Bergstrom. Cody then worked for Myron Hunt before starting a partnership with Lester H. Hibbard. Due to health issues, Cody left the firm and moved to Palm Springs in 1920. Cody only completed a few projects in Palm Springs, but he is recognized as the first professionally trained architect to practice in Palm Springs.[119]

Local examples: Horticulture Building, UCR (Anderson Hall I, 1916); Irrigation Building, UCR (Anderson Hall II, 1916); Director's Residence Grouping, UCR (College Building South, 1916); Superintendent's Cottage and Garage, UCR (1916); University Cottage/Teamster's Cottage and Palm Tree Grove (The Cottage, 1916)

Jones & Emmons

A. Quincy Jones and Frederick E. Emmons founded Jones and Emmons in 1951 and worked together until 1969.

A. Jones was born in Kansas City, Missouri in 1913. As a young boy, he went to live with his grandparents in Gardena, outside of Los Angeles. He became interested in architecture in high school and went on to study at the University of Washington. After he graduated in 1936, Jones moved to Los Angeles to begin his professional career. He designed his own residence and an income property in Laurel Canyon with his first wife. He worked for a number of eminent Los Angeles architects in his early career, including Douglas Honnold and Paul R. Williams. Jones received his certificate to practice architecture in 1942; the same year, he joined the Navy. Jones was stationed in the Pacific until his 1945 discharge. He returned to Los Angeles amidst the post-war development boom.

Frederick E. Emmons was born in Olean, New York in 1907. After graduating from Cornell University with a degree in architecture, he worked for the New York firm of McKim, Mead and White. He moved to Los Angeles in 1932. Before the war, he became friends with Jones through their mutual employment at Allied Engineers in San Pedro. During the war, Emmons spent four years in the Navy. Afterward, Jones opened his own architecture. Soon after, the two men became partners and opened the firm “Jones and Emmons.” The firm was called “Jones and Emmons” until Emmons retired in 1969.

Jones and Emmons utilized new building technologies that decreased costs and production time. The firm favored structural innovations including lightweight post-and-beam construction with pre-assembled parts. Stylistically, the firm’s early residential work was characterized by an emphasis on the horizontal and the relationship between the building and the natural environment. The use of rational space planning, access to natural light, and the outdoors are presented in Jones and Emmons’ 1957 book, *Builders’ Homes for Better Living*.

Jones and Emmons work included large-scale commissions, including religious buildings, educational facilities, and civic spaces. In addition, the firm designed office, restaurant, and factory buildings throughout California. Educational facilities were perhaps the most common category of Jones and Emmons’ non-residential work. This work was particularly focused on college campuses in Southern California. The firm designed numerous buildings on the University of California campuses at San Diego, Santa Barbara, Irvine, and Riverside. At UCR Jones and Emmons designed one of the most prominent and recognizable structures, the Carillon [UCR Bell] Tower (1966). They also designed the Chemistry Building (1965) the previous year. The Carillon [UCR Bell] Tower stands at the center of the modern, 1950s buildings and across from the Commons. It is 161 feet tall and contains 48 bells. University of California Regent Philip Boyd and his wife Dorothy donated funds for the [UCR] Bell Tower and dedicated it on October 2, 1966.[120]

Local examples: Chemistry Building, UCR (Pierce Hall, 1965); UCR Bell Tower, UCR (1966)

Latta, Graham

Sheridan Graham Latta was born in 1906 in Wilcox, Pennsylvania. He studied at the University of Southern California School of Architecture, receiving a B.Arch. in 1927. Latta had his own firm from 1935 to 1950, and from 1955 to 1965. From 1950 to 1955, Latta partnered with Carl Denney. From 1966 until his retirement, Latta was in a partnership with Donald Lynch. Latta’s office and residence were in Glendale. Prominent commissions include Thomas Jefferson Elementary School in Glendale (1952), the office building at 3324 Wilshire Boulevard in Los Angeles (1961), the Grandview Branch Library in Glendale (1963), Lafayette Park Senior Citizens Center in Los Angeles (1964), and Crenshaw-Imperial Branch Library in Inglewood (1965), along with several buildings on the University of California, Riverside campus. He was a member of the American Institute of Architects from 1942 to 1971. He died in 1976.[121]

Local examples: Life Sciences Experimental Area, UCR (1954); Library, UCR (Rivera Library, 1954) as Latta & Denny; Boyden Entomological Lab, UCR (1961)

Pereira, William

William Pereira was a highly influential and prolific architect and urban planner whose work defined the look of mid-century America. He was born in 1909 in Chicago and graduated from the University of Illinois School of Architecture. He began his first practice as W.L. Pereira in 1931, while also working with Holabird and Root. An offer from Hollywood to design movie sets brought him to Los Angeles. He shared the 1942 Academy Award for Best Special Effects for the movie *Reap of the Wild Wind*. He left the field of set design and formed an architecture firm with Charles Luckman in 1950. Although the firm was successful, it broke up due to the different styles and visions of the two partners. Pereira then launched William L. Pereira Associates, which lasted from 1958 until his death in 1985. He is best known for designing the Transamerica Pyramid in San Francisco (1973), but his greatest achievement is considered to be the master plan for Irvine Ranch (1961).

Pereira’s buildings are easily identified by their unmistakable style, often taking unusual forms such as pyramids and ziggurats. They usually projected a grand presence, heavyset in appearance and often sitting atop pedestals that were themselves an integral part of the building. Water features complimented many of his buildings and some were almost entirely surrounded by water. His material of choice in creating unique geometric forms was pre-cast concrete. Working in this medium, he could create his impressive facades by simply attaching them as panels on to the steel frame of the building. His list of 425 projects include: CBS Television City (1953), Union Oil Building (1958), Bullock’s Fashion Square, Santa Ana (1958), the Theme Restaurant at Los Angeles International Airport (with Paul Williams, 1958), the University of California, Santa Barbara master plan (1958), the Los Angeles Zoo master plan (1958), the City of Newport Beach master plan (1960), and the Los Angeles County Museum of Art (1964). In Riverside, Pereira and Luckman designed the second phase of the Hunter Douglas Engineering Plant (1953) and the Life Sciences Building at the University of California, Riverside (1959).[122]

Local examples: Life Sciences Building, UCR (1958), Hunter Douglas Engineering Plant, 1455 Columbia Avenue (1953)

Ruhnau, Herman

Herman Ruhnau was born September 1, 1912 in Santa Barbara. His family moved to Pasadena and then to Riverside in 1929. He studied architecture at the University of Southern California. He was an architect for the U.S. Navy during the World War II and helped design the U.S. Naval Hospital in Norco. In 1946, he opened a Riverside branch office for Heitschmidt and Matcham, a Los Angeles-based architecture firm. In 1950, Ruhnau founded his own firm. Much of his work was in Riverside. He designed homes, banks, and government facilities. Ruhnau designed a Colonial Revival mansion for Tiny Naylor in Rubidoux, which is now used as the headquarters of the Riverside County Parks Department. In 1975, he completed two high-profile commissions in Riverside, the Riverside City Hall and the Riverside County Administration Center.

In 1979, a newspaper called Ruhnau the dominant figure in Riverside architecture after World War II. He also designed farm labor housing and County fairground buildings in Indio. He

> became an AIA Fellow in 1974. His son David joined his firm, which is now called Ruhnau Ruhnau Clarke. The firm has offices in Riverside and Carlsbad. Before his death in 2006, Ruhnau received the lifetime achievement award from the Inland Chapter of the AIA. Although he is best known for designing some of the largest public buildings in Riverside, his finest building may be his smallest, the Marcy Branch Library (1958) in the Magnolia Center area. Partially funded by a bequest by Riverside resident Charles F. Marcy, it is a circular building sheathed in stacked Roman brick. The wide, also circular, overhang near the entrance is supported by laminated wood beams.[123]

Local examples: Entomology Building Addition, UCR (1960); Health Service Building, UCR (1961); City Police Department Building, 4102 Orange Street (1965); Riverside County Law Library, 3535 9th Street (1969); La Sierra High School, 4145 La Sierra Avenue (1969); 5-story addition to Webber Hall, UCR as Ruhnau-Evans-Ruhnau Associates (1975); Computer Statistics Building, UCR as Ruhnau-Evans-Ruhnau Associates (School of Medicine Education Building, 1975)

Shellhorn, Ruth

Ruth Shellhorn was born in Los Angeles, California in 1909 and spent most of her childhood in South Pasadena. Shellhorn became interested in pursuing landscape architecture after conferring with her neighbor, the master landscape architect Florence Yoch, about the career and calling. In 1927, Shellhorn entered the School of Landscape Architecture at Oregon State Agricultural College in Corvallis, Oregon. In 1930, Shellhorn transferred to the School of Landscape Architecture at Cornell University to further her studies. In 1933, Shellhorn returned to Los Angeles where she set up a small residential practice, designing ten residential gardens in the Whittier neighborhood in 1934 and a landscape design for South Pasadena High School in 1935. The following year, she was invited by Landscape Architect Ralph Cornell to assist in the landscape design for Richard Neutra’s entry in the California House and Garden exhibition.[124]

From 1945 to 1978, Shellhorn designed landscapes for Bullock’s department stores, adopting Modernist palette and park-like settings. In 1956, Walt Disney hired Shellhorn to complete the park’s pedestrian circulation system as well as the Entrance, Main Street, and Plaza Hub.[125] That year, the *Los Angeles Times* named Shellhorn the Woman of the Year. In 1971, she was named a Fellow of the American Society of Landscape Architects, one of only 145 fellows nationwide. Over the course of her career, Ruth Shellhorn created close to 400 landscapes.[126]

Local examples: 1965 LRDP, UCR (1965); Aberdeen Drive median, UCR; West Campus Drive median, UCR; Pierce Lawn, UCR; Hinderaker Courtyard, UCR

Wilson, G. Stanley

G. Stanley Wilson was born in England 1879 before moving to Riverside in 1895 at the age of 16. Wilson began his career in Riverside as a carpenter, before opening his own office in 1909. In his new position he worked on the Mission Inn under Architect Myron Hunt. In 1923, Wilson obtained his architect’s license from the International Correspondence School.[127] It appears that he did not partner with other architects, but instead ran a solo firm until his death in 1958.[128] He was located out of Riverside, and completed numerous projects in the city during his life.

Local examples: UCR Soils/Plant Nutrition Wing (Chapman Hall) (1931); Casa Blanca Elementary School (1923); Alvord School District (1924), Riverside City College Quadrangle, Terracina Avenue (1923-1950), All Saints Episcopal Church, 3847 Terracina Avenue (1948), Grant Elementary School. 4011 Fourteenth Street (1953)

4 Evaluation Results

As noted previously, all properties 45 years of age (1975) and older were surveyed and evaluated against the NRHP and CRHR criteria. All criteria were applied in the survey, which considered buildings, structures, objects, as well as potential historic districts and cultural landscapes. The historic context section of this report described significant patterns of development and events on campus over the decades. Those contexts were also applied in these evaluations.

The most intact collection of buildings/site design features on campus, the Mid-Century Modern Core Historic District, appears eligible as a historic district. The district and its contributing properties are described below. Subsequent sections describe the applicable criteria, periods of significance, and reasons statements/descriptions of each eligible resource.

- Among the approximately **165 properties** surveyed, a **total of nearly 40 buildings/structures and landscape features** appear eligible for the NRHP and/or CRHR either individually or as contributors to a historic district.
- **One historic district and one cultural landscape** were also identified: (1) the Mid-Century Modern Core Historic District, which has 15 contributing buildings as well as associated site plan features, circulation corridors, and landscaping; and (2) the Citrus Variety Collection Cultural Landscape, which has 11 contributing buildings and ancillary structures as well as associated agricultural fields.
- All **15 contributors** to the Mid-Century Modern Core Historic District also appear individually eligible under Criteria A/1 and C/3 as indicated below.

Appendix A includes an illustrated table with all survey results, along with applicable criteria and contexts/themes conferring eligibility. Table 2 summarizes results, with an overview of the properties recommended as eligible. Following the table, Figure 69 provides an overview of survey results, with eligible and noneligible properties.

Table 2 Evaluation Results, UCR Facilities Constructed through 1975

#	Current Building Name Architect (if known)	Original Bldg. Name	Year	Historical Resource?	Criteria	Contributor to Historic District?
1-15	Mid-Century Modern Core Historic District		1953-1966	Yes	A/1, C/3	
1	UCR Bell Tower Architects: Jones & Emmons		1966	Yes	A/1, C/3	Yes (MCM Core Historic District)
2	Rivera Library Architects: Latta & Denny	Library	1954	Yes	A/1, C/3	Yes (MCM Core Historic District)
3	Gordon S. Watkins Hall Architects: Clark & Frey	Social Sciences-Humanities Building	1953	Yes	A/1, C/3	Yes (MCM Core Historic District)

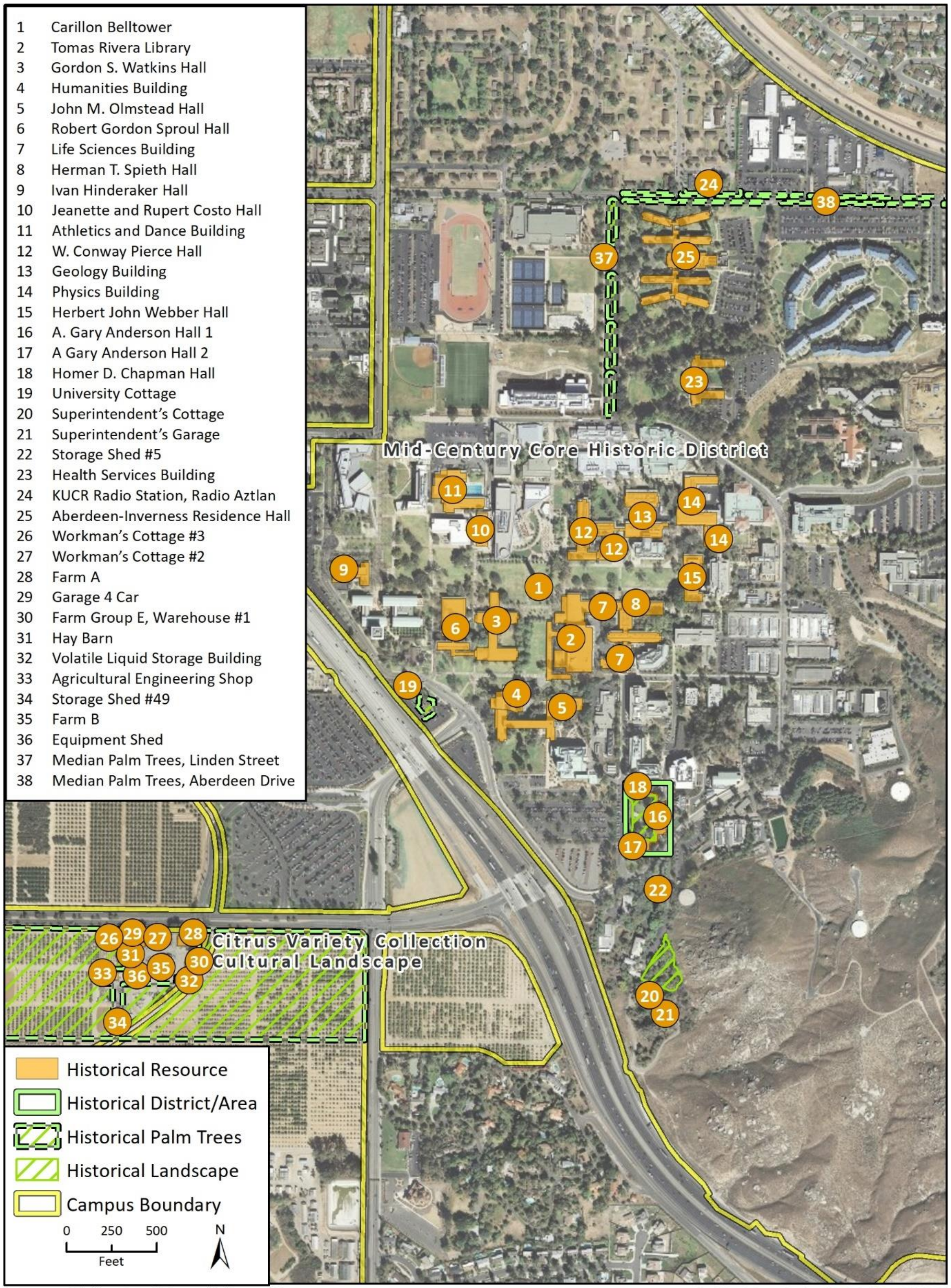
#	Current Building Name Architect (if known)	Original Bldg. Name	Year	Historical Resource?	Criteria	Contributor to Historic District?
4	Humanities Building Architects: Matchem, Granger & Russell		1963	Yes	A/1; C/3	Yes (MCM Core Historic District)
5	John M. Olmstead Hall Architects: Allison & Rible		1963	Yes	A/1; C/3	Yes (MCM Core Historic District)
6	Robert G. Sproul Hall		1965	Yes	A/1; C/3	Yes (MCM Core Historic District)
7	Life Sciences Building Architects: Pereira & Luckman		1958	Yes	A/1; C/3	Yes (MCM Core Historic District)
8	Herman T. Spieth Hall		1958	Yes	A/1; C/3	Yes (MCM Core Historic District)
9	Ivan Hinderaker Hall Architects: Clark, Frey & Chambers	Administration Building	1960	Yes	A/1; C/3	Yes (MCM Core Historic District)
10	Costo Hall (includes Daniel Gonzalez 1975 Chicano Civil Rights Era mural)		1965	Yes	A/1; C/3	Yes (MCM Core Historic District)
11	Athletics and Dance Building	Physical Education Building	1953	Yes	A/1; C/3	Yes (MCM Core Historic District)
12	W. Conway Pierce Hall	Chemistry Building	1966	Yes	A/1; C/3	Yes (MCM Core Historic District)
13	Geology Building Architects: Bennett & Bennett	Physical Sciences Building	1953	Yes	A/1; C/3	Yes (MCM Core Historic District)
14	Physics Building		1965	Yes	A/1; C/3	Yes (MCM Core Historic District)
15	Herbert John Webber Hall		1953	Yes	A/1; C/3	Yes (MCM Core Historic District)

#	Current Building Name Architect (if known)	Original Bldg. Name	Year	Historical Resource?	Criteria	Contributor to Historic District?
16	A. Gary Anderson Hall 1; includes landscaping and site (Anderson Hall 1) Architects: Lester H. Hibbard and H.B. Cody	Horticulture Building, Citrus Experiment Station	1916	Yes	A/1; C/3	No
17	A. Gary Anderson Hall 2; includes landscaping and site (Anderson Hall 2) Architects: Lester H. Hibbard and H.B. Cody	Irrigation Building, Citrus Experiment Station	1916	Yes	A/1; C/3	No
18	Homer D. Chapman Hall; includes landscaping and site (Chapman Hall)	Soils/Plant Nutrition Wing, Citrus Experiment Station	1931	Yes	A/1; C/3	No
19	The Cottage (includes adjacent Historic Palm Grove)	University Cottage/ Teamster's Cottage	1916	Yes	A/1	No
20	Superintendent's Cottage (includes Director's Garden)		1916	Yes	1; 3 (CRHR only)	No
21	Superintendent's Garage (includes Director's Garden)		1916	Yes	1; 3 (CRHR only)	No
22	Storage Shed #5		1916	Yes	1 (CRHR only)	No
23	Health Service Building Architects: Herman Ruhnau		1961	Yes	1/3 (CRHR only)	No
24	KUCR Radio Station, Radio Aztlán (Canyon Crest Housing, 691/693 Linden Street)		1941	Yes	1 (CRHR only) site of pioneering Chicano radio station, Radio Aztlán	No
25	Aberdeen-Inverness Residence Hall Architects: Allison & Rible		1959	Yes	A/1; C/3	No
26-36	Citrus Variety Collection Cultural Landscape (includes 11 buildings/structures and associated fields)		1916 - 1975	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
26	Workman's Cottage #3		1922	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)

#	Current Building Name Architect (if known)	Original Bldg. Name	Year	Historical Resource?	Criteria	Contributor to Historic District?
27	Workman's Cottage #2		1922	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
28	Farm A		1955	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
29	Garage 4 Car		1955	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
30	Farm Group E, Warehouse #1		1932	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
31	Hay Barn		1917	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
32	Volatile Liquid Storage Building		1974	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
33	Agricultural Engineering Shop		1960	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
34	Storage Shed #49		1965	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
35	Farm B		1955	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
36	Equipment Shed		1916	Yes	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)

#	Current Building Name Architect (if known)	Original Bldg. Name	Year	Historical Resource?	Criteria	Contributor to Historic District?
37	Median Palm Trees, Linden Street		1955ca	Yes	1 (CRHR only)	No
38	Median Palm Trees, Aberdeen Drive		1955ca	Yes	1 (CRHR only)	No

Figure 69 Historic Resources Survey Results, UCR Campus



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Final Historic Survey Results - Historic Buildings 2021-02-04

4.1 Summary of Historic District/Cultural Landscape Eligibility

#1: Mid-Century Modern Core Historic District

Criteria A/1 eligibility: The Mid-Century Modern Core Historic District is eligible as an intact, cohesive collection of institutional buildings constructed during the university's founding years. The historic district exemplifies institutional/educational facility expansion in Riverside during the City's postwar transformation.

Context / Theme: Riverside's Postwar Boom, 1945-1975 | Postwar Institutional Expansion in Riverside

Period of significance: 1953-1966

Criteria C/3 eligibility: The Mid-Century Modern Core Historic District is also eligible as a distinctive, outstanding example of the Mid-Century Modern/New Formalist architectural style, applied to institutional buildings/educational facilities. The district represents one of the most expansive and intact collections of Mid-Century Modern/New Formalist architecture in Riverside.

Context / Theme: Architecture and Design | Mid-Century Modernism in Riverside

Period of Significance: 1953 – 1966

The Mid-Century Modern Core Historic District is a cohesive, distinctive grouping of the earliest buildings designed for UCR during its most active construction phase. The district exemplifies the rapid, widespread postwar expansion of Riverside, both in terms of population growth and new construction (Criteria A/1).

In addition, with its unified site plan, distinctive architectural style, associated landscaping and hardscaping features, the Mid-Century Modern Core Historic District represents one of Riverside's most extensive and intact collections of Mid-Century Modern/Late Modern architecture (Criteria C/3).

#2: Citrus Variety Collection Cultural Landscape, West Campus (CRHR eligible only; includes 11 buildings/structures and associated fields)

Criterion 1 eligibility: The Citrus Variety Collection Cultural Landscape, West Campus is eligible as an intact, cohesive collection of buildings, landscape features, agricultural fields and support buildings (including a portion of the Gage Canal) built over time in support of the Citrus Experiment Station.

While the UCR campus retains a number of resources related to the Citrus Experiment Station, this grouping is the most cohesive and most expansive in terms of building types and a span of decades. The cultural landscape exemplifies institutional/educational facility expansion in Riverside during the City's postwar transformation.

Context / Theme: Early Settlement and Development in Riverside | Citrus Industry and Citriculture in Riverside | The UC Riverside Citrus Experiment Station

Period of significance: 1917-1966

With dates of construction ranging from 1916 to 1974, this grouping of related buildings, structures, and agricultural fields represents the most complete and intact collection of over a century of Citrus Experiment Station operations. Located in UCR's West Campus, the Citrus Variety Collection Cultural Landscape is defined by Martin Luther King Jr. Boulevard to the north and a curved section of the 1884 Gage Canal along the east and south. This location was selected for the Citrus Experiment Station for its proximity to the Gage Canal and emerging citrus fields in Riverside.

5 Conclusions

This study documented the findings of a historic resources survey conducted by Rincon of the UCR campus. The survey scope included all permanent buildings, aged 45 years or older as of 2020 (i.e., constructed through the year 1975). This project was completed in support of the 2021 Long Range Development Plan and accompanying EIR. As a result of the survey, a total of 35 properties were identified as historical resources pursuant to CEQA. This includes one historic district (the Mid-Century Modern Core Historic District) and one cultural landscape (the Citrus Variety Collection Cultural Landscape, which has 11 contributing buildings and ancillary structures as well as associated agricultural fields).

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Appendix A

UCR Historic Resources Survey Results

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Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
 	**1-15**	Mid-Century Modern Core Historic District	1953-1966	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (15 total contributors and associated landscaping, site plan features)
 	**1**	UCR Bell Tower Architects: Jones & Emmons	1966	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
 	**2**	Tomas Rivera Library (Library) Architects: Latta & Denny	1954	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
 	**3**	Gordon S. Watkins Hall (Social Sciences Building) Architects: Clark & Frey	1953	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)

Photos	**#**	**Current Name (Original Name)| Architect**	**Date of Constr.**	**Eligibility Criteria | Context / Theme**	**Part of District/Cultural Landscape?**
	**4**	Humanities Building Architects: Matchem, Granger & Russell	1963	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**5**	John M. Olmstead Hall Architects: Allison & Rible	1963	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**6**	Robert G. Sproul Hall	1965	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**7**	Life Sciences Building Architects: Pereira & Luckman	1958	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
	**8**	Herman T. Spieth Hall	1958	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**9**	Ivan Hinderaker Hall (Administration Building) Architects: Clark, Frey & Chambers	1960	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**10**	Costo Hall (includes Daniel "Chano" Gonzalez 1975 Chicano Civil Rights Era mural)	1965	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR 1 (CRHR only): Context: Social and Cultural Development | Theme: UCR Initiatives in Cultural Diversity, Ethnic Studies C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
	**11**	Athletics and Dance Building (Physical Education Building)	1953	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**12**	W. Conway Pierce Hall (Chemistry Building) Architects: Jones & Emmons	1966	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**13**	Geology Building (Physical Sciences Building) Architects: Bennett & Bennett	1953	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**14**	Physics Building	1965	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
	**15**	Herbert John Webber Hall	1953	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	Yes (Mid-Century Modern Core Historic District)
	**16**	A. Gary Anderson Hall 1 (Horticulture Building, Citrus Experiment Station Horticulture Building); includes landscaping and site Architects: Lester H. Hibbard and H.B. Cody	1916	A/1: Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station C/3: Context: Architecture and Design	No
	**17**	A Gary Anderson Hall 2 (Irrigation Building, Citrus Experiment Station Irrigation Building); includes landscaping and site Architects: Lester H. Hibbard and H.B. Cody	1916	A/1: Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station C/3: Context: Architecture and Design	No
	**18**	Homer D. Chapman Hall (Soils/Plant Nutrition Wing, Citrus Experiment Station); includes landscaping and site	1931	A/1: Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station C/3: Context: Architecture and Design	No

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
	**19**	The Cottage (University Cottage/Teamster's Cottage; includes adjacent Palm Grove)	1916	1 (CRHR only): Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station	No
	**20**	Superintendent's Cottage (includes Director's Garden)	1916	1 (CRHR only): Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station	No
	**21**	Superintendent's Garage (includes Director's Garden)	1916	1 (CRHR only): Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station	No
	**22**	Storage Shed #5	1916	1 (CRHR only): Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station	No

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
	**23**	Health Services Building Architect: Herman Ruhnau	1961	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	No
	**24**	KUCR Radio Station, Radio Aztlán (originally Canyon Crest Housing, 691/693 Linden Street)	1941	1 (CRHR only): Context: Social and Cultural Development | Theme: UCR Initiatives in Cultural Diversity, Ethnic Studies (site of pioneering Chicano radio station, Radio Aztlán)	No
	**25**	Aberdeen-Inverness Residence Hall Architects: Allison & Rible	1959	A/1: Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR C/3: Context: Architecture and Design	No
	**26-36**	Citrus Variety Collection Cultural Landscape (includes 11 buildings/structures and associated fields)	1916 - 1975	1 (CRHR only): Context: Early Settlement Dev. in Riverside | Theme: Citrus Industry & Citriculture in Riverside | Subtheme: UCR Citrus Experiment Station	Yes (Citrus Variety Collection Cultural Landscape)

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
	**26**	Workman's Cottage #3 (Zone 1, Bldg. 107)	1922	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
	**27**	Workman's Cottage #2 (Zone 1, Bldg. 108)	1922	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
	**28**	Farm A (Zone 1, Bldg. 109)	1955	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
	**29**	Garage 4 Car (Zone 1, Bldg. 111)	1955	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
 	**30**	Farm Group E, Warehouse #1 (Zone 1, Bldg. 112)	1932	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
 	**31**	Hay Barn (Zone 1, Bldg. 113)	1917	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
	**32**	Volatile Liquid Storage Building (Zone 1, Bldg. 114)	1974	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
 	**33**	Agricultural Engineering Shop (Zone 1, Bldg. 115)	1960	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)

Photos	#	Current Name (Original Name)| Architect	Date of Constr.	Eligibility Criteria | Context / Theme	Part of District/Cultural Landscape?
	**34**	Storage Shed #49 (Zone 1, Bldg. 116)	1965	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
	**35**	Farm B (Zone 1, Bldg. 226)	1955	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
	**36**	Equipment Shed (Zone 1, Bldg. 227)	1916	1 (CRHR only)	Yes (Citrus Variety Collection Cultural Landscape)
	**37 and 38**	Median Palm Trees, Linden Street and Aberdeen Drive	1955ca	1 (CRHR only): Context: Riverside's Postwar Boom | Theme: Postwar Institutional Expansion in Riverside | Subtheme: Founding of UCR	No

Appendix F

Energy Supporting Information

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Appendix F1

Construction Energy Fuel Consumption Calculations – Annual 2022

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UCR Long Range Development Plan Project - Construction Energy Calculations_2022

Last Updated: 6/8/2021

**Based on CalEEMod labeled "2022 Scenario Combined" located here: L:\EPS\Riverside Co\UCR\19-07846 Lng Rng Dev Pln EIR\Other\AQ\CalEEMod\2022 Scenario\2_Second Runs (gsf)*

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Concrete/Industrial Saws	1	8	81	0.73	Demolition	555.96
Excavators	3	8	158	0.38	Demolition	1,523.35
Rubber Tired Dozer	2	8	247	0.40	Demolition	1,671.19
Tractors/Loaders/Backhoes	4	8	97	0.37	Site Prep	674.90
Rubber Tired Dozer	3	8	247	0.40	Site Prep	1,253.39
Graders	1	8	187	0.41	Grading	1,134.76
Tractors/Loaders/Backhoes	2	8	97	0.37	Grading	1,181.07
Excavators	2	8	158	0.38	Grading	1,777.25
Scrapers	2	8	367	0.48	Grading	5,214.52
Rubber Tired Dozer	1	8	247	0.40	Grading	1,462.29
Cranes	1	7	231	0.29	Building Construction	3,842.01
Forklifts	3	8	89	0.20	Building Construction	3,891.13
Generator Sets	1	8	84	0.74	Building Construction	4,529.45
Tractors/Loaders/Backhoes	3	7	97	0.37	Building Construction	6,864.95
Welders	1	8	46	0.45	Building Construction	1,508.36
Pavers	2	8	130	0.42	Paving	923.55
Paving Equipment	2	8	132	0.36	Paving	803.80
Rollers	2	8	80	0.38	Paving	571.66
Air Compressors	1	6	78	0.48	Architectural Coating	264.02
					Total Diesel Fuel Used	**39,647.60**
						(Gallons)

Construction Phase	Days of Operation
Demolition	20
Site Preparation Phase	10
Grading Phase	35
Building Construction Phase	155
Paving Phase	20
Architectural Coating Phase	20
Total Days	260

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition Phase	24.0	15	14.7	91.88
Site Prep Phase	24.0	18	14.7	385.88
Grading Phase	24.0	20	14.7	428.75
Building Construction Phase	24.0	398	14.7	37785.13
Paving Phase	24.0	15	14.7	183.75
Architectural Coating Phase	24.0	80	14.7	980.00
			Total Fuel Used	**39,855.38**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
HAULING TRIPS				
Demolition Phase	7.4	515	20.0	1391.89
Site Prep Phase	7.4	0	20.0	0.00
Grading Phase	7.4	12817	20.0	34640.54
Building Construction Phase	7.4	0	20.0	0.00
Paving Phase	7.4	0	20.0	0.00
Architectural Coating Phase	7.4	0	20.0	0.00
			Total Fuel Used	**34,640.54**
VENDOR TRIPS				
Demolition Phase	**7.4**	0	6.9	0.00
Site Prep Phase	7.4	0	6.9	0.00

Grading Phase	7.4	0		6.9	0.00
Building Construction Phase	7.4	90		6.9	13007.43
Paving Phase	7.4	0		6.9	0.00
Architectural Coating Phase	7.4	0		6.9	0.00
			Total Fuel Used		**13,007.43**

Total Gasoline Consumption (gallons)	**39,855.38**
Total Diesel Consumption (gallons)	**87,295.57**

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b* . July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.

Appendix F2

Construction Energy Fuel Consumption Calculations – 2023 through 2035

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UCR Long Range Development Plan Project - Construction Energy Calculations_2023-2035

Last Updated: 6/8/2021

**Based on CalEEMod labeled "2023-2035 Scenario Combined" located here: L:\EPS\Riverside Co\UCR\19-07846 Lng Rng Dev Pln EIR\Other\AQ\CalEEMod\2023-2035 Scenario\2_Second Runs (gsf)*

Compression-Ignition Engine Brake-Specific Fuel Consumption (BSFC) Factors **[1]**:

HP: 0 to 100	0.0588	HP: Greater than 100	0.0529

Values above are expressed in gallons per horsepower-hour/BSFC.

CONSTRUCTION EQUIPMENT

Construction Equipment	#	Hours per Day	Horsepower	Load Factor	Construction Phase	Fuel Used (gallons)
Concrete/Industrial Saws	1	8	81	0.73	Demolition	555.96
Excavators	3	8	158	0.38	Demolition	1,523.35
Rubber Tired Dozer	2	8	247	0.40	Demolition	1,671.19
Tractors/Loaders/Backhoes	4	8	97	0.37	Site Prep	674.90
Rubber Tired Dozer	3	8	247	0.40	Site Prep	1,253.39
Graders	1	8	187	0.41	Grading	1,134.76
Tractors/Loaders/Backhoes	2	8	97	0.37	Grading	1,181.07
Excavators	2	8	158	0.38	Grading	1,777.25
Scrapers	2	8	367	0.48	Grading	5,214.52
Rubber Tired Dozer	1	8	247	0.40	Grading	1,462.29
Cranes	1	7	231	0.29	Building Construction	3,842.01
Forklifts	3	8	89	0.20	Building Construction	3,891.13
Generator Sets	1	8	84	0.74	Building Construction	4,529.45
Tractors/Loaders/Backhoes	3	7	97	0.37	Building Construction	6,864.95
Welders	1	8	46	0.45	Building Construction	1,508.36
Pavers	2	8	130	0.42	Paving	923.55
Paving Equipment	2	8	132	0.36	Paving	803.80
Rollers	2	8	80	0.38	Paving	571.66
Air Compressors	1	8	78	0.48	Architectural Coating	352.02
					Total Fuel Used	**39,735.60** **(Gallons)**

Construction Phase	Days of Operation
Demolition	20
Site Preparation Phase	10
Grading Phase	35
Building Construction Phase	155
Paving Phase	20
Architectural Coating Phase	20
Total Days	260

WORKER TRIPS

Constuction Phase	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
Demolition Phase	24.0	15	14.7	91.88
Site Prep Phase	24.0	18	14.7	385.88
Grading Phase	24.0	20	14.7	428.75
Building Construction Phase	24.0	184	14.7	17468.50
Paving Phase	24.0	15	14.7	183.75
Architectural Coating Phase	24.0	37	14.7	453.25
			Total Fuel Used	**19,012.00**

HAULING AND VENDOR TRIPS

Trip Class	MPG [2]	Trips	Trip Length (miles)	Fuel Used (gallons)
		HAULING TRIPS		
Demolition Phase	7.4	270	20.0	729.73
Site Prep Phase	7.4	0	20.0	0.00
Grading Phase	7.4	6725	20.0	18175.68
Building Constrcution Phase	7.4	0	20.0	0.00
Paving Phase	7.4	0	20.0	0.00
Architectural Coating Phase	7.4	0	20.0	0.00
			Total Fuel Used	**18,905.41**

VENDOR TRIPS				
Demoliton Phase	7.4	0	6.9	0.00
Site Prep Phase	7.4	0	6.9	0.00
Grading Phase	7.4	0	6.9	0.00
Building Constrcution Phase	7.4	43	6.9	6214.66
Paving Phase	7.4	0	6.9	0.00
Architectural Coating Phase	7.4	0	6.9	0.00
			Total Fuel Used	**6,214.66**

Total Gasoline Consumption (gallons)	**19,012.00**
Total Diesel Consumption (gallons)	**64,855.67**

Sources:

[1] United States Environmental Protection Agency. 2018. *Exhaust and Crankcase Emission Factors for Nonroad Compression-Ignition Engines in MOVES2014b*. July 2018. Available at: https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100UXEN.pdf.

[2] United States Department of Transportation, Bureau of Transportation Statistics. 2018. *National Transportation Statistics 2018* . Available at: https://www.bts.gov/sites/bts.dot.gov/files/docs/browse-statistical-products-and-data/national-transportation-statistics/223001/ntsentire2018q4.pdf.

Appendix F3

Operational Energy Consumption

Operational Energy Calculations

Year		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Growth Metrics																			
Demographics																			
Student Population (SP)		23,922	24574	25225	25877	26529	27180	27832	28484	29135	29787	30438	31090	31742	32393	33045	33697	34348	35,000
Faculty/Staff Population (FSP)		4,739	4904	5069	5234	5399	5564	5729	5894	6059	6224	6389	6554	6720	6885	7050	7215	7380	7545
Campus Population Total (CP)		28661	29478	30294	31111	31928	32744	33561	34378	35195	36011	36828	37645	38461	39278	40095	40911	41728	42,545
Campus Space (GSF)																			
Academics & Research		1,220,283	1298577	1376871	1455164	1533458	1611752	1690046	1768339	1846633	1924927	2003221	2081515	2159808	2238102	2316396	2394690	2472983	2,551,277
Academic Support		1,458,975	1580965	1702955	1824945	1946935	2068925	2190915	2312906	2434896	2556886	2678876	2800866	2922856	3044846	3166836	3288826	3410816	3,532,806
Student Life		1,875,963	2136068	2396174	2656279	2916385	3176490	3436596	3696701	3956807	4216912	4477018	4737123	4997228	5257334	5517439	5777545	6037650	6,297,756
Other		248,279	255581	262884	270186	277488	284791	292093	299395	306698	314000	321302	328605	335907	343209	350512	357814	365116	372,419
Campus LRDP Program Space Total		4,803,500	5271192	5738883	6206575	6674267	7141958	7609650	8077341	8545033	9012725	9480416	9948108	10415800	10883491	11351183	11818875	12286566	12,754,258
Yearly % Increase Campus Pop			3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Yearly % Increase Campus Space			10%	9%	8%	8%	7%	7%	6%	6%	5%	5%	5%	5%	4%	4%	4%	4%	4%
UCR Fleet (BAU)																			
Unleaded Gasoline Usage (gallons per Campus Pop)		4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.716932417	4.71693242
Diesel Usage (gallons per Campus Pop)		0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.254910854	0.25491085
CNG Usage (gallon equivalents per Campus Pop)		0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236
Unleaded Gasoline Usage (gallons)		135,192	139,044	142,897	146,749	150,601	154,453	158,306	162,158	166,010	169,862	173,715	177,567	181,419	185,271	189,124	192,976	196,828	200,681
Diesel Usage (gallons)		7,306	7,514	7,722	7,931	8,139	8,347	8,555	8,763	8,971	9,180	9,388	9,596	9,804	10,012	10,221	10,429	10,637	10,845
CNG Usage (gallon equivalents)		4,321	4,444	4,567	4,690	4,814	4,937	5,060	5,183	5,306	5,429	5,552	5,675	5,799	5,922	6,045	6,168	6,291	6,414
UCR Business Travel (BAU)																			
Air Travel (passenger miles per faculty/staff)		1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746
Total Air Travel (passenger miles)		8,273,344	8,561,475	8,849,606	9,137,736	9,425,867	9,713,998	10,002,129	10,290,259	10,578,390	10,866,521	11,154,652	11,442,782	11,730,913	12,019,044	12,307,175	12,595,306	12,883,436	13,171,567
Total Air Travel (gallons)		182,979	189,351	195,724	202,096	208,469	214,841	221,214	227,586	233,959	240,331	246,704	253,076	259,449	265,821	272,194	278,566	284,939	291,311
On-road Transportation (BAU)																			
Passenger VMT/year		79,581,443	83,589,393	87,597,344	91,605,295	95,613,245	99,621,196	103,629,147	107,637,097	111,645,048	115,652,999	119,660,950	123,668,900	127,676,851	128,609,891	129,542,932	130,475,972	131,409,012	132,342,053
Light-Heavy VMT/year		607,005	655,194	703,384	751,573	799,762	847,951	896,141	944,330	992,519	1,040,709	1,088,898	1,137,087	1,185,276	1,193,109	1,200,942	1,208,775	1,216,608	1,224,441
Medium-Heavy VMT/year		577,080	620,729	664,378	708,027	751,676	795,325	838,974	882,623	926,271	969,920	1,013,569	1,057,218	1,100,867	1,100,420	1,099,972	1,099,525	1,099,078	1,098,630
Heavy-Heavy VMT/year		896,490	964,762	1,033,034	1,101,306	1,169,578	1,237,850	1,306,122	1,374,394	1,442,666	1,510,937	1,579,209	1,647,481	1,715,753	1,720,209	1,724,665	1,729,121	1,733,577	1,738,033
Commercial VMT/year		2,080,575	2,240,685	2,400,795	2,560,905	2,721,016	2,881,126	3,041,236	3,201,346	3,361,456	3,521,566	3,681,677	3,841,787	4,001,897	4,013,738	4,025,580	4,037,422	4,049,263	4,061,105
Passenger gasoline gallons/year		2,085,088	2,159,190	2,233,291	2,307,392	2,381,494	2,455,595	2,529,696	2,603,798	2,677,899	2,752,001	2,826,102	2,900,203	2,974,305	3,048,406	3,122,507	3,196,609	3,270,710	3,344,812
Light-Heavy gasoline gallons/year		9,879	10,444	11,008	11,573	12,138	12,703	13,268	13,832	14,397	14,962	15,527	16,092	16,656	17,221	17,786	18,351	18,916	19,480
Medium-Heavy gasoline gallons/year		5,837	6,251	6,664	7,077	7,490	7,904	8,317	8,730	9,143	9,556	9,970	10,383	10,796	11,209	11,622	12,036	12,449	12,862
Heavy-Heavy gasoline gallons/year		54	56	58	59	61	63	64	66	68	69	71	72	74	76	77	79	81	82
Commercial gasoline gallons/year		15,771	16,750	17,730	18,710	19,689	20,669	21,649	22,628	23,608	24,588	25,567	26,547	27,527	28,506	29,486	30,466	31,445	32,425
Passenger diesel gallons/year		15,672	17,051	18,431	19,810	21,189	22,568	23,947	25,326	26,706	28,085	29,464	30,843	32,222	33,601	34,981	36,360	37,739	39,118
Light-Heavy diesel gallons/year		10,802	11,115	11,428	11,741	12,053	12,366	12,679	12,992	13,305	13,618	13,931	14,244	14,557	14,870	15,183	15,496	15,809	16,122
Medium-Heavy diesel gallons/year		72,991	70,091	67,191	64,291	61,391	58,491	55,592	52,692	49,792	46,892	43,992	41,092	38,192	35,292	32,393	29,493	26,593	23,693
Heavy-Heavy diesel gallons/year		148,346	141,983	135,620	129,257	122,894	116,531	110,168	103,805	97,442	91,079	84,716	78,353	71,990	65,627	59,265	52,902	46,539	40,176
Commercial diesel gallons/year		232,138	223,189	214,239	205,289	196,339	187,389	178,439	169,489	160,539	151,589	142,640	133,690	124,740	115,790	106,840	97,890	88,940	79,990
Passenger electricity (kwh)/year		75,551	138,265	200,980	263,695	326,410	389,124	451,839	514,554	577,268	639,983	702,698	765,412	828,127	890,842	953,557	1,016,271	1,078,986	1,141,701
Public Transit (BAU)																			
Bus VMT per campus population		14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.23230457	14.2323046
Total Bus VMT		407,912	419,535	431,159	442,782	454,406	466,029	477,652	489,276	500,899	512,522	524,146	535,769	547,393	559,016	570,639	582,263	593,886	605,509
Total Bus Fuel Use (GGE)		125,126	128,692	132,257	135,823	139,388	142,954	146,519	150,085	153,650	157,215	160,781	164,346	167,912	171,477	175,043	178,608	182,174	185,739
Total Bus Fuel Use (cu ft CNG)		15,461,870	15,902,453	16,343,036	16,783,618	17,224,201	17,664,784	18,105,367	18,545,950	18,986,533	19,427,115	19,867,698	20,308,281	20,748,864	21,189,447	21,630,030	22,070,612	22,511,195	22,951,778
Building and Facility Energy Usage (Leg Adjusted)																			
Natural Gas Use per Square Foot (therm/sqf)		0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.721753277	0.72175328
Baseline Natural Gas Usage (therms)		3,466,942	3,804,500	4,142,058	4,479,616	4,817,174	5,154,732	5,492,290	5,829,848	6,167,406	6,504,964	6,842,522	7,180,080	7,517,637	7,855,195	8,192,753	8,530,311	8,867,869	9,205,427
Natural Gas Usage of Demoed Buildings (therms)	subtract out			0	32,619	65,237	97,856	130,474	163,093	195,711	228,330	260,949	293,567	326,186	354,449	382,711	410,974	439,237	467,500
Natural Gas Usage of New Buildings (therms)	add in			0	91,675	183,349	275,024	366,698	458,373	550,047	641,722	733,396	825,071	916,745	1,008,420	1,100,094	1,191,769	1,283,443	1,375,118
Leg Adj Natural Gas Consumption (therms)		3,466,942	3,804,500	4,142,058	4,538,672	4,935,286	5,331,900	5,728,513	6,125,127	6,521,741	6,918,355	7,314,969	7,711,583	8,108,197	8,509,167	8,910,136	9,311,106	9,712,076	10,113,046
Diesel Use per Square Foot (gallons/sqf)		0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.001666077	0.00166608
Total Diesel Usage (gallons)		8,003	8,782	9,561	10,341	11,120	11,899	12,678	13,457	14,237	15,016	15,795	16,574	17,354	18,133	18,912	19,691	20,470	21,250
Electricity Use per Square Foot (kWh/sqf)		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Baseline Electricity Use (kWh)		118,960,675	130,543,253	142,125,831	153,708,408	165,290,986	176,873,564	188,456,142	200,038,720	211,621,297	223,203,875	234,786,453	246,369,031	257,951,609	269,534,186	281,116,764	292,699,342	304,281,920	315,864,498
Electricity Usage of Demoed Buildings (kWh)	subtract out			0	2,069,096	4,138,192	6,207,287	8,276,383	10,345,479	12,414,575	14,483,671	16,552,766	18,621,862	14,932,436	16,084,140	17,235,845	18,387,549	19,539,254	20,690,958
Electricity Usage of New Buildings (kWh)	add in			0	4,659,042	9,318,084	13,977,126	18,636,168	23,295,210	27,954,252	32,613,294	37,272,336	41,931,378	46,590,420	51,249,462	55,908,504	60,567,546	65,226,588	69,885,630
Leg Adj Electricity Use (kWh)		118,960,675	130,543,253	142,125,831	156,298,355	170,470,879	184,643,402	198,815,926	212,988,450	227,160,974	241,333,498	255,506,022	269,678,546	289,609,592	304,699,508	319,789,423	334,879,338	349,969,254	365,059,169

Appendix F4

Operational Energy Consumption Summary

Operational Energy Calculations Summary

Year	1990	2018	2020	2025	2030	2035
Growth Factors						
Campus Population						
Student Population (SP)		23,922	25225	28484	31742	35,000
Faculty/Staff Population (FSP)		4,739	5069	5894	6720	7,545
Campus Population Total (CP)		28,661	30294	34378	38461	42,545
Campus Space (GSF)						
Academics & Research		1,220,283	1376871	1768339	2159808	2,551,277
Academic Support		1,458,975	1702955	2312906	2922856	3,532,806
Student Life		1,875,963	2396174	3696701	4997228	6,297,756
Other		248,279	262884	299395	335907	372,419
Campus LRDP Program Space Total		4,803,500	5738883	8077341	10415800	12,754,258

Energy Use

			Existing Conditions			Energy Use Sum (2022-2035)	Annualized Energy Use*	Per capita annual energy consumption (LRDP)	Per capita annual energy consumption (Existing Conditions)
Building Electricity Use									
Leg Adj Consumption (kWh)	118,960,675	142,125,831	212,988,450	289,609,592	365,059,169	3,724,603,983	266,043,142	6,253	4,151
Building Natural Gas Use									
Leg Adj Consumption (Therms)	3,466,942	4,142,058	6,125,127	8,108,197	10,113,046	105,251,203	7,517,943	177	121
Other Stationary Combustion Fuels									
Diesel Consumption (gallons)	8,003	9,561	13,457	17,354	21,250	226,586	16,185	0.38	0.28
UCR Fleet Fuel Use									
Unleaded Gasoline Usage (gallons)	135,192	142,897	162,158	181,419	200,681	2,458,971	175,641	4.13	4.72
Diesel Usage (gallons)	7,306	7,722	8,763	9,804	10,845	132,887	9,492	0.22	0.25
CNG Usage (gallon equivalents)	4,321	4,567	5,183	5,799	6,414	78,594	5,614	0.13	0.15
On-Campus Transportation Fuel Use (campus commuters, commercial vendors, etc)									
Total Gasoline Fuel Consumption (gallons)	2,100,859	2251021.02	2626426.18	3001831.34	3377236.51	40,448,937	2,889,210	68	73
Total Diesel Fuel Consumption (gallons)	247,811	232669.27	194815.68	156962.09	119108.50	2,356,454	168,318	4	9
Total Electricity Consumption (kwh)	75,551	200980.15	514553.66	828127.17	1141700.68	10,276,772	734,055	17	3
Air Travel Fuel Use (Attributed to UCR use)									
UCR Attributed Aviation Gasoline Fuel Use (gallons)	182,979	195,724	227,586	259,449	291,311	3,498,459	249,890	6	6
Public Transit Fuel Use (Attributed to UCR use)									
UCR Attributed Bus Fuel Use (gallon equivalents)	125,126	132,257	150,085	167,912	185,739	2,275,891	162,564	4	4

Notes:

*divided by 14 years (becasuse 14 years of LRDP between 2022 and 2035)

SUM by Fuel Type					
Total diesel (gallons)	263,120	249,953	217,036	184,120	151,203
Total natural gas (Therms)	3,466,942	4,142,058	6,125,127	8,108,197	10,113,046
Total gasoline (gallons)	2,419,030	2,589,641	3,016,170	3,442,699	3,869,228
Total CNG (GGE)	129,447	136,825	155,267	173,710	192,153
Total electricity (kwh)	119,036,226	142,326,811	213,503,004	290,437,719	366,200,870

Appendix F5

Mitigation Impacts

Operational Energy Reductions associated with Mitigation

Mitigation Measure: EN-3

All newly constructed building projects, other than wet lab research laboratories, shall be designed, constructed, and commissioned to outperform the California Building Code (Title 24 portion of the California Code of Regulations) energy efficiency standards by at least 20 percent

Energy Consumption for new construction reduced by 20% after title 24 adjustments

	2025	2030	2035	2045
Electricty				
Adjusted Electricity from New Construction (kWh)	23,295,210	46,590,420	69,885,630	69,885,630
Electricty from new construction exceed Title 24 (kWh)	18,636,168	37,272,336	55,908,504	55,908,504
Electricty Reductions (kWh)	4,659,042	9,318,084	13,977,126	13,977,126
Natural Gas				
Adjusted NG from New Construction (therms)	458,373	916,745	1,375,118	1,375,118
NG from new construction exceed Title 24 (therms)	366,698	733,396	1,100,094	1,100,094
Natural Gas Reductions (therms)	91,675	183,349	275,024	275,024

Mitigation Measure: EN-5A

Identify aging equipment throughout the Campus such as equipment associated with the Central Steam Plant, electrical distribution system, and building HVAC systems…..The schedule and upgrade strategy must cumulatively meet a 2% energy efficiency improvement annually through 2035

Assumed 2% reduction in both electricty and natural gas annually in energy consumption in exsiting starting in 2022 buildings

	2022	2025	2030	2035	2045
Electricty					
Electricity from Existing Buildings (kWh)	165,290,986	165,290,986	165,290,986	165,290,986	165,290,986
Electricty after 2% reductions (kWh)	165,290,986	155,570,554	140,623,459	127,112,469	103,860,142
Electricty Reductions (kWh)	0	9,720,432	24,667,527	38,178,517	61,430,844
Natural Gas					
Natural Gas from Existing Buildings (therm)	3,466,942	3,466,942	3,466,942	3,466,942	3,466,942
Natural Gas after 2% reductions (therm)	3,466,942	3,263,058	2,949,546	2,666,156	2,178,443
Natural Gas Reductions (therms)		203,884	517,396	800,786	1,288,498

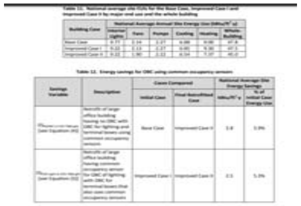
Mitigation Measure: EN-5B

Require all new buildings to incorporate occupancy sensors and controls such that lighting of shared spaces is on occupancy sensors, building temperature set points are widened and aligned with occupancy schedules, and ventilation systems are converted from constant volume to variable so that ventilation rates are occupancy-base

Assume energy efficiency is gained in natural gas, and that the majority of natural gas consumption is used for heating and cooling

Assume 20% of energy use is used for lighting

	2025	2030	2035	2045
Electricity				
Electricty Consumption in New Buildings exeeding Title 24 (kWh)	18,636,168	37,272,336	55,908,504	55,908,504
Portion of electricity used for lighting [1]	20%	20%	20%	20%
Electricty consumption in new buildings used for lighting (kWh)	3,727,234	7,454,467	11,181,701	11,181,701
Efficinecy Increase from Occupancy-Based Sensors [1]	5.30%	5.30%	5.30%	5.30%
Electricty Consumption Reduced (kWh)	197,543	395,087	592,630	592,630
Natural Gas				
Natural Gas Consumption in New Buildings excedding Title 24 (therms)	366,698	733,396	1,100,094	1,100,094
Efficinecy Increase from Occupancy-Based Sensors [1]	5.30%	5.30%	5.30%	5.30%
Natural Gas Consumption Reduced (therms)	19,435	38,870	58,305	58,305



1. https://www.pnnl.gov/main/publications/external/technical_reports/pnnl-22072.pdf

Appendix G

GHG Emissions Supporting Information

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Appendix G1

Final GHG Inventory, Forecast, and Targets Methodology and Calculations Report

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Final GHG Inventory, Forecast, and Targets Methodology and Calculations Report

University of California, Riverside 2021 Long Range Development Plan

prepared for

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March 15, 2021

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Appendix A Inventory, Forecast, and Targets Modeling Outputs

1 Introduction

California considers greenhouse gas (GHG) emissions and the impacts of climate change to be a serious threat to the public health, environment, economic well-being, and natural resources of the State and has taken an aggressive stance to address the impact of climate change at the State-level through the adoption of legislation and policies. Many institutions in California have developed campus climate action plans or GHG reduction strategies and aligned goals to correspond with State emissions reduction targets. The University of California, Riverside (UCR) has tracked GHG emissions for its main campus and associated satellite facilities (as stipulated by the UC Sustainable Practices Policy) since 2009. In addition, the University of California (UC) has established policy goals to achieve carbon neutrality for Scope 1 and Scope 2 emissions by 2025 and carbon neutrality for Scope 3 emissions by 2050 or sooner.[1]

The two major State GHG emissions-related goals are established by Assembly Bill (AB) 32 and Senate Bill (SB) 32. AB 32 required State agencies to reduce State GHG emissions to 1990 levels by 2020, whereas SB 32 requires a 40 percent reduction below 1990 levels by 2030. The goals set by AB 32 were achieved even earlier by the State in 2016,[2] and many California institutions are completing updated GHG inventories to quantify progress toward their specific 2020 goals as well as develop targets to align with the requirements of SB 32. Recently, Executive Order (EO) B-55-18, was passed in 2018 by Governor Jerry Brown and set a goal for achieving carbon neutrality Statewide by 2045. These EOs are applicable to State Agencies such as the UC.

UCR has prepared this GHG inventory as a primary step in its GHG reduction strategy (GHGRS). The GHGRS is being developed in conjunction with the 2021 Long Range Development Plan (LRDP) to ensure that the 2021 LRDP is implemented in alignment with the UC Sustainable Practices Policy and to fulfill the GHG emissions reduction requirements of SB 32 and the requirements of California Environmental Quality Act (CEQA) Guidelines Section 15183.5. CEQA Guidelines Section 15183.5 specifically addresses how a lead agency, in this case UCR, can analyze and mitigate GHG emissions at a programmatic level.

This report details the methodology and results of the GHG emissions inventory completed for UCR, and the forecast of future GHG emissions, and the GHG target setting for the 2021 LRDP. The emissions inventory was completed for the 2018 calendar year and provides a basis for the associated GHG emissions forecast. GHG emissions are forecasted for the years 2025, 2030, and 2035 to align with UC Sustainability Practices Policy emissions target year (2025), State SB 32 emissions target year (2030) and the 2021 LRDP planning horizon year (2035). GHG emissions are also forecasted for the year 2045 (to align with EO B-55-18) for informational purposes; this allows for determining a trajectory post-2035, which is necessary for 2035 target setting. GHG emissions are forecasted under baseline, business-as-usual,[3] and adjusted scenarios. The adjusted forecast scenario accounts for the impact of State regulations on GHG emissions. Results of the forecasts in turn inform GHG reduction target setting.

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[1] This report refers to emissions scopes per the California Air Resources Board (CARB) 2017 Climate Change Scoping Plan. Refer to Section 1.2, *Geographic and Operational Boundaries*, for additional information about what the various emissions scopes entail.

[2] CARB. California Greenhouse Gas Emissions Inventory. Available: <https://ww3.arb.ca.gov/cc/inventory/inventory.htm>. Accessed July 8, 2020.

[3] The business-as-usual forecast scenario provides a projection of GHG emissions would change in the forecast years if consumption trends continue as in 2018, absent any new regulations which would reduce emissions.

1.1 Regulatory Background

State GHG Emissions Targets

The State of California considers GHG emissions and the impacts of global warming to be a serious threat to the public health, environment, economic well-being, and natural resources of California, and has taken an aggressive stance to mitigate the State's impact on climate change through the adoption of legislation and plans. The following legislative and plan targets inform the State targets.

- **Executive Order S-3-05 (2005),** signed by former Governor Schwarzenegger in 2005, establishes Statewide GHG emissions reduction goals to achieve longer-term climate stabilization as follows: by 2020, reduce GHG emissions to 1990 levels and by 2050, reduce GHG emissions to 80 percent below 1990 levels. The 2050 goal was accelerated by the 2045 carbon neutral goal established by EO B-55-18, as discussed below.[4]
- **Assembly Bill 32 (2006),** known as the Global Warming Solutions Act of 2006, requires State GHG emissions be reduced to 1990 levels by the year 2020 (approximately a 15 percent reduction from 2005 to 2008 levels). The AB 32 Climate Change Scoping Plan, first published in 2008, identifies mandatory and voluntary measures to achieve the Statewide 2020 emissions limit, and encourages local governments to reduce municipal and community GHG emissions proportionate with State goals.[5]
- **Climate Change Scoping Plan (2008),** the original California Climate Change Scoping Plan, includes measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste. Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted and implemented since approval of the Scoping Plan.
- **Climate Change Scoping Plan Update (2013),** the first update to the California Climate Change Scoping Plan, defines CARB climate change priorities for the next five years and set the groundwork to reach post-2020 Statewide GHG emissions reduction goals. The 2013 Scoping Plan Update highlighted California's progress toward meeting the 2020 GHG emission goals defined in the original Scoping Plan. It also evaluated how to align the State's longer-term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use.
- **Executive Order B-30-15 (2015)**, Establishes Statewide GHG emissions reduction goals of reducing GHG emissions to 40 percent below 1990 levels by 2030.
- **Senate Bill 32 (2016),** signed by former Governor Brown in 2016, codified the Statewide mid-term GHG reduction goal of 40 percent below 1990 levels by 2030.
- **Climate Change Scoping Plan Update (2017)**, CARB approved a 2017 update to the California Climate Change Scoping Plan that lays out a roadmap to achieve 2030 GHG reduction targets.
- **Executive Order B-55-18 (2018),** signed by former Governor Brown in 2018, expanded upon EO S-3-05 by creating a Statewide GHG goal of carbon neutrality by 2045. EO S-55-18 identifies

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[4] A state executive order is a directive issued by a governor that regulates operations of the respective state government. California Executive Orders are binding unto California State agencies. Accordingly, EOs S-03-05, B-30-15, and B-55-18 direct UC efforts to control and regulate GHG emissions.

[5] Specifically, the AB 32 Climate Change Scoping Plan States CARB, "encourages local governments to adopt a reduction goal for municipal operations emissions and move toward establishing similar goals for community emissions that parallel the State commitment to reduce GHG emissions by approximately 15 percent from current levels by 2020" (p. 27). "Current" as it pertains to the AB 32 Climate Change Scoping Plan is commonly understood as between 2005 and 2008.

CARB as the lead agency to develop a framework for implementation and progress tracking toward this goal in the next update to the Climate Change Scoping Plan.

The State of California, via CARB, has issued several guidance documents concerning the establishment of GHG emissions reduction targets for GHG reduction plans to comply with legislated emissions reductions goals. In the first California *Climate Change Scoping Plan,*[6] CARB encouraged local governments to adopt a reduction target for community emissions paralleling the State commitment to reduce GHG emissions. In 2016, the State adopted SB 32 mandating a reduction of GHG emissions by 40 percent from 1990 levels by 2030 and in 2017 CARB published *California's 2017 Climate Change Scoping Plan* (hereafter referred to as the Scoping Plan Update) outlining the strategies the State will employ to reach these targets.[7] With the release of the Scoping Plan Update, CARB recognized the need to balance population growth with emissions reductions and in doing so, provided a new methodology for proving consistency with State GHG reduction goals through the use of per service population efficiency targets.[7] These targets are generated by dividing a institution's GHG emissions for each horizon year by the institution's total population for that target year.

UC GHG Emissions Targets and Existing Reduction Policies

UC's official sustainability commitment began in 2003 with a Regental action that led to the adoption of a Presidential Policy on Green Building Design and Clean Energy Standards in 2004. Since adopting that policy, UC expanded its sustainability policies to address climate protection, transportation, building operations, waste, procurement, food, water, and health care facilities. The policy was subsequently renamed the *UC Policy on Sustainable Practices* (UC Policy), which is updated periodically. In the 2007 revision of the UC Policy, the University of California Office of the President (UCOP) committed UC to implementing actions to achieve a reduction in GHG emissions from UC operations and activities to 2000 levels by 2014 and 1990 levels by 2020. Today, UC's official commitment to sustainability across the above-listed sectors is integrated into the UC Policy updated in July 2020.[8] The UC Policy states that each campus and the UC Office of the President will develop strategies for meeting the following UC goals:

- Policy C.1: Climate neutrality from Scope 1 and Scope 2 sources by 2025
- Policy C.2: Climate neutrality from specific Scope 3 sources (as defined by Second Nature's Carbon Commitment) by 2050 or sooner

In addition, the following UCR existing GHG emissions reduction policies pertain to operations that are within the operational control of UCR and set specific, quantitative standards. The following policies are noted from the UC Policy (2020):

- Policy A.1: All new building projects, other than acute care facilities, shall be designed, constructed, and commissioned to outperform the CBC energy-efficiency standards by at least 20 percent or meet the whole-building energy performance targets listed in Table 1 of Section V.A.3 of the UC Policy. The University will strive to design, construct, and commission buildings that outperform CBC energy efficiency standards by 30 percent or more, or meet the stretch

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[6] CARB. 2008. Climate Change Scoping Plan. Available: <https://www.arb.ca.gov/cc/scopingplan/document/adopted_scoping_plan.pdf>. Accessed July 8, 2020

[7] CARB. 2017. California 2017 Climate Change Scoping Plan. Available: <https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf>. Accessed July 8, 2020

[8] UC. Sustainable Practices Policy. 2020. Available: <https://policy.ucop.edu/doc/3100155/SustainablePractices>. Accessed August 14, 2020.

whole-building energy performance targets listed in Table 1 of Section V.A.3 of the UC Policy, whenever possible within the constraints of program needs and standard budget parameters.

- Policy A.3: No new building or major renovation that is approved after June 30, 2019 shall use on-site fossil fuel combustion (e.g., natural gas) for space and water heating (except those projects connected to an existing campus central thermal infrastructure). Projects unable to meet this requirement shall document the rationale for this decision as described in Section V.A.4 of the UC Policy.
- Policy A.4: All new buildings will achieve a U.S. Green Building Council (USGBC) LEED “Silver” certification at a minimum. All new buildings will strive to achieve certification at a USGBC LEED “Gold” rating or higher, whenever possible within the constraints of program needs and standard budget parameters.
- Policy A.5: The University of California will design, construct, and commission new laboratory buildings to achieve a minimum of LEED “Silver” certification as well as meeting at least the prerequisites of the Laboratories for the 21st Century (Labs21) Environmental Performance Criteria (EPC). Laboratory spaces in new buildings also shall meet at least the prerequisites of Labs21 EPC. Design, construction, and commissioning processes shall strive to optimize the energy efficiency of systems not addressed by the CBC energy efficiency standards.
- Policy A.7: Major Renovations of buildings are defined as projects that require 100% replacement of mechanical, electrical, and plumbing systems and replacement of over 50% of all non-shell areas (interior walls, doors, floor coverings, and ceiling systems) shall at a minimum comply with III.A.4 or III.A.5, above. Such projects shall outperform CBC Title 24, Part 6, currently in effect, by 20%. This does not apply to acute care facilities.
- Policy B.1: Each location will implement energy efficiency actions in buildings and infrastructure systems to reduce the location’s energy use intensity by an average of least 2% annually.
- Policy B.2: Campuses and health locations will install additional on-site renewable electricity supplies and energy storage systems whenever cost-effective and/or supportive of the location’s Climate Action Plan or other goals.
- Policy B.3: By 2025, each campus and health location will obtain 100 percent clean electricity. By 2018, the University’s Wholesale Power Program will provide 100 percent clean electricity to participating locations.[9]
- Policy B.4: By 2025, at least 40 percent of the natural gas combusted on-site at each campus and health location will be biogas.
- Policy D.1: Each location will reduce GHG emissions from its fleet and report annually on its progress. Locations shall implement strategies to reduce fleet emissions and improve the fuel efficiency of all university-owned or operated fleet vehicles and equipment where practical options exist through acquisition and fleet operation protocols.
  - By 2025, zero-emission vehicles or hybrid vehicles shall account for at least 50%of all new light-duty vehicle acquisitions. Lawrence Berkeley National Laboratory will follow federal fleet requirements in the case where federal and UC fleet requirements conflict.
- Policy D.2: The University recognizes that single-occupant vehicle (SOV) commuting is a primary contributor to commute GHG emissions and localized transportation impacts.
  - By 2025, each location shall strive to reduce its percentage of employees and students commuting by SOV by 10% relative to its 2015 SOV commute rates;

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[9] UCR is not currently a participating location under the Wholesale Power Program.

  - By 2050, each location shall strive to have no more 40% of its employees and no more than 30% of all employees and students commuting to the location by SOV.
- Policy D.3: Consistent with the State of California goal of increasing alternative fuel – specifically electric – vehicle usage, the University shall promote purchases and support investment in alternative fuel infrastructure at each location.
  - By 2025, each location shall strive to have at least 4.5% of commuter vehicles be ZEV.[10]
  - By 2050, each location shall strive to have at least 30% of commuter vehicles be ZEV.
- Policy D.4: Each location will develop a business-case analysis for any proposed parking structures serving University affiliates or visitors to campus to document how a capital investment in parking aligns with each campus' Climate Action Plans and/or sustainable transportation policies. Policy F.1: The University will achieve zero waste[11] through prioritizing waste reduction in the following order: reduce, reuse, and then recycle and compost (or other forms of organic recycling) as described in section V.F.6. Minimum compliance for zero waste, at all locations other than health locations, is as follows:
  a. Reduce per capita total municipal solid waste generation by:
     i. 25% per capita from FY2015/16 levels by 2025
     ii. 50% per capita from FY2015/16 levels by 2030.
  b. Divert 90% of municipal solid waste from the landfill.
- Policy F.2: The University supports the integration of waste, climate and other sustainability goals, including the reduction of embodied carbon in the supply chain through the promotion of a circular economy and the management of organic waste to promote atmospheric carbon reduction. In support of this goal, waste reporting will include tracking estimated scope 3 greenhouse gas emissions.

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[10] ZEV stands for a zero-emissions vehicle.

[11] The University zero waste goal is made up of incremental waste reduction and waste diversion targets. The University recognizes the attainment of reduction goals stated in this Policy and a 90 percent diversion of municipal solid waste as minimum compliance standard to be defined as a zero waste for locations other than health locations.

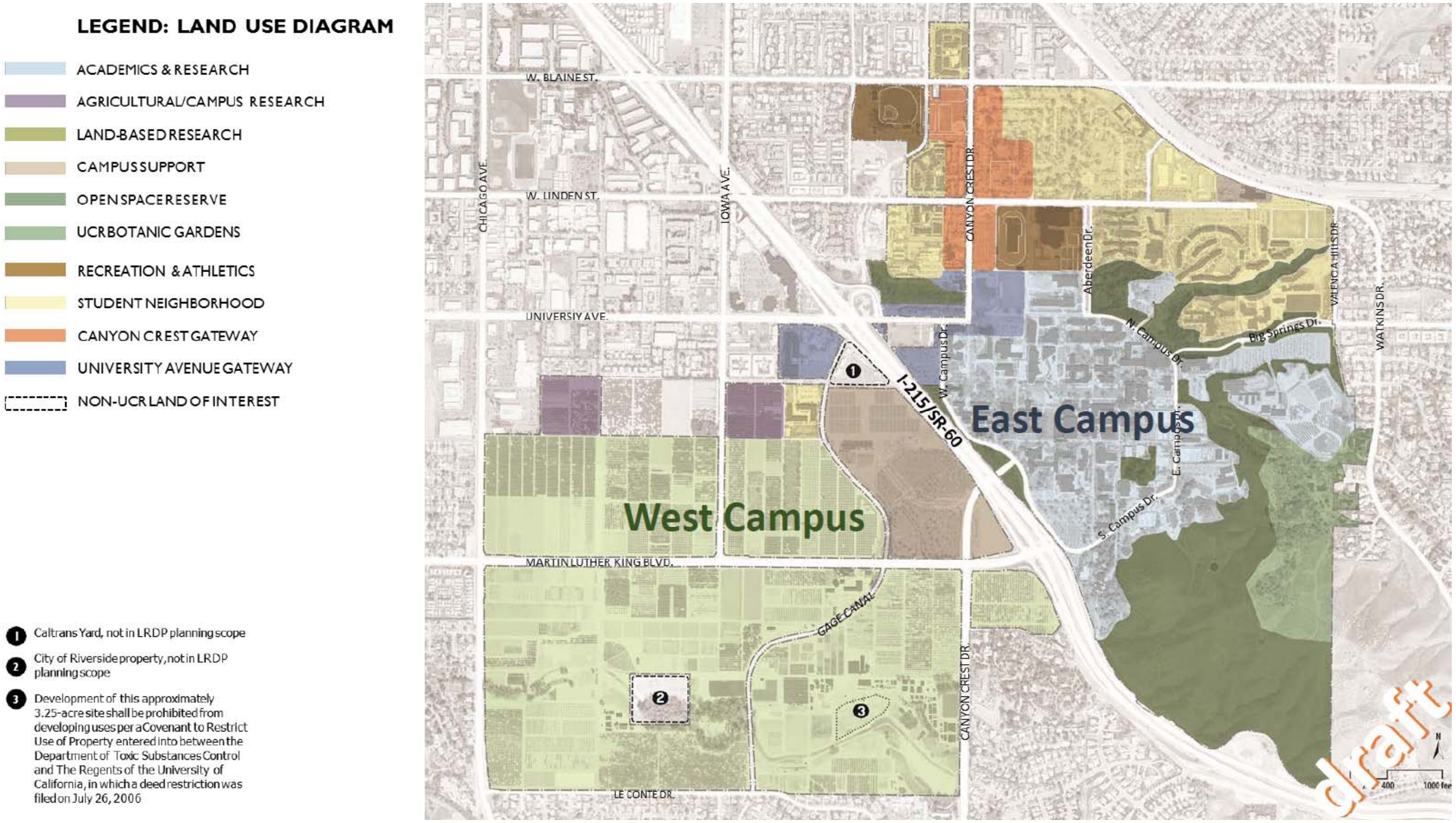
1.2 Geographic and Operational Boundaries

Consistent with standardized GHG reporting protocols, such as those prepared by ICLEI – Local Governments for Sustainability (ICLEI; formerly known as International Council for Local Environmental Initiatives), The Climate Registry (TCR), and American College and University Presidents' Climate Commitment (ACUPCC), a clear delineation of the geographic and operational boundaries used to account for emissions in an inventory must be established. Therefore, the boundaries for the GHG inventory and forecasting included in this report are limited to the geographic and operational boundary of the 2021 LRDP. Similar to the 2005 LRDP, the 2021 LRDP encompasses the approximate 1,108 contiguous acres constituting the UCR main campus, which is bisected by Interstate 215/State Route 60 into two distinct areas commonly referred to as East Campus and West Campus.

Figure 1 depicts the UCR main campus (i.e., the designated 2021 LRDP area) obtained from the 2021 LRDP. The GHG inventory and forecasting included in this report includes emissions from all facilities and sources within these boundaries over which UCR has operational control over. Specifically, for UCR, the following emissions sources are included:

- Scope 1 Emissions: Direct emissions, including stationary combustion such as boilers, hydrofluorocarbon (HFC) refrigerant use, as well as non-stationary combustion of fuels in University-owned vehicles.
- Scope 2 Emissions: Indirect stationary sources, including emissions from purchased electricity and purchased steam for leased facilities.
- Scope 3 Emissions: Other indirect emissions from business air travel and from commuting by students, faculty, and staff. Scope 3 is defined as emissions that are a consequence of the activities of the institution, but occur from sources not owned or controlled by the institution.

Figure 1 LRDP Operational Boundary



① Caltrans Yard, not in LRDP planning scope

② City of Riverside property, not in LRDP planning scope

③ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

2 2018 GHG Emissions Inventory

This section describes the methodologies, data sources, calculations, and results associated with the UCR 2018 GHG emissions inventory. The 2018 inventory is considered the baseline inventory for the GHG emissions forecasting process to support the UCR 2021 LRDP. The 2018 UCR GHG emissions inventory serves as the inventory to inform development of future GHG emissions forecasts that will assist UCR in setting GHG emissions targets that are consistent with State and UC goals.

2.1 Inventory Data and Methodology

Previous Inventories

The UC Policy requires each UC campus to report a GHG emissions inventory to an independent reporting organization in accordance with American College & University Presidents' Climate Commitment (*ACUPCC*) and The Climate Registry (TCR) requirements. Since 2009, UCR has reported Scope 1 and Scope 2 emissions to TCR using the most current published TCR protocol on an annual basis. UCR also reports Scope 3 emissions, including emissions from business air travel and from commuting by students, faculty, and staff, on an annual basis to the ACUPCC.[12] UCR tracks and reports its progress towards meeting its GHG emissions goals in its Annual Sustainability Report.[13] Historically, emissions reporting data has covered all UCR facilities over which UCR has operational control, including the UCR main campus as defined in the 2021 LRDP, as well as UCR satellite facilities.

1990 GHG Emissions

The State GHG targets are all referenced to Statewide GHG emissions in 1990. Therefore, estimating 1990 GHG emission levels is helpful when establishing GHG baselines and comparing future emissions. However, most agencies do not have completed 1990 GHG inventories or access to high quality data to estimate their 1990 GHG emissions. Based on CARB estimates of Statewide 1990 levels, GHG emissions have grown approximately one percent per year from 1990 to “current” emission levels as defined by the AB 32 Scoping Plan. “Current” as it pertains to the AB 32 Scoping Plan is commonly understood as sometime between 2005 and 2008, the time frame in which the AB 32 Scoping Plan was first adopted (i.e., 2008). As such, it was been deemed appropriate for local agencies to estimate or back-cast to 1990 levels from an inventory within the 2005-2008 timeframe by assuming emissions have grown by 1 percent from 1990 levels to the “current” day levels, defined as between 2005 and 2008 in first Scoping Plan.

UCR utilized historical metered data and back casting to estimate GHG emissions in 1990.[14] Methodology utilized for back casting is detailed in the UCR Climate Action Plan drafted in 2010.[15] UCR calculated Scope 1, 2, and 3 GHG emissions for UCR in 1990 to total 82,167 MT CO_2e. Scope 1 emissions contributed approximately 22 percent (17,535 MT CO_2e), Scope 2 emissions (e.g.,

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[12] Association for the Advancement of Sustainability in Higher Education (AASHE). 2016. UCR Sustainability Tracking, Assessment & Rating System (STARS) 2016 Report. Available: <https://reports.aashe.org/institutions/university-of-california-riverside-ca/report/2016-04-21/OP/air-climate/OP-1/>. Accessed July 14,2020.

[13] UCOP. 2019. *Annual Sustainability Report*, Fiscal Year 2018/2019. Available: <https://ucop.edu/sustainability/sustainability_report_2019_f2.pdf>. Accessed June 3, 2020.

[14] UCR. [Drafted] 2010. University of Riverside Climate Action Plan.

[15] Note that this CAP was not formally adopted and provided to Rincon August 20, 2020 to provide details regarding previous inventory and forecast calculations.

electricity) contributed approximately 48 percent (39,704 MT CO_2e), and Scope 3 emissions (e.g., commuting, air travel) contributed approximately 30 percent (24,928 MT CO_2e) to the total UCR GHG emissions.

The 1990 inventory emissions levels calculated using the UCR 2010 Draft CAP methodology have since been utilized by UCR to establish their 2020 emissions target of 82,00 MT CO_2e stipulated by the UC Policy. UCR tracks their progress in achieving 1990 GHG emissions levels by 2020 each year based on data submitted by the UCR Climate Change Working Group (CCWG) and reported on within the Annual Sustainability Report published by the UCOP.

2009 GHG Inventory

The 2009 GHG inventory is the first UCR inventory where Scope 1 and Scope 2 emissions were audited by a third-party verifier. Scope 1 and Scope 2 emissions were reported to TCR, while Scope 3 emissions were reported to ACUPCC. Because this is the earliest year for a UCR GHG inventory to be verified by a third party, UCR reports 2009 as the baseline year under the Sustainability Tracking, Assessment, & Rating System (STARs) report submitted to the Association for the Advancement of Sustainability in Higher Education (AASHE).

The 2009 GHG inventory concluded that Scope 1, 2, and 3 emissions for UCR in 2009 totaled 166,552 MT CO_2e.[Error! Bookmark not defined.,Error! Bookmark not defined.] Scope 3 sources contributed approximately 43 percent (70,877MT CO_2e), Scope 2 emissions contributed approximately 42 percent (70,562MT CO_2e), and Scope 1 emissions contributed approximately 15 percent (25,112MT CO_2e).[16] This increase from estimated 1990 levels is due to campus growth. UCR grew significantly from 1990 to 2009 such that the weighted number of campus users increased from 9,145 to 19,168 between 1990 and 2009.[17]

2012 GHG Inventory

The TCR reporting protocol requires quantification of all Scope 1 and Scope 2 emissions, while reporting of Scope 3 emissions is optional. Although not reported to TCR, UCR tracked Scope 3 emissions from commuting and business air travel for the 2012 inventory. Air travel paid for by UCR was calculated using the Clean Air Cool Campus calculator. Commuting was calculated using a methodology approved by the Southern California Air Quality Management District and UC. Scope 2 emissions were based on the utility-specific emissions factor provided by RPU, rather than the eGRID emissions factor.

The 2012 GHG inventory concluded that Scope 1, 2, and 3 emissions for UCR in 2012 totaled 122,129MT CO_2e. Scope 1 emissions contributed approximately 21 percent (26,047 MT CO_2e), Scope 2 emissions contributed approximately 51 percent (61,671 MT CO_2e), and Scope 3 sources contributed approximately 28 percent (34,412MT CO_2e).[16] This represents a 149 percent increase from estimated 1990 emissions levels and an approximately 27 percent decrease from the 2009 emissions levels.

2018 Inventory (Current) Year

The State of California uses 1990 as a reference year in Assembly Bill (AB) 32, which codified State 2020 GHG emissions target by directing CARB to reduce Statewide emissions to 1990 levels by 2020. However, agencies throughout California typically elect to use years later than 1990 as baseline

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[16] Note that values presented in the text are rounded to the nearest whole integer and may not add up to the total.

[17] Weighted campus user is defined per the AASHE STARs Technical Manual and was provided by Institutional Research (July 24, 2019).

years due to the increased reliability of recordkeeping from those years and the large amount of growth that has occurred since 1990. Additionally, the UCR 2005 LRDP projected out to the 2015-2016 academic year. The 2005 LRDP Amendment extended the horizon year out to the 2020-2021 academic year. The calendar year 2018 has been selected as the baseline year for the 2021 LRDP GHG inventory, because it is the most recent year with a complete and accurate data set available that is most representative of the 2021 LRDP organizational and operational boundaries. Data from 2018 has the level of detail necessary to validate the data and disaggregate the data for the 2021 LRDP boundary. Therefore, the 2018 calendar year is the current inventory year for purposes of this report.

GHG Inventory Protocols

Emissions were calculated using standard accounting protocols from the TCR, ACUPCC, and ICELI GHG accounting protocols as described below for each source of emissions. Emissions from nitrous oxide (N_2O), methane (CH_4), and carbon dioxide (CO_2) are included in this assessment as well as specific hydrofluorocarbon (HFC) refrigerants used by UCR. Each GHG has a different capability of trapping heat in the atmosphere, known as its global warming potential (GWP), which is normalized relative to CO_2 and expressed as carbon dioxide equivalent, or CO_2e. The CO_2e values for these gases are derived from the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change GWP values for consistency with the yearly CARB GHG inventory, as shown in Table 1.[18,19] Each refrigerant also has a unique GWP that is detailed below in Section 2.2, *Scope 1 2018 Inventory Emissions Calculation Results*, based on the refrigerant inventory provided by UCR for 2018.

Table 1 Global Warming Potentials of Greenhouse Gases

Greenhouse Gas	Molecular Formula	Global Warming Potential (CO_2e)
Carbon Dioxide	CO_2	1
Methane	CH_4	28
Nitrous Oxide	N_2O	265

MT CO_2e: metric tons of carbon dioxide equivalent

Included Emissions

The 2018 UCR inventory includes estimated emissions for the following categories generated on the UCR main campus in accordance with the boundary of the 2021 LRDP:

- Energy (electricity generation, natural gas use, stationary and mobile fuel combustion)
- Fugitive emissions from high GWP refrigerants
- On-site Transportation (UCR vehicle fleet, on-site transportation, transit vehicles)
- Business Air Travel
- Solid Waste Generation

Emissions from those categories are organized into three scopes (Scopes 1, 2 and 3) depending on the emissions source and level of operational control that UCR has over the emissions. Section 2, *2018 GHG Emissions Inventory,* describes how GHG emissions are categorized into scopes, the

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[18] Intergovernmental Panel on Climate Change. 2014. Fifth Assessment Report: Climate Change. Available: <https://ar5-syr.ipcc.ch/ipcc/ipcc/resources/pdf/IPCC_SynthesisReport.pdf>. Accessed July 8, 2020.

[19] All calculations use Intergovernmental Panel on Climate Change Fifth Assessment Report GWP values.

specific geographic boundary of the GHG inventory methodologies and protocols used and presents the results of the inventory by scope.

Excluded Emissions

The following emissions categories were excluded from the GHG emissions inventory.

Water Conveyance and Treatment Emissions

GHG emission from the conveyance and treatment of water used on the UCR campus are excluded from the inventory and forecast, because UCR does not operate a wastewater treatment system or have operational control over water pumping. It is not typical under the ACUPCC protocol to include water treatment and conveyance emissions within a campus GHG inventory.[35]

Consumption-based Emissions

GHG emissions from consumption of goods within UCR are excluded from the inventory and forecast of UCR's emissions, as an increase in such goods is considered speculative and uncertain. A widely accepted standard methodology for reporting consumption-based inventory does not currently exist.

Natural and Working Lands Emissions

GHG emissions from carbon sinks and sources in natural and working lands are not included in this inventory and forecast due to the lack of granular data and standardized methodology. Additionally, given the amount of natural lands within the UCR campus, emission impacts are negligible and further would not be impacted by the 2021 LRDP buildout. CARB has included a State-level inventory of natural and working lands in the 2017 Scoping Plan Update[20] GHG inventory; however, at the time of this UCR 2018 inventory, sufficient data and tools were not available to conduct an institution-specific working lands inventory. The Nature Conservancy and California Department of Conservation[21] are exploring options for a tool that may be able to perform these inventories at a more specific geographic level.

About 18 percent of the UCR main campus is designated as open space that includes approximately 154.8 acres of relatively intact natural habitat identified as Open Space Reserve and, approximately 43.7 acres associated with the UCR Botanic Gardens. Additional open space, including the interconnected framework of Primary and Secondary open space that are not defined together as a designated land use are incorporated throughout the campus organization and exist within all of the 2021 LRDP defined land use categories.[22] Additionally, land-based research makes up approximately 38 percent (419.3 acres)[23] of UCR's existing campus land use which predominantly includes agricultural field research. These land uses devoted to open spaces or land-based research for agriculture would more appropriately be characterized as urban green space and farmland,

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[20] CARB. California 2017 Climate Change Scoping Plan. Available: <https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf>. Accessed July 8, 2020.

[21] California Department of Conservation. TerraCount Scenario Planning Tool. Available: <https://maps.conservation.ca.gov/terracount/>. Accessed July 8, 2020.

[22] As defined in the 2021 LRDP, Primary Open Spaces include significant campus malls, major pedestrian corridors, streetscapes, quads, and plazas, while Secondary Open Spaces are focused on minor pedestrian linkages that foster greater movement throughout campus, as well as smaller, more intimate, courtyard spaces or plazas. They are not defined together as a designated land use but rather exist as a secondary overlay to land use organization.

[23] UCR. 2011. 2005 LRDP Amendment 2. Available: <http://rplan.ucr.acsitefactory.com/sites/g/files/rcwecm1811/files/2018-10/Final%20-%202005%20LRDP%20Amendment%202.pdf> Accessed July 8, 2020.

respectively, within California's Natural and Working Lands Sector.[24] However, GHG sequestration generated from the open space and natural land uses are excluded from the inventory and forecast due to limited availability of appropriate data.[25]

Agricultural Emissions

CARB considered agricultural sources to include off-road farm equipment, irrigation pumps, crop residue burning, emissions from flooded soils, livestock waste, crop residue decomposition, and fertilizer volatilization. The agricultural activities conducted at UCR do not align with the specified emission sources and will not be affected by the buildout of the 2021 LRDP. Therefore, are not considered a significant contributing source to UCR's GHG emission profile. Furthermore, it is not typical under TCR or ACUPCC protocols to include agriculture and forestry emissions within a campus GHG inventory. Emissions associated with energy use and on-road transportation for maintenance of these areas is included under Scope 1, 2 and 3 emission sources accordingly.

2021 LRDP Building Space and Demographic Data

The 2018 baseline inventory includes a total campus population of 28,661, which includes 23,922 students and 4,739 faculty and staff members.[26] Campus space in 2018 totaled approximately 4,803,500 assignable square feet (asf) or approximately 7,205,250 gross square feet (gsf).[27]

Inventory Structure and Data Types

The 2018 GHG inventory is structured by emission scope, or classifications of GHG emissions based on source. Scope 1 emissions are defined as direct GHG emissions generated from sources within UCR operations that it owns and/or controls. Scope 2 emissions are those generated at power plants when generating electricity that is then consumed at UCR. Scope 3 emissions are other emissions that are generated from the activities of the institution but occur from sources not fully controlled by UCR. Information about the data sources and methodologies used to inventory emissions is presented by scope below.

Scope 1 Emissions

Scope 1 emissions include the stationary combustion of fuels in any stationary equipment to produce electricity, steam, heat or power using equipment in a fixed location; mobile combustion of fuels in fleet transportation sources and emissions from off-road equipment such as those in construction, agriculture, and forestry; process emissions other than fuel combustion from physical or chemical processing; and fugitive emissions associated with the process, transmission, and storage of other substances (e.g., refrigerants) that do not pass through a stack, vent or exhaust point. Under Scope 1, UCR reports all campus emissions from natural gas and diesel stationary combustion at its facilities and buildings, mobile combustion emissions from the UCR mobile fleet, vanpool, and shuttle, as well as usage of refrigerants in HVAC and ventilation systems[28]. UCR does

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[24] CalEPA, California Natural Resources Agency, CDFA, CARB, and California Strategic Growth Council. 2019. January 2019 Draft: California 2030 Natural and Working Lands Climate Change Implementation Plan. Available: <https://ww2.arb.ca.gov/sites/default/files/2019-06/draft-nwl-ip-040419.pdf>. Accessed April 24, 2020.

[25] The reduction in GHG emissions from sequestration could be included in the future to the 2018 baseline inventory and forecast after a comprehensive study based on the natural and working land protocol has been completed.

[26] Campus population as Full-time equivalents (FTE) was approximately 23,313.3 in 2018 based on UCOP approximation provided by UCR Campus Planning Department.

[27] Per UCR direction the standard space planning assumption of 1.5 is used to convert assignable square footage (asf) to gross square footage (gsf).

[28] Refrigerants included: R-22, R134A, R-404A, R-407C, R-410A.

not have operational control of any physical or chemical processes other than fuel combustion; therefore, emissions associated with physical or chemical processes are not included in the inventory.

Scope 1 emissions reported by UCR are calculated using natural gas utility data from service providers (stationary combustion), inventoried fuel usage (mobile combustion), and refrigerant usage (fugitive emissions) tracked by various UCR Departments. Rincon completed a review of the calculations and found them to be consistent with the methodologies and principals outlined in the TCR General Reporting Protocol (GRP).[29] Emissions are estimated by collecting activity data such as million British Thermal Unit (MMBtu) of natural gas used in facilities and buildings; gallons of diesel used for portable generators, heaters, etc.; gallons of fuel used by the UCR vehicle fleet, and pounds (lbs) of refrigerants used in facilities and buildings. UCR disaggregated source data in order to provide activity data for solely the main campus included in the 2021 LRDP area. Table 2 provides a summary of UCR Scope 1 activity data for the 2018 GHG inventory.[30]

Table 2 Scope 1 2018 Inventory Data and Sources

Sector/Emission Source	Data Source	Activity	Units
Stationary Combustion[1]			
Natural Gas (Shell)	Annual utility data (Shell)	346,611	MMBtu
Diesel	Invoice summary	8,003	Gallons
Mobile Combustion			
Unleaded Gasoline	Fleet vehicle, fuel, and mileage data	135,192	Gallons
Compressed Natural Gas	Fleet vehicle, fuel, and mileage data	4,321	Gallon equivalents[2]
Diesel	Fleet vehicle, fuel, and mileage data	7,306	Gallons
Process and Fugitive Emissions			
Refrigerants used for Heating, Ventilation, and Air Conditioning (HVAC)	Refrigerants usage summary report	318	lbs

All presented data was provided by UCR and is based on 2018 calendar year.

[1] Natural gas is transported to the UCR main campus by Southern California Gas and is procured through Shell.

[2] CNG fuel consumption is expressed as gallon equivalents. For emissions calculations CNG fuel consumption is converted to scf where 123.57 scf CNG = 1 gasoline equivalent gallons and there are 1027 BTUs/standard cubic foot (SCF); emission factors from TCR v.2.1 (2016) Table 13.6.

Scope 2 Emissions

Scope 2 emissions reported by UCR annually were calculated using utility data from electricity service providers. Electricity usage at UCR is complex as it is acquired from a variety of sources. Specifically, UCR electricity is provided by the Imperial Irrigation District (IID), Riverside Public Utility (RPU), Southern California Edison (SCE), and SunPower. However, UCR disaggregated utility data shows that main campus electricity is only provided by RPU. Additionally, UCR reports the amount of electricity generated from installed solar photovoltaic (PV) systems on main campus. Main campus solar power is generated from SunPower photovoltaic systems located on campus at Parking Lot 30 and Lot 32, and other SunPower PV systems (Solar Farm). Rincon completed a review of the Scope 2 data and calculations and found them to be consistent with the methodologies and

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[29] TCR. 2019. General Reporting Protocol Version 3.0. Available: <https://www.theclimateregistry.org/protocols/General-Reporting-ProtocolV3.pdf>. Accessed May 25, 2020.

[30] All activity data and emissions calculations presented in this report are rounded to the nearest whole number.

principals outlined in the TCR GRP.[31] Emissions are estimated by multiplying electricity consumption by an emission factor for electricity provided by RPU. Electricity generated by solar PV systems does not produce GHG emissions.

Table 3 provides a summary of the Scope 2 emission sources, the data received, activity usage, and reported units for electricity usage and solar power generation.

Table 3 Scope 2 2018 Inventory Data and Sources

Sector/Emission Source	Data Source[1]	Activity	Units
Electricity			
Riverside Public Utility	Summary spreadsheet of usage summarized by utility provider	107,088,200	kWh
SunPower Lot 30	Summary spreadsheet of production summarized by utility provider (SunEdison)	5,733,909	kWh
SunPower Lot 32	Summary spreadsheet of production summarized by utility provider (SunEdison)	1,098,690	kWh
Other Solar SunPower (Solar Farm)	Summary spreadsheet of production summarized by utility provider (SunEdison)	5,039,876	kWh

All presented data was provided by UCR and is based on 2018 calendar year.

[1] A summary of the electricity purchased from RPU and generated by on-site solar was provided by UCR Energy Manager in the form of an Annual Utilities Summary Spreadsheet.

See Appendix A for detailed emission calculations.

Scope 3 Emissions

Scope 3 emissions reported by UCR annually have included emissions generated from faculty air travel and mobile emissions generated from staff and student employee commute. UCR tracks faculty air travel through invoices and the miles of air travel incurred from origin to destination on a calendar basis. UCR calculates staff and student/employee commute emissions calculations based on the estimated vehicle miles traveled (VMT) and associated fuel consumption by employee commuters from a commuter survey administered by UCR staff. For this inventory, Fehr & Peers (F&P) modeled all on-site VMT at the UCR main campus. Additional details on the VMT modeling are included in the CEQA Transportation Impact Analysis Appendix of the Draft EIR for the 2021 LRDP. Because the staff and student/employee commute data provided in the commuter survey is inherently included in the F&P modeled on-site VMT data, only the F&P VMT modeled data was used for calculating emissions. In addition to faculty air travel and staff and student employee commuting, emissions associated with the RTA buses that travel to and from the main UCR campus were quantified based on RTA ridership data. Waste generation are also included in the 2018 baseline inventory.

UCR provided faculty air travel miles by calendar year, commuter survey data by fiscal year, RTA ridership data by fiscal year, and waste generation by fiscal year. Due to the data sources and means of compiling the Scope 3 source data, disaggregation of UCR main campus data from total UCR campus data was not possible for faculty air travel, employee commute, and waste. However, UCR staff indicated that a majority of the listed Scope 3 activities would be associated with the main campus.[32] Therefore, it is conservatively assumed that the activity data and associated emissions sources for the Scope 3 data is representative of the main campus. Scope 3 data collection and

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[31] TCR. 2019. General Reporting Protocol Version 3.0. Available: <https://www.theclimateregistry.org/protocols/General-Reporting-ProtocolV3.pdf>. Accessed May 25, 2020.

[32] Communications with UCR staff during various data review meetings and email communications.

emissions calculations follow the methodologies outlined in TCR's GRP, ICLEI Local Government Operations Protocol, and ACUPCC's Second Nature Carbon Commitment's Implementation Guide.[33,34,35] Table 4 provides a summary of the Scope 3 emission sources included in the 2018 inventory.

Table 4 Scope 3 2018 Inventory Data and Sources

Sector/Emission Source	Data Type Received	Activity	Units
Business Travel			
Faculty/Staff Air Travel	Spreadsheet summarizing faculty airline travel	8,273,344	Passenger miles
On-Site Transportation			
Passenger Vehicle	F&P Vehicle Miles Traveled spreadsheet	79,581,443	Annual VMT[1]
Light Trucks	F&P Vehicle Miles Traveled spreadsheet	607,005	Annual VMT[1]
Medium Trucks	F&P Vehicle Miles Traveled spreadsheet	577,080	Annual VMT[1]
Heavy Trucks	F&P Vehicle Miles Traveled spreadsheet	896,490	Annual VMT[1]
Transit Vehicle Transportation (RTA)	RTA UPASS – ridership data spreadsheet	554,396	# riders
Waste Generation[2]			
Waste sent to landfill, recycling center, and composting facility	Waste summary spreadsheet	4,246.5; 66% 1,008.7; 96%	MSW tons generated; MSW diversion rate C&D tons generated; C&D diversion rate

[1] Daily VMT provided by F&P is adjusted according to the Origin-Destination (O-D) Method as described in the following section.

[2] Fiscal year 2017/2018 and 2018/2019 was averaged to provide an estimate of waste in 2018 calendar year. Provided waste data included Municipal Solid Waste (MSW) and Construction & Demolition (C&D).

All presented data was provided by UCR or F&P and is based on 2018 calendar year.

Source: Data compiled by Rincon in May 2020.

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[33] TCR. 2019. General Reporting Protocol Version 3.0. Available: <https://www.theclimateregistry.org/protocols/General-Reporting-ProtocolV3.pdf>. Accessed May 25, 2020.

[34] ICLEI. 2010. Local Governments Operations Protocol Version 1.1 Available: <https://icleiusa.org/ghg-protocols/>. Accessed May 25, 2020.

[35] ACUPCC. Implementation Guide Version 2.1. Available: <http://secondnature.org/wp-content/uploads/ACUPCCImplementationGuide_V2.1_.pdf>. Accessed May 25, 2020.

2.2 Scope 1 2018 Inventory Emissions Calculation Results

Results of the Scope 1 Emissions inventory are presented in

Table 5. As shown, Scope 1 emissions totaled 20,136 MT CO_2e in 2018. The largest component of UCR's Scope 1 emissions are generated by stationary combustion of natural gas in buildings and facilities, which accounts for approximately 91.4 percent of Scope 1 emissions. Figure 2 shows a breakdown of Scope 1 emissions by sector.

Table 5 Scope 1 2018 Emissions Inventory

Source	Activity Data	Emission Factor	Total Emissions ($MTCO_2e$)
Stationary Combustion[1]			
Natural Gas (Buildings and Facilities)			**18,410**
Natural Gas (Shell)	346,611 MMBtu	0.053 MT CO_2e/MMBtu	18,410
Other Stationary Combustion (Buildings and Facilities)			**82**
Diesel #2	8,003 gallons	0.010 MT CO_2e/gallon	82
Fugitive Emissions			
Refrigerants[2]			**339**
R-22	163 pounds	1,760 (GWP)	130
R-134A	17 pounds	1,120 (GWP)	9
R-404A	87 pounds	3,943 (GWP)	155
R-410A	52 pounds	1,924(GWP)	45
Mobile Combustion			
UCR Fleet Fuel Use[3]			**1,305**
Unleaded Gasoline	135,192 gallons	0.0088 MT CO_2e/gallon	1,187
Compressed Natural Gas	4,321 gallons equivalents	0.0067 MT CO_2e/gallon equivalent	29
Diesel	7,306 gallons	0.0102 MT CO_2e/gallon	75
Scope 1 Total			20,136

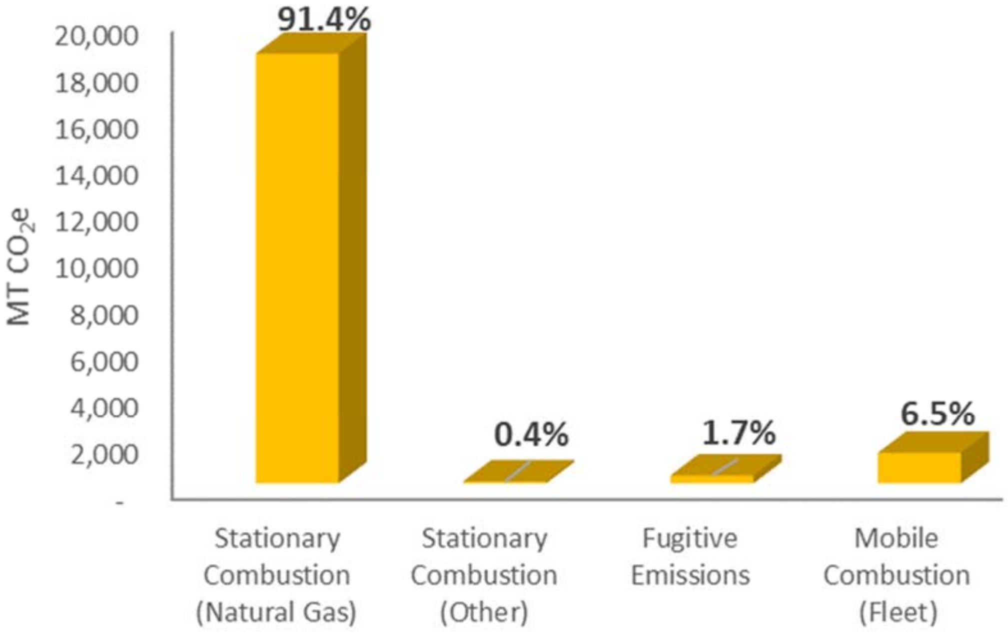
[1] The UCR Energy Manager compiled monthly invoices for all accounts associated with the main campus and provided the natural gas data in the form of a single workbook that presented monthly natural gas consumption by utility provider. Annual diesel usage on UCR main campus was provided by UCR based on a summary of monthly invoices for the year.

[2] Refrigerant data was provided in a "Usage Summary Report" document that totals usage by refrigerant type by the 2018 calendar year. Refrigerant data was disaggregated by the Sustainability Officer to provide just the refrigerant usage associated with the main campus. The total net refrigerant value is reported as the total amount added during the year, minus all refrigerant that is recovered and returned to the equipment after repair and maintenance.

[3] The provided fleet list and fleet fuel usage is tracked for the entire UCR campus by the Office of Sustainability and was provided for the 2018 inventory. The presented fleet vehicle fuel usage is representative of the main campus fleet fuel usage.

See Appendix A for detailed emission calculations. Activity data and total emissions presented herein is rounded.

Figure 2 Scope 1 Emissions by Sector



Stationary Fuel Combustion

Natural Gas Use in UCR Facilities and Buildings

In order to calculate emissions from natural gas consumption, natural gas consumption in MMBtu is multiplied by the emission factors reported by TCR for natural gas in industrial uses[36]. TCR provides emissions factors for CO_2, CH_4 and N_20 which are multiplied by total natural consumption to calculate emissions. Overall, natural gas used at UCR has an emission factor of 0.053 MT CO_2e/MMBtu. In 2018, 346,611 MMBtu of natural gas were consumed, generating approximately 18,410 MT CO_2e.

Diesel Use in UCR Facilities and Buildings

Diesel is used on campus for stationary combustion such as in emergency generators. In order to calculate emissions from diesel consumption, diesel in MMBtu is multiplied by the emission factors reported by TCR and EPA for diesel in industrial uses. The TCR emission factor was used for CO_2, and the EPA emission factor was used for CH_4 and N_20.[37,38] Emission factors are multiplied by total diesel consumption to calculate emissions. Overall, diesel has an emission factor of 0.010 MT CO_2e/gallon. In 2018, 8,003 gallons of diesel were consumed, generating approximately 82 MT CO_2e.

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[36] The Climate Registry. 2020. Default Emission Factors. Available: <https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed May 25, 2020.

[37] The Climate Registry. 2020. Default Emission Factors. Available: <https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed May 25, 2020.

[38] EPA. 2018. Emission Factors for Greenhouse Gas Inventories. Available: <https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf>. Accessed May 25, 2020.

Process and Fugitive Emissions

Refrigerants Use in UCR Facilities and Buildings

Refrigerant data provided by UCR includes the refrigerants that have been added to the main campus system, then subtracts any refrigerant that is removed with recovery equipment and stored during repair and maintenance. Therefore, the total refrigerant value is reported as the total amount added during the year, minus all refrigerant that is recovered and returned to the equipment after repair and maintenance. Emissions from refrigerants are calculated based on annual usage of refrigerant and the refrigerants global warming potential (GWP) obtained from the USEPA *Emission Factors for Greenhouse Gas Inventories.*[39] Refrigerants are high GWP compounds that are themselves the GHG and are not generated as a product of combustion. As such, there is no emission factor associated with refrigerants. A total of 390 pounds of refrigerants were emitted in 2018, composed of refrigerants R-22, R-134A, R-404A, R-407C and R-410A. As identified by UCR, R-407C was added and recovered outside of the 2021 LRDP boundary and therefore was excluded from the 2018 inventory. As such, of the 390 pounds of refrigerants emitted in 2018, 318 were accounted for in the 2018 inventory for the 2021 LRDP. The GWP of each was used to calculate MT CO_2e emissions. Overall, refrigerants accounted for approximately 339MT CO_2e in 2018.

Mobile Combustion

Fuel Use by UCR Fleet and Department Vehicles

Emission from fuel use by the UCR vehicle fleet are calculated by multiplying gallons of fuel consumed by fuel specific emissions factors obtained from CARB's EMission FACtors (EMFAC2017) model and emission factors from the USEPA *Emission Factors for Greenhouse Gas Inventories*.[40,41] Unleaded gasoline, compressed natural gas (CNG), and diesel are the fuels used by the vehicle fleet. In 2018, 135,192 gallons of unleaded gasoline, 4,321 gallon-equivalents of CNG, and 7,306 gallons of diesel were consumed for a total of 146,819 gallons of fuel used. Emission factors for CO_2, CH_4 and N_2O of emissions from each fuel type were sources from TCR.[42] The emission factor for mobile combustion of gasoline fuel in the UCR vehicle fleet is 0.0088 MT CO_2e/gallon, 0.0067 MT CO_2e/gallon equivalents for CNG fueled vehicles, and 0.0102 MT CO_2e/gallon for diesel fueled vehicles. Based on this emissions factors, fuel use by the UCR vehicle fleet accounted for 1,305 MT CO_2e in 2018.

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[39] USEPA. 2018. Emission Factors for Greenhouse Gas Inventories. Available: <https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf>. Accessed May 25, 2020.

[40] USEPA. 2018. Emission Factors for Greenhouse Gas Inventories. Available: <https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf>. Accessed May 2020.

[41] CARB. 2018. EMFAC2017 Volume III – Technical Documentation. Available: <https://www.arb.ca.gov/emfac/>. Accessed May 2020.

[42] The Climate Registry. 2020. Default Emission Factors. Available: <https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf>. Accessed May 25, 2020.

2.3 Scope 2 2018 Inventory Emissions Calculation Results

Results of the Scope 2 emissions inventory are presented in Table 6. As shown, Scope 2 emissions totaled 45,834 MT CO_2e in 2018. All Scope 2 emissions are generated by electricity from Riverside Public Utility (RPU).

Table 6 Scope 2 2018 Emissions Inventory

Sector/Emission Source[1]	Activity	Emission Factor	Total Emissions ($MTCO_2e$)
Electricity			**45,834**
Riverside Public Utility	107,088 MWh	0.428 MT CO_2e/MWh	45,834
SunPower Lot 30	5,734 MWh	0	0
SunPower Lot 32	1,099 MWh	0	0
Solar SunPower	5,040 MWh	0	0
Scope 2 Total			**45,834**

[1] UCR provided a compiled list of electricity data from all electricity providers including solar generation occurring on main campus.

See Appendix A for detailed emission calculations. Activity data and total emissions presented herein is rounded.

Electricity Consumption

UCR Building and Facility Electricity Use

Emissions resulting from electricity usage in UCR buildings and facilities were estimated by multiplying annual electricity consumed by an emission factor representing the average emissions associated with generation of one megawatt hour (MWh) of electricity. Electricity from the grid is supplied to the UCR by Riverside Public Utility (RPU). UCR reported an electricity carbon intensity factor of 0.428 MT CO_2e per MWh for electricity provided by RPU.[43] Based on this emission factor and usage of 107,088,200 kWh (107,088 MWh) provided by RPU, electricity usage at UCR accounted for 45,834 MT CO_2e in 2018.

Electricity Generation

No GHG emissions are associated with the on-site solar generation of electricity. As such, this information related to electricity production by SunPower is reported solely for informational purposes, forecasting and future GHGRP implementation tracking.

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[43] RPU provided the UCR Energy Manager with an emission factor of 0.428 MT CO_2e/MWh.

2.4 Scope 3 2018 Inventory Emissions Calculation Results

Results of the Scope 3 emissions inventory are presented in Table 7. As shown, Scope 3 emissions totaled 31,263 MT CO_2e in 2018. The largest component of UCR's Scope 3 emission are generated from use of passenger vehicles by staff and students, which accounts for approximately 84.3 percent of Scope 3 emissions. Figure 3 shows a breakdown of Scope 3 emissions by sector.

Table 7 Scope 3 2018 Emissions Inventory

Sector/Emission Source	Activity	Emission Factor	Total Emissions ($MTCO_2e$)
Business Travel			
Faculty/Staff Air Travel	8,273,344 passenger miles	0.000189 MT CO_2e/passenger mile	1,562
On-Site Transportation			
Mobile			**28,714**
Passenger Vehicle	79,581,443 annual VMT	0.00033 MT CO_2e/mile	26,342
Commercial Light Trucks	607,005 annual VMT	0.00066 MT CO_2e/mile	404
Commercial Medium Trucks	577,080 annual VMT	0.00106 MT CO_2e/mile	614
Commercial Heavy Trucks	896,490 annual VMT	0.00151 MT CO_2e/mile	1,354
Transit			**743**
Transit Vehicle Transportation (RTA/UPASS)[1]	554,396 annual trips	0.00134 MT CO_2e/passenger trip	743
Waste Generation[2]			**244**
UCR Generated Waste Sent to Landfills	1,456 tons	0.11 MT CO_2e/waste tonnage	160
Process Emissions Associated with Landfilling[3]	1,456 tons	0.054CO_2e/waste tonnage	79
Collection Emissions	1,456 tons	0.02 MT CO_2e/waste tonnage	(105)[4]
Transportation Emissions	1,456 tons	0.00012 $MTCO_2e$/waste tonnage/mile	4.8
Total			**31,263**

[1] Emission factor is presented here as the total annual emissions calculated for selected RTA routes divided by annual number of passengers reported. Emissions by route were calculated based on annually reported vehicle revenue miles and a weighted emission factor developed for urban buses using EMFAC2017. Based on provided fleet information from RTA in email correspondence on August 21, 2020 the fleets are operated using only gasoline and compressed natural gas, therefore the developed emission factor for Urban busses from EMFAC2017 did not include diesel fuel usage.

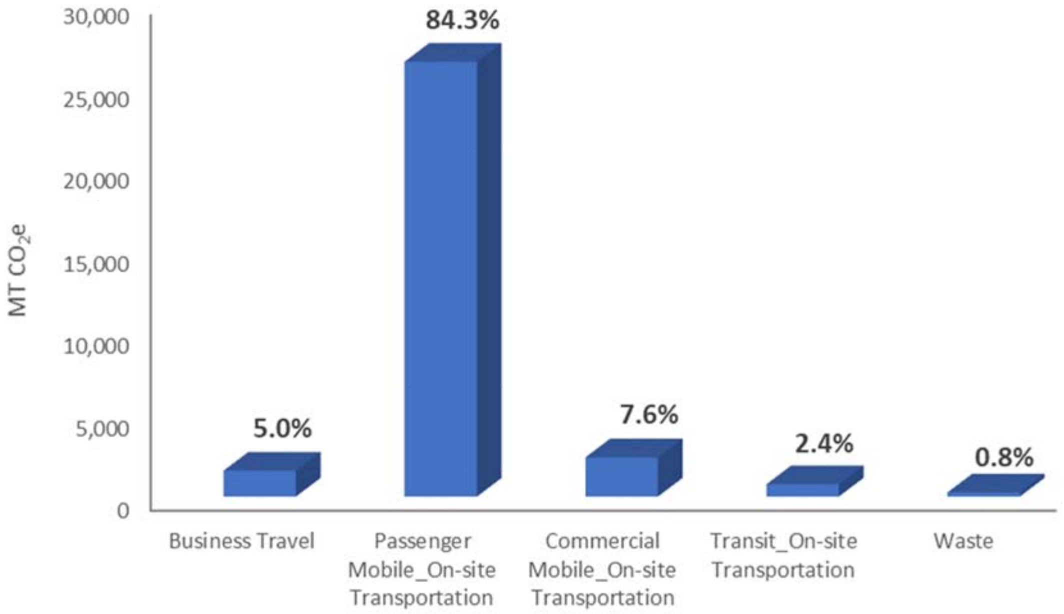
[2] Fiscal year 2017/2018 and 2018/2019 was averaged to provide an estimate of waste in 2018 calendar year. Provided waste data included Municipal Solid Waste (MSW) and Construction & Demolition (C&D).

[3] Process and stationary emissions at El Sobrante and Badlands landfill for 2018 were obtained from the EPA GHGRP database FLIGHT. Available: <https://ghgdata.epa.gov/ghgp/main.do>. The emission factor presented here is based on the combination of process emission from methane generation and stationary combustion reported at each landfill and the overall tonnage of waste landfilled at each site. It is further assumed that 50% of waste is landfilled at each site.

[4] Emissions from waste collection are excluded to avoid double counting.

See Appendix A for detailed emission calculations. Activity data and total emissions presented herein is rounded.

Figure 3 Scope 3 Emissions Breakdown



Business Travel

UCR Faculty/Staff Air Travel

In order to calculate emissions from faculty and staff air travel[44], passenger mileage is multiplied by energy intensity factors per passenger mile and emission factors for aviation fuel. An energy intensity of 2,654 BTU per passenger mile was obtained from the Federal Aviation Administration (FAA) and used to convert into gallons of aviation passenger miles into gallons of aviation gasoline using a TCR emission factor.[45,46] Based on 8,273,344 passenger miles in 2018, 182,979 gallons of aviation fuel were consumed due to UCR faculty and staff air travel.

To calculate emissions, gallons of aviation fuel consumed is multiplied by emissions factors for CO_2, CH_4 and N_20. Overall, faculty and staff air travel had an emission factor of 0.000189 MT CO_2e/passenger mile. Based on this emission factor, faculty and staff air travel accounted for 1,562 MT CO_2e in 2018.

On-site Transportation

Non-Transit Vehicle Transportation

Transportation modeling for non-fleet passenger VMT attributed to UCR was calculated by F&P based on outputs of the current version of the Riverside Transportation Analysis Model (RivTAM), a regional version consistent with the Southern California Association of Governments (SCAG) transportation model. The VMT data is based on the RivTAM activity-based model and the Origin-

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[44] Faculty and staff air travel emissions are only based on what is reported from Connexxus (UC system-wide travel program).

[45] Federal Aviation Administration. 2015. Aviation Emissions, Impacts and Mitigation: A Primer. Available: <https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/Primer_Jan2015.pdf>. Accessed May 25, 2020.

[46] Conversion factor for aviation gasoline is 0.120 MMBtu/gallon per TCR 2020.

Destination (O-D) method, the preferred method identified by ICLEI and TCR. The O-D method includes all trips occurring within 2021 LRDP boundaries and half of any trips that either originate or terminate within the 2021 LRDP boundaries and excludes VMT from “pass through” trips (i.e., not originating or terminating within 2021 LRDP boundaries). Like the Trip Based SCAG model, RivTAM utilizes socio-economic data (i.e., population, employment, households, workers, school enrollment, etc.), transportation analysis zones (TAZ), the highway and transit network to calculate VMT for UCR. A summary of the VMT results is presented in

Table 8.

Table 8 Estimated On-Road Transportation Emissions for 2018

Source[1]	Activity Data (Daily VMT)
Passenger	
Internal-Internal Daily VMT	2,420
½ Internal-External Daily VMT	122,523
½ External-Internal Daily VMT	127,697
Total Passenger Daily VMT Accounted for on UCR campus	**252,640**
Light Trucks	
Internal-Internal Daily VMT	52
½ Internal-External Daily VMT	935
½ External-Internal Daily VMT	941
Total Light Truck Daily VMT Accounted for on UCR campus	**1,927**
Medium Trucks	
Internal-Internal Daily VMT	3
½ Internal-External Daily VMT	912
½ External-Internal Daily VMT	918
Total Medium Truck Daily VMT Accounted for on UCR campus	**1,832**
Heavy Trucks	
Internal-Internal Daily VMT	1
½ Internal-External Daily VMT	1,420
½ External-Internal Daily VMT	1,426
Total Passenger Daily VMT Accounted for on UCR campus	**2,846**
Annual Passenger VMT[2]	**79,581,443**
Annual Light Truck VMT[2]	**607,005**
Annual Medium Truck VMT[2]	**577,080**
Annual Heavy Truck VMT[2]	**896,490**

[1] Daily VMT provided by F&P is based on the RivTAM activity-based model and is adjusted according to the Origin-Destination (O-D) Method as described in the following section.

[2] Based on Caltrans Data, Fehr & Peers recommends annualizing data based on 315 days/year for the study area.

See Appendix A for detailed emission calculations. Activity data and total emissions presented herein is rounded.

Emissions related to passenger vehicle operation are calculated using the ICELI Community Protocol *Method TR.1.A*[47]. Equations *TR.1.B.2* and *TR.1.B.3* are used to convert provided VMT data into

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[47] ICLEI. 2013. U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions Version 1.1.

emissions data with regional emission factors from CARB's most recent EMission FACtors (EMFAC2017).[48] EMFAC2017 VMT-based emission rates are based on the vehicle class, model years, speed, and fuel type. The inventory accounts for passenger, light trucks, medium trucks, and heavy truck vehicle types. As shown in Table 7, each vehicle class is associated with an annual VMT and an overall emission factor. In 2018, operation of non-transit vehicles at UCR accounted for 28,714 MT CO_2e. Emissions associated with passenger VMT accounted for 26,342 MT CO_2e and emissions associated with commercial VMT, aggregation of light, medium and heavy truck VMT, accounted for 2,372 MT CO_2e.

UCR EMPLOYEE COMMUTE SUBSET

UCR conducts a commuter survey every April in support of the South Coast Air Quality Management District (SCAQMD) Employee Commute Reduction Program (ECRP). Emissions from UCR employee commuting (e.g., faculty, staff, and student employees) captured by this survey are only a subset of the overall UCR on-road transportation and transit emissions associated with UCR on-site traffic as described in detail above. As such, trips associated with employee commuting have already been captured through on-road transportation VMT and transit ridership reported in Table 7. Therefore, GHG emissions associated with the employee commute subset are not reported as a stand-alone category in this report. However, emissions generated by UCR employee commuting will be quantified and discussed in the GHG Reduction Measure Quantification Report to inform the process of developing GHG reduction measures for inclusion in the GHGRS.

Transit Vehicle Transportation

UCR STAFF/STUDENT TRANSIT TRAVEL

Emissions due to UCR staff and student travel are calculated based on the UCR population that rides bus transit lines that stop, originate, or terminate on the UCR campus. Total emissions for the Rapid Link Gold Line, Route 1, Route 16, Route 51, Route 52, Route 204, Route 208 and Route 212 are calculated based on total vehicle revenue miles (VRMs) traveled in 2018.[49] Emissions factors for motor busses are obtained from EMFAC.[50] The total emissions associated with the identified bus routes was calculated to be 3,537 MT CO_2e.

UCR provided ridership data for the RTA bus routes that are subsidized through the UPASS bus subsidy program. UPASS ridership data indicates the number of rides taken under a UPASS and affiliated with UCR. To attribute total emissions from RTA to UCR riders, the annual number of miles ridden by UPASS riders was estimated based on the average RTA passenger VRM. Based on the number of annual riders and annual VRM, it was calculated that, on average, a RTA passenger trip was 0.74 mile. Using the RTA average mileage per passenger trip (0.74 mile) and the UPASS ridership numbers (554,396) for 2018, it was estimated that UPASS riders rode a total of approximately 407,912 miles on RTA buses. This accounts for approximately 21 percent of all RTA VRMs in 2018. As such, 21 percent of the annual emissions calculated for RTA bus routes was attributed to UCR. In total, UCR students and staff rode an estimated 407,912 miles on RTA routes in 2018, producing a total of 743 MT CO_2e from transit bus operation.

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[48] CARB. 2018. EMFAC2017 Volume III – Technical Documentation. Available: <https://www.arb.ca.gov/emfac/>. Accessed May 2020.

[49] RTA. 2019. Short Range Transit Plan FY19-FY21. Available: <https://www.riversidetransit.com/images/DOWNLOADS/PUBLICATIONS/SRTPS/FY2019-2021%20SRTP.pdf> Accessed July 8, 2020.

[50] CARB. 2018. EMFAC2017 Volume III – Technical Documentation. Available: <https://www.arb.ca.gov/emfac/>. Accessed May 2020.

Waste Generation

UCR Faculty/Staff Waste Generation

Solid waste emissions are generated by decomposition of waste in landfills, process emissions from methane generation associated with landfilling, stationary combustion emissions from the landfill operation, and collection and transportation of waste from where it is generated to the landfill where it is deposited. Emissions are calculated for all phases using emissions factors specific to each. UCR provided 2018/2019 fiscal year data including tonnage generated and diverted, type of waste generated from the Zero Waste Working Group as well as the location of waste pickup on campus and the hauler information from UCR staff. Because the data was provided by fiscal year, 2018 calendar year data was calculated using a weighted average of data from the 2017/2018 fiscal year and 2018/2019 fiscal year. As such in 2018, UCR generated an estimated total of 5,255 tons of solid waste. Of that, 3,800 tons or approximately 72 percent were diverted from landfills. Therefore, GHG emissions for solid waste were calculated based on 1,455.5 tons of solid waste disposed in a landfill.

An emission factor for solid waste decomposition of 0.11 MT CO_2e/wet short ton was obtained from EPA's Waste Reduction Model (WARM) v15 for California Collection, dry climate and landfills with landfill gas (LFG) recovery and flaring.[51] Based on this emission factor, solid waste decomposition accounts for approximately 160 MT CO_2e.

Solid waste generated at UCR is disposed at two facilities, the El Sobrante and Badlands Landfills. Emission factors for process emissions from methane generation associated with landfilling were obtained for both landfills.[52] Additionally, the El Sobrante Landfill reported emissions associated with stationary combustion at the landfill that were included in the overall process emission factor determined for the El Sobrante Landfill. Waste disposed at the El Sobrante Landfill has a combined process and stationary combustion emission factor of 0.021 MT CO_2e/ton, and waste disposed at the Badlands Landfill has a process emission factor of 0.087 MT CO_2e/ton. To calculate process emissions, it is assumed that solid waste is split evenly between the two landfills. Based on the above denoted emission factors for the El Sobrante and Badlands Landfill as well as the disposal of approximately 728 tons of solid waste at each landfill, process and stationary emissions are 15.5 MT CO_2e from El Sobrante and 79.1 MT CO_2e from Badlands.

Additional emissions are generated by the collection and transportation of solid waste to a landfill. Waste is first collected and hauled to a transfer station in Perris, California. UCR hauls waste generated on campus using its own vehicle fleet[53]. As such, an emission factor for collection was developed assuming that hauling vehicles are diesel powered. Based on an emission factor of 0.02 MT CO_2e/waste tonnage, collection of solid waste generated 105 MT CO_2e. As collection is performed by UCR fleet vehicles, collection emissions are excluded from the inventory to avoid double counting emissions already accounted for in the Scope 1 inventory.

After collected waste is deposited at the transfer station, it is transported to the El Sobrante and Badlands landfills. To calculate transportation emissions, it is assumed that solid waste is split evenly between the two landfills. An emission factor for transportation of waste was based on the assumptions that 50 percent of transport fuel is compressed natural gas (CNG) and 50 percent of transport fuel is diesel. According to ICLEI defaults, the emission factor for diesel is 0.00014

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[51] USEPA. 2020. WARM Model. Available: <https://www.epa.gov/warm/versions-waste-reduction-model-warm#15>. Accessed May 2020.

[52] USEPA. 2020. GHG FLIGHT. Available: <https://ghgdata.epa.gov/ghgp/main.do#>. Accessed May 2020.

[53] Per Feb 14, 2020 email from UCR Facilities Services, UCR hauls own waste to be landfilled to the CR&R facility in Perris. To avoid double counting of operation of fleet vehicles for waste collection, collection emissions will not be included. Collection emissions based on assumption the UCR fleet vehicles for waste hauling are diesel (ECF Diesel = 0.02), ICELI Default equation SW.6.

$MTCO_2e$/mile and the emission factor for CNG is 0.00010. Based on an overall emissions factor of 0.00012 $MTCO_2e$/waste tonnage/mile and a distance of 28 miles traveled to the Badlands Facility and 27 miles to the El Sobrante Landfill, transportation of waste generated 4.8 MT CO_2e in 2018. In total, solid waste emissions accounted for 244 MT CO_2e in 2018.

2.5 2018 Emissions Inventory Results by Scope Summary

Overall UCR GHG emissions were estimated to be 97,232 MT CO_2e in 2018. The largest component of UCR emissions were Scope 2 emissions, which account for 45,834 MT CO_2e or approximately 47 percent of overall emissions. Scope 3 emissions were the second largest, accounting for 31,263 MT CO_2e or approximately 32 percent of overall emissions. Scope 1 emissions were the smallest component, accounting for 20,136 MT CO_2e or approximately 21 percent of overall emissions. Emissions are summarized in

Table 9 and Figure 4.

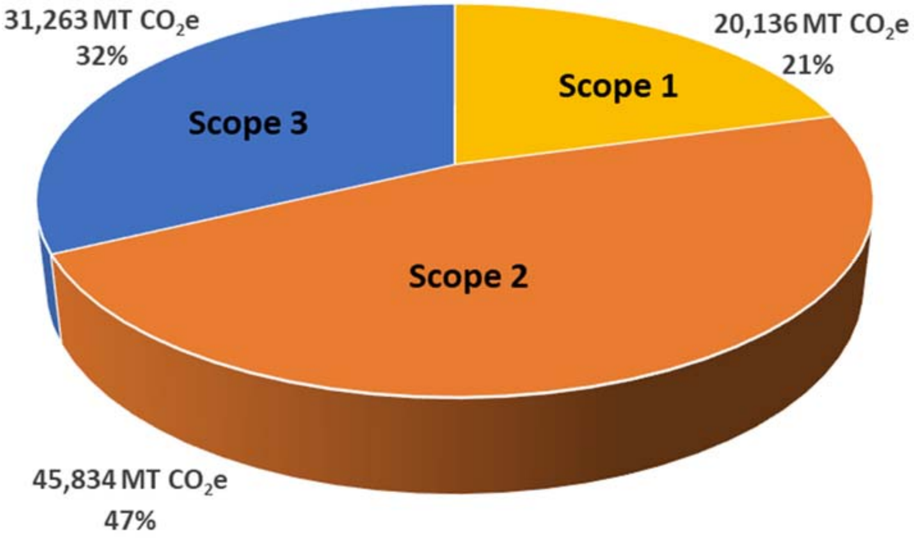
Table 9 2018 GHG Inventory

Scope	MT CO_2e[1]	Percent of Total Emissions	Percent within Scope
Scope 1	**20,136**	**21%**	**100.0%**
Stationary Fuel Combustion (Natural Gas)	18,410	19%	91.4%
Stationary Fuel Combustion (Diesel)	82	0.1%	0.4%
Process and Fugitive Emissions (Refrigerants)	339	0.3%	1.7%
Mobile Fuel Combustion (Fleet)	1,305	1%	6.5%
Scope 2	**45,834**	**47%**	**100.0%**
Electricity Consumption	45,834	47%	100.0%
Scope 3	**31,263**	**32%**	**100.0%**
Business Travel (Faculty/Staff Air Travel)	1,562	2%	5.0%
On-site Transportation (all non-transit vehicle travel, including employee commute)	26,342	27%	84.3%
On-site Transportation (vendors)	2,372	2%	7.6%
Transit Vehicle Transportation (Staff/Student Transit Travel)	743	1%	2.4%
Waste Generation	244	0.3%	0.8%
Total Emissions	**97,232**	–	–

[1] Values are rounded to the nearest whole integer and may not add up to noted total.

See Appendix A for detailed emission calculations. Activity data and total emissions presented herein is rounded.

Figure 4 2018 UCR Emissions by Scope



2.6 Progress Towards the State's 2020 GHG Emissions Goal

Progress towards the State's 2020 GHG emissions goal has been tracked using inventories developed for UCR-wide emissions which include both the 2021 LRDP facilities as well as additional satellite facilities. For the 2018 calendar year, the UCR Climate Change Work Group (CCWG) reported 104,767 MT CO_2e from UCR-wide operations.[54] As such, UCR-wide emissions operations appeared to reduce by 66,210 MT CO_2e in comparison to 2009 levels. For the purposes of the 2021 LRDP GHGRS, the 2018 calendar inventory reported herein includes only emissions associated with the 2021 LRDP boundary area.

Based on the 2019 Annual Report on Sustainable Practices published by UCOP, UCR-wide emissions were 22,600 MT CO_2e above the UCR 2020 emissions goal (e.g., 1990 level [82,167 MT CO_2e]). As such, UCR would need to reduce UCR-wide emissions by approximately 22,600 MT CO_2e or an additional 21.5 percent by 2020 to meet the 2020 goal established by the UC Policy.[55]

The 2021 LRDP boundary represents main campus but does not include satellite campuses, therefore, it is not appropriate to directly compare the inventory developed for the main campus to the 1990 UCR-wide emissions baseline. As such, the 1990 UCR-wide baseline emissions levels must be scaled appropriately to allow for an assessment of the UCR's main campus progress towards the 2020 GHG emissions goal. As described in detail in Section 4.1, *Targets Baseline Year,* the main campus makes up approximately 90 percent of UCR-wide emissions based on a comparison of the CCWG prepared UCR-wide 2018 inventory and the main campus 2018 inventory prepared for the 2021 LRDP. The 2018 GHG inventory prepared by CCWG includes disaggregated data such that main

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[54] UCR-wide emissions inventory calculated annually by UCR CCWG include all UCR operations activity. The 2018 inventory presented herein is limited in scope to the operations associated with the 2021 LRDP boundary.

[55] UC. 2019. Sustainable Practices Policy. Available: <http://ucal.us/suspolicy>. Accessed July 8, 2020.

campus operations were distinguishable from UCR-wide operations. To ensure the comparison between the two inventories was consistent, only emission sources included in both the CCWG inventory and the 2018 main campus inventory were evaluated to determine relative contribution of the main campus to UCR-wide emissions.[56] As previously detailed not all emission sources could be disaggregated, however, the primary GHG emissions source is related to energy use which was disaggregated by the UCR staff; main campus natural gas usage was approximately 80 percent of UCR-wide natural gas utility data while electricity usage on main campus made up approximately 90 percent of UCR's total electricity consumption.[57] Business air travel, on-site transportation, and mobile combustion from UCR fleet were not disaggregated. However, UCR staff confirmed that a vast majority of such emissions are associated with main campus and it is appropriate to attribute these sources of emissions to main campus.[58] Summation of the main campus 2018 inventory emission sources that are included in the CCWG reports (i.e. natural gas combustion, fugitive emissions from refrigerants, mobile combustion from fleet vehicles, electricity consumptions, business air travel, and on-site commuter transportation emissions) result in 93,791 MT CO_2e. This is approximately 90 percent of the UCR-wide emissions reported by CCWG in 2018, 104,767 MT CO_2e.[59] Therefore, scaling the UCR-wide 1990 emissions levels down by 10 percent to just the main campus, results in a scaled main-campus 1990 emissions level of 73,623 MT CO_2e. As such, the full 2018 inventory developed for the 2021 LRDP discussed in Section 2.5, *2018 Emissions Inventory Results by Scope Summary*, shows that main-campus 2018 GHG emissions levels (97,232 MT CO_2e) are approximately 23,609 MT CO_2e above the scaled main-campus 1990 baseline. UCR would need to reduce 2020 main campus emissions by approximately 23,609 MT CO_2e or approximately 24.2 percent to be consistent with the 2020 goal established by the UC Policy.

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[56] The CCWG inventories include natural gas combustion, fugitive emissions from refrigerants, UCR fleet mobile combustion emissions, electricity consumption, business air travel, and on-site transportation.

[57] UCR staff confirmed the CCWG data included UCR-wide utility. Therefore, utility energy data was disaggregated prior to being provided to Rincon. See the University of California at Riverside 2021 Long Range Development Plan. Greenhouse Gas Emissions Inventory and Forecast Data Evaluation Memorandum (Final) delivered on January 12, 2021.

[58] Confirmation was made verbally during the April 24, 2020 call with the UCR team during the review of provided data.

[59] The CCWG reported UCR-wide emissions from 2018 as 104,767 MT CO_2e including the following emission sources: natural gas combustion, fugitive emissions from refrigerants, mobile combustion from fleet vehicles, electricity consumptions, business air travel, and on-site commuter transportation emissions. Summation of only those same sources from the 2021 LRDP (i.e., main campus) 2018 inventory is 93,791 MT CO_2e. (93,791/104,767 = 90%)

3 2025, 2030, & 2035 GHG Emissions Forecasts

3.1 Forecast Data and Methodology

A GHG emissions inventory sets a reference point for a single year. However, annual emissions change over time due to factors such as population growth, increased vehicular fuel efficiency, increased renewables sources from the electricity providers, new development as well as new technologies and policies. A GHG emissions forecast accounts for projected growth and presents an estimate of GHG emissions in future years.

This section calculates a GHG emissions forecast for UCR through 2035[60] in a *business-as-usual* (BAU) scenario, and then quantifies the reduction that State regulations will have on the UCR GHG emissions forecast and presents the results in an *adjusted scenario* forecast. The *adjusted scenario* incorporates the effect of State regulations that would reduce UCR GHG emissions to provide a more accurate picture of future emissions growth.

Forecast Years (2025, 2030, and 2035)

The GHG baseline inventory provides accurate reference points for emissions levels in past years for the UCR main campus as defined above. Because annual emissions of the UCR main campus as defined in the 2021 LRDP will change over time due to increased student demand and enrollment, increased employment, and development and operational changes to accommodate the enrollment increase, an emissions forecast which accounts for these changes has been prepared. Forecasting future GHG emissions also allows for a comparison between the forecasted GHG emissions and the reduction target. The gap between these two points is what will ultimately allow for accurate climate action planning via development of GHG emissions reduction measures that assist UCR in achieving its GHG reduction targets.

The future GHG emissions forecast models the maximum projected build out for the Land Use Designations as defined by the 2021 LRDP while also accounting for anticipated GHG reductions from State-level policies. Forecast results are shown for the years 2025, 2030, and 2035. Forecast results are also shown for 2045 to illustrate the anticipated future trajectory of GHG emissions beyond 2035, which is necessary for 2035 target setting. In order to develop a UCR 2035 target, the forecast must extend past 2035 (the 2021 LRDP planning horizon year). Forecasted data for 2045 is presented for informational purposes, as it is understood that a future LRDP update will occur to account for growth post-2035 at which time an updated emissions forecast would also need to be conducted. The forecast years align with the following State and UC established target years for GHG emissions:

- 2025: UC Sustainable Practices Policy Scopes 1 and 2 carbon neutrality policy goal
- 2030: SB 32 target year
- 2035: 2021 LRDP planning horizon year
- *2045: EO B-55-18 target year for carbon neutrality*[61]

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[60] The 2021 LRDP horizon year is 2035 therefore the forecast is developed to go through 2035.

[61] The State 2045 target is presented in the forecast to provide a trajectory post-2035; this is necessary for UCR 2035 target setting purposes. Note that the 2045 forecast information has been included in the tables throughout this forecast section for informational purposes.

- *2050 or sooner: UC Sustainable Practices Policy Scopes 1, 2, and 3 carbon neutrality policy goal*[62]

2021 Building Space and Population Projections Data

GHG forecasted emissions are based on campus business-as-usual energy-use trends, the anticipated impact of 2021 LRDP developments, the anticipated impact of existing energy efficiency and GHG reduction programs, and campus growth assumptions consistent with the 2021 LRDP. Per the 2021 LRDP, growth modeling is based on the anticipated 2021 LRDP building growth, current student population, historic student growth trends for UC Riverside, delivery time required to build new facilities, and infrastructure needs. Projected building square footage is presented in assignable square feet (asf), or the area within the interior walls of a room that can be assigned to a program. However, GHG emissions generated from energy consumption and building construction depend on the total building space and materials necessary to construct the building, not just the area within the interior walls of a building. Therefore, for the purposes of forecasting operation and construction, asf is converted to gross square footage (gsf) using the standard space planning assumption ratio of 1.5 per UCR direction.

Table 10 and Table 11 provide a summary of the 2021 LRDP building and population growth assumptions in the 2035 horizon year used in the GHG emissions forecasting. Per the 2021 LRDP, growth modeling is based on the anticipated 2021 LRDP building growth, current student population, historic student growth trends for UC Riverside, delivery time required to build new facilities, and infrastructure needs. Projected building square footage is presented in assignable square feet (asf), or the area within the interior walls of a room that can be assigned to a program.[63] However, GHG emissions generated from energy consumption and building construction depend on the total building space and materials necessary to construct the building, not just the area within the interior walls of a building. Therefore, for the purposes of forecasting operation and construction, asf is converted to gross square footage (gsf) using the standard space planning assumption ratio of 1.5 per UCR direction.

Table 10 UCR 2021 LRDP Building Space Program Projections

Land Use	2018-2035 Building Change (asf)	New Construction (gsf)
Academics and Research		
Classroom and Services	176,970	265,455
Teaching Lab and Service	63,071	94,607
Open Lab and Service	12,757	19,136
Research Lab and Service	178,090	267,135
Total	**430,888**	**646,332**
Academic Support		
Offices and Services	586,581	879,872
Library & Collaborative Learning Space	177,238	265,857
Assembly and Exhibit	62,012	93,018
Other Department Space	70,398	105,597

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[62] Note that 2050 forecast information has not been included in the tables throughout this forecast section, because the UCR target trajectory was developed based on alignment with the State EO B-55-18 2045 target, which supersedes the UC Sustainability Practices Policy 2050 target.

[63] Assignable Square Feet (asf) is defined as the area measured within the interior walls of a room that can be assigned to a program and does not include circulation, mechanical, restrooms, or building service spaces. Per UCR direction the standard space planning assumption of 1.5 is used to convert asf to gsf.

Total	**896,229**	**1,344,344**
Student Life		
Residential	2,117,973	3,176,960
Residential Dining	38,725	58,088
Student Health	10,383	15,575
Student Union	90,300	135,450
Recreation Indoors	65,160	97,740
Recreation Outdoors	4 (acres)[1]	0
Athletics	0	0
Total	**2,322,541**	**3,483,812**
Other Campus Space		
Corporation Yard	0	0
2021 LRDP Total	**3,649,658**	**5,474,487**

[1] Negligible emissions are associated with the growth of outdoor recreation space therefore change in recreation space is not included in the inventory or forecast and presented here for information purposes only related to anticipated growth under the 2021 LRDP.

Source: 2021 LRDP Program Model

Table 11 UCR 2021 LRDP Campus Population Projections

Land Use	Baseline (2018/2019)	2021 LRDP Horizon Year (2035/2036)	Net 2021 LRDP Increase from Baseline
Students			
Undergraduates	20,581	28,000	7,419
Graduates	3,341	7,000	3,659
Total	**23,922**	**35,000**	**11,078**
Faculty and Staff			
Ladder Rank Faculty	841	1,285	444
Other Instructional Faculty	332	486	154
Non-Teaching Academic Appointment	529	774	245
Non-Academic Staff	3,037	5,000	1,963
Total	**4,739**	**7,545**	**2,806**
Total Campus Population	**28,661**	**42,545**	**13,884**

Source: 2021 LRDP Program Model

There are several interim projects that have occurred or are in progress on the UCR main campus after the 2018 calendar year and therefore, were not accounted for within the 2018 baseline GHG inventory. However, for the purposes of forecasting emissions, interim projects emissions have been added to the 2018 baseline year (i.e., inventory year) emissions to account for total emissions associated with projects built between the invenotry year and adoption of the proposed 2021 LRDP. Interim projects are described in further detail in the *Interim Projects Building Space Data* subsection below.

In addition, transportation related emissions are forecast based on the annual VMT estimates are shown in Table 12. Future VMT estimates with and without the 2021 LRDP buildout were modeled and provided by Fehr & Peers for 2030, 2035, and 2045.[64]

Table 12 Forecast Year Annual VMT with 2021 LRDP Buildout

Year	2030	2035	2045[2]
Vehicle Class[1]			
Passenger	127,676,851	132,342,053	141,672,456
Light Trucks	1,185,276	1,224,441	1,302,770
Medium Trucks	1,100,867	1,098,630	1,094,157
Heavy Trucks	1,715,753	1,738,033	1,782,593
Total	**131,678,748**	**136,403,157**	**145,851,976**

[1] Daily VMT with 2021 LRDP buildout for each of the indicated years was provided by Fehr & Peers. The data is adjusted according to the Origin-Destination (O-D) Method previously described to obtain daily VMT attributed to UCR. on Caltrans Data, Fehr & Peers recommends annualizing data based on 315 days/year for the study area.

[2] As noted in Section 3.1, *Forecast Data and Methodology: Forecast Years (2025, 2030, and 2035)*, 2045 forecast data is provided for informational purposes and is utilized for developing a trajectory post-2035 to allow for UCR 2030 and 2035 target setting.

Source: Fehr & Peers 2020. Draft Traffic Analysis

Interim Projects Building Space Data

There are several interim projects that have occurred or are in progress on the UCR main campus within the boundary of the 2021 LRDP post the 2018 calendar year and, therefore, would not be accounted for within the 2018 baseline GHG inventory. As these projects are under UCR operational control and are within the 2021 LRDP area, though not formally included in the 2021 LRDP, the construction and operational emissions associated with these interim projects are added to the GHG emissions forecasting to provide an all-encompassing and, thus, conservative forecast for the UCR main campus in 2018. The total 2018 baseline GHG emissions with the interim construction projects that would have been conducted prior during 2018 is 97,333 MT CO_2e.

Interim projects are not associated with the 2021 LRDP and have or will occur prior to its implementation and are outside of the scope of the 2021 LRDP projected growth. Construction and operational GHG emissions associated with the interim projects have been previously quantified in separate standalone UCR project-level CEQA documents using California Emissions Estimator Model (CalEEMod), and the respective results have been provided to Rincon by UCR for inclusion in the forecast. Construction and operational emissions were estimated using CalEEMod with the exception of the renovation projects (i.e., Batchelor Hall and Pierce Hall). The CEQA documents prepared for Batchelor Hall and Pierce Hall renovation did not include emission estimations. The two renovation projects primarily consist of energy upgrades; therefore, construction emissions are assumed to be negligible. The net change in energy consumption due to energy improvements was estimated based on communications with UCR Facilities that indicated a 16 percent reduction of energy consumption at Pierce Hall and was incorporated into the forecast. As the Batchelor Hall Renovation project is not yet under contract it was conservatively assumed that there would be no change in energy consumption from this project. To provide a conservative forecast analysis, interim project emissions were accounted for as Scope 3 emissions in the forecasts.

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[64] Fehr and Peers. 2020. UCR VMT Summary Spreadsheet.

Rincon received a list of eleven interim projects that were constructed post-2018 and are not included in the 2021 LRDP, but that are included in the forecast.[65] Interim projects include: North District Development (NDD) Phase 1, North District Development (NDD) Phases 2-5, Dundee Glasgow, The Barn, Plant Growth Environments Facility (PGEF), Student Success Center (SSC), Parking Structure 1 (PS1), Pierce Hall Renovation, Batchelor Hall Renovation, Student Health & Counseling Center, and School of Medicine Building 2.[66,67,68,69,70,71,72]

Subsequent to the completion of the Greenhouse Gas Emissions Inventory and Forecast Data Evaluation Memorandum sent to UCR on May 15, 2020, two projects, the Class Lab & Teaching Facility and School of Business were removed from the interim projects category, as it has been confirmed that these two projects are already incorporated into the 2021 LRDP program model.[73]

Forecast Methodology

Operation-related GHG emissions from building electricity and fuel use; utility electricity generation/transmission; vehicle fuel use by UCR fleet vehicles/employee and student commute; refrigerant process/storage; waste generation, as well as construction-related GHG emission from building demolition/construction materials and construction vehicle/equipment fuel use is forecasted using various models and plan-specific data and reports provided by UCR, discussed below.

The UCR GHG emissions forecast that accounts for building demolition, construction and operation is unique in that it accounts for the emissions savings of buildings that will be removed and replaced under the 2021 LRDP. Demolished buildings will be replaced by new facilities built according to the latest standards for energy efficiency. Therefore, operational GHG emissions of existing buildings that will be replaced under the 2021 LRDP are subtracted from the forecast and replaced by the operational GHG emissions associated with the replacement structures. The forecast also accounts for the GHG emissions associated with the demolition of existing structures and construction of replacement structures that will occur under the 2021 LRDP.

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[65] The updated list of interim projects including associated CEQA documentation of construction and demolition emissions and related information details were provided by UCR between June 24, 202 and July 10, 2020.

[66] UCR. 2019. North District Development Plan Project 3 958080: Revised Draft Environmental Impact Report SCH #2018061044. Available: <https://cpp.ucr.edu/sites/g/files/rcwecm2356/files/2019-04/ndd_revised_deir_all_sections.pdf>. Accessed May 1, 2020.

[67] UCR. 2018. Dundee Residence Hall and Glasgow Dining Project UCR Project # 950570: Addendum No. 2 to the 2005 UC Riverside Long-Range Development Plan Environmental Impact Report. Available: <https://cpp.ucr.edu/sites/g/files/rcwecm2356/files/2019-04/dundee-glasgow_combined_addendum_06-2018.pdf>. Accessed May 1, 2020.

[68] UCR. 2019. Plant Growth Environments Facility Project No. 950558: Final Initial Study/Mitigated Negative Declaration State Clearinghouse No. 2019029085. Available: <https://cpp.ucr.edu/sites/g/files/rcwecm2356/files/2019-04/pgef_final_is_mnd_april_2019.pdf>. Accessed May 1, 2020.

[69] UCR. 2017.Final Initial Study/Mitigated Negative Declaration: Barn Expansion UCR Project No. 950493 SCH No. 2017041076. Available: <https://cpp.ucr.edu/sites/g/files/rcwecm2356/files/2019-04/barn_expansion_final_is_mnd-august_2017.pdf>. Accessed June 11, 2020.

[70] UCR. 2019. UCR Student Success Center Project No. 950512: Final Initial Study/Mitigated Negative Declaration State Clearinghouse No. 2019089058. Available: <https://cpp.ucr.edu/sites/g/files/rcwecm2356/files/2019-10/Final_SSC_ISMND-Oct2019_1.pdf>. Accessed May 1, 2020.

[71] UCR. 2020. UCR Parking Structure 1 Project No. 956553: Final Initial Study/Mitigated Negative Declaration State Clearinghouse No. 2019129026. Available: <https://cpp.ucr.edu/sites/g/files/rcwecm2356/files/2020-01/UCR%20PS1_Final%20IS-MND_1-27-20.pdf>. Accessed May 1, 2020.

[72] Batchelor Hall and Pierce Hall were mechanical renovations that were assessed through Categorical Exemption. Therefore, net new emissions from the renovation project are based on improvements in building energy intensity (EUI) from the current building code, assumed to be 2016 -Title 24.

[73] Email communication with Stephanie Tang, UCR Campus Environmental Planner, on June 26, 2020.

For all forecast years and scenarios, the CalEEMod version 2016.3.2[74] was used to quantify emissions associated with the demolition of existing buildings and construction of future buildings under the 2021 LRDP. UCR provided a list of buildings and the associated building square footage that would be demolished in 5 to 10 years and 10 to 15 years. Emissions associated with demolition were calculated via CalEEMod based on the gross square footage of the buildings to be demolished as defined by UCR. Similarly, emissions associated with construction of new buildings was calculated using building square footage provided by UCR, and CalEEMod defaults based on the land use type. CalEEMod provides a number of default land use types such as University/College 4-Year, Library, and General Office Buildings that are representative of the UCR buildings to be constructed under the 2021 LRDP. See Appendix A for details regarding the new building size in gsf provided by UCR and CalEEMod land use type applied to the 2021 LRDP building data. Demolition and construction emissions were amortized across 2021 to 2035 and added to the forecasted emissions. The energy use intensity (EUI) factors developed by Brightworks Sustainability for the *UCR Program Concept Energy Analysis* (2016) and building gross square footage provided by UCR was utilized to estimate annual natural gas and electricity use by building type for both existing buildings and future building.[75] Energy use for existing buildings was based on the EUI associated with the current level of energy performance at the time of the study, while energy use for future buildings was based on the EUI for the escalating California Title-24 code. UCR distinguished existing and future buildings by building or land use type allowing for the application of the appropriate EUI. Existing building EUIs in kBtu/sf-yr were determined for academic/admin, lab/complex, residential, and social building types to be 107, 253, 83 and 180 kBtu/sf-yr, respectively. New buildings built to code were determined by UCR in the Brightworks study to have EUIs of 65, 149, 57 and 107 kBtu/sf-yr for academic/admin, lab/complex, residential, and social building types, respectively. EUIs for existing and future buildings were applied to the 2021 LRDP buildings gsf based on building type defined as either academic/admin, lab/complex, residential, or social. See Appendix A for details regarding designation of 2021 LRDP buildings by type and calculations of energy use based on the EUI. Additional energy use improvements resulting from other legislation or UC Sustainability Policies was incorporated under the legislative adjusted scenario as described in detail in the following sections.

Business As Usual Forecast Scenario Methodology

The BAU scenario forecast provides an estimate of how GHG emissions would change in the forecast years if consumption trends continue as in 2018, absent any new regulations which would reduce emissions. Indicator growth rates were developed from 2018 activity levels and applied to the various emissions sectors to project future year emissions.

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[74] California Air Pollution Officers Association (CAPCOA). 2016. CalEEMod Version 2016.3.2. user guide and program documentation. Available: <http://www.aqmd.gov/caleemod/>. Accessed: March 10, 2020.

[75] A distinct EUI was developed for the following specific building types: academic/admin, lab/complex, residential, social.

Table 13 contains a list of growth factors used to develop the business-as-usual scenario forecast. The BAU growth factors were then multiplied by the population or service person growth rates and anticipated building square footage growth to develop the BAU emissions forecast.

Table 13 BAU Forecast Scenario Growth Metrics

Sector	Growth Metrics
Energy	
Baseline Electricity (kWh/SF)	24.765
Baseline NG (Therms/SF)	0.722
Baseline Diesel (Gal/SF)	0.002
Fugitive	
Baseline Refrigerant (MT CO_2e/SF)	0.00007
Campus Fleet	
Gasoline (Gal/CP)	4.7
Diesel (Gal/CP)	0.3
CNG (scf/CP)	0.2
Business Travel	
Air Travel (miles per Staff)	1,746
On Site Transport	
Passenger (VMT/CP)	2,777
Light-Heavy Duty (VMT/CP)	21
Medium-Heavy Duty (VMT/CP)	20
Heavy-Heavy-Duty (VMT/CP)	31
Public Transit	
Attributed VMT per CP	14.0
Waste	
Waste Generation (short tons/CP)	0.0508

kWh: kilowatt hour; CP: campus population (students, faculty and staff) MT CO_2e: metric tons of carbon dioxide equivalent; VMT: vehicle miles traveled

See Appendix A for detailed emission calculations and forecast methodology. Growth metrics are developed based on existing conditions at UCR as presented and used in the 2018 inventory.

State Regulations Adjusted Emissions Forecast Scenario Methodology

The State regulations adjusted scenario estimates future UCR emissions under codified GHG reduction strategies currently being implemented at the State and federal level. The 2017 Scoping Plan Update identified several existing State programs and targets, or known commitments required by statute which can be assumed to achieve GHG reductions without UCR action, such as increased fuel efficiency standards of mobile vehicles. The following known commitments are factored into the adjusted scenario projection.

TAILPIPE EMISSIONS

The CARB EMFAC2017 transportation modeling program incorporates legislative requirements and regulations including Advanced Clean Cars program (Low Emissions Vehicles III, Zero Emissions Vehicles program, etc.), and Phase 2 federal GHG Standards. Signed into law in 2002, AB 1493 (Pavley Standards) required vehicle manufacturers to reduce GHG emissions from new passenger vehicles and light trucks from 2009 through 2016, with a target of 30 percent reductions by 2016, while simultaneously improving fuel efficiency and reducing motorists' costs.[76]

Prior to 2012, mobile emissions regulations were implemented on a case-by-case basis for GHG and criteria pollutant emissions separately. In January 2012, CARB approved a new emissions-control program (the Advanced Clean Cars program) combining the control of smog, soot causing pollutants, and GHG emissions into a single coordinated package of requirements for passenger cars and light trucks model years 2017 through 2025. The Advanced Clean Cars program coordinates the goals of the Low Emissions Vehicles, Zero Emissions Vehicles, and Clean Fuels Outlet programs. However, in 2019 the federal government issued a final action entitled the One National Program on Federal Preemption of State Fuel Economy Standards Rule, which finalized Part I of the Safer, Affordable, Fuel-Efficient (SAFE) Vehicles Rule and stated that federal law preempts State and local tailpipe GHG emissions standards as well as zero emission vehicle mandates. While still in flux, under the SAFE Rule discussed above, fuel economy and GHG emission standards for new vehicles may not improve beyond model year 2020. According to CARB, the federal rollback proposal of the remaining Advanced Clean Cars Program standards would increase global warming emissions by 14 million metric tons per year by 2025.[77]

Reductions in GHG emissions from the above referenced standards were calculated using the CARB EMFAC2017 model for Riverside County. The EMFAC2017 model integrates the estimated reductions into the mobile source emissions portion of the model.[78]

As of the time of this writing, the federal Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part 2 has been posted in the Federal Register but was intended to take effect on June 29, 2020. This new rule rolls back California fuel efficiency standards for on-road passenger vehicles, so that cars and trucks will now only achieve a 40.4 mpg industry average by 2026 compared to the 46.7 mpg projected requirement under the previous California Advanced Clean Car Program/federal Corporate Average Fuel Economy (CAFE) standards. No methodology currently exists for extracting or altering the on-road passenger vehicles fuel efficiency standard aspect of the Emissions Factors (EMFAC) model[79] used to calculate forecasted vehicle GHG emissions. In addition, the California Climate Change Scoping Plan does not yet address or provide guidance related to this pending change in fuel efficiency standards with regard to GHG emissions determination. Furthermore, California is currently challenging this new rule in the court system, and it is reasonably foreseeable that the State will be successful in its legal challenges, for the reasons outlined in the State's lawsuit[80] and on the CARB website.[81] Furthermore, in February 2021, the U.S. Department of Justice asked courts to put the litigation on hold while the administration "reconsidered the policy

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[76] CARB. 2013.Clean Car Standards – Pavley, Assembly Bill 1493.

[77] CARB. 2018. California moves to ensure vehicles meet existing State greenhouse gas emissions standards. Available: <https://ww2.arb.ca.gov/news/california-moves-ensure-vehicles-meet-existing-state-greenhouse-gas-emissions-standards-0>. Accessed May 25, 2020.

[78] Additional details are provided in the EMFAC2017 Technical Documentation, July 2018. Available: <https://www.arb.ca.gov/msei/downloads/emfac2017-volume-iii-technical-documentation.pdf>. Accessed May 25, 2020. The Low Carbon Fuel Standard (LCFS) regulation is excluded from EMFAC2017 because most of the emissions benefits due to the LCFS come from the production cycle (upstream emissions) of the fuel rather than the combustion cycle (tailpipe). As a result, LCFS is assumed to not have a significant impact on CO_2 emissions from EMFAC's tailpipe emissions estimates.

[79] The EMFAC model is developed and used by CARB to assess emissions from on-road vehicles including cars, trucks, and buses in California and to support CARB regulatory and planning efforts to meet Federal Highway Administration transportation planning requirements.

[80] *State of California et al. v. Chao et al.* (Case 1:19-cv-02826). Available: <https://oag.ca.gov/system/files/attachments/press_releases/California%20v.%20Chao%20complaint%20%2800000002%29.pdf>. Accessed May 2020.

[81] CARB. Waiver Timeline. Available: <https://ww2.arb.ca.gov/resources/documents/carb-waiver-timeline>. Accessed May 2020.

decisions of a prior administration." Therefore, the UCR adjusted forecasts have not been modified to reflect the new SAFE Rule Part 2.

INNOVATIVE CLEAN TRANSIT

In December 2018, the CARB adopted the Innovative Clean Transit (ICT) regulations, requiring all transit agencies to develop a plan to achieve zero emission bus (ZEB) fleets on or before 2040. Starting between 2023 and 2029, transit agencies must begin purchasing only ZEB replacements and must have completed the fleet replacement program prior to 2040.

TITLE 24

Although it was not originally intended to reduce GHG emissions, California Code of Regulations Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was adopted in 1978 in response to a legislative mandate to reduce California's energy consumption, which in turn reduces fossil fuel consumption and associated GHG emissions. The standards are updated triennially to allow consideration and possible incorporation of new energy-efficient technologies and methods. The update process reviews the standards with the legislative directive of "[r]educing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy." (Pub. Resources Code, § 25402). Starting in 2020, new residential developments will include on-site solar generation and near-zero net energy use. For projects implemented after January 1, 2020, the California Energy Commission estimates the 2019 standards will reduce consumption by seven percent for single-family residential buildings and 30 percent for non-residential buildings, relative to the 2016 standards. Overall, the 2019 standards are anticipated to use about 53% less energy than structures developed under the 2016 standards, which in turn were 28% more efficient that the 2013 standards. These percentage savings relate to heating, cooling, lighting, and water heating only and do not include other appliances, outdoor lighting not attached to buildings, plug loads, or other energy uses. The calculations and GHG emissions forecast assume all growth in the residential and commercial/industrial sectors is from new construction compliant with the latest Title 24 Standards.

The 2017 Scoping Plan Update calls for the continuation of ongoing triennial updates to Title 24 which will yield regular increases in the mandatory energy and water savings for new construction. The State is already in the process of preparing 2022 building standards and energy efficiency requirements.[82] Future updates to Title 24 standards for residential and non-residential alterations past 2023 are not taken into consideration as the 2022 standards have not yet been adopted.

RENEWABLES PORTFOLIO STANDARD & SENATE BILL 100

Established in 2002 under SB 1078, enhanced in 2015 by SB 350, and accelerated in 2018 under SB 100, California's RPS is one of the most ambitious renewable energy standards in the country. The RPS program requires investor-owned utilities, publicly owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 60 percent of total procurement by 2030. The RPS program further requires these entities to increase procurement from GHG-free sources to 100 percent of total procurement by 2045.

RPU provides the grid electricity used by UCR and is subject to the RPS requirements. In 2018, the inventory year, 35 percent of RPU's total procurement was from eligible renewable energy

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[82] CEC. 2020. 2022 Building Energy Efficiency Standards. Available: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed May 2020.

resources. UCR forecast emissions factors include reductions based on compliance with RPS requirements through 2045. As such, the percent of eligible renewable energy resources procured by RPU was interpolated for interim years assuming that RPU achieved the following required targets: 60 percent eligible renewable energy resources in 2030, and 100 percent eligible renewable energy resources in 2045.

UC Policy on Sustainable Practices

UC has committed to a number of goals related to GHG emissions reduction. The original GHG reduction goal set by the UC Policy was to reduce GHG emissions to 2000 levels by 2014, to 1990 levels by 2020, and ultimately climate neutrality as soon as feasible.[83] The UC Policy has been updated to included goals beyond 2020. The most recent update of the UC Policy requires carbon neutrality for Scope 1 and Scope 2 emissions by 2025 and carbon neutrality for Scope 3 emissions by 2050 or sooner.

The impact of existing UC policies has not been factored into the adjusted forecast scenario included in this report.

3.2 BAU Forecast Scenario Calculation Results

Under the BAU forecast scenario, UCR GHG emissions are projected to continue increasing through 2035 as shown in

Table 14. This increase is driven primarily by an increase in energy usage due to building space growth under the 2021 LRDP buildout and increased on-site transportation due to campus population growth. As previously discussed, the BAU provides an estimate of how GHG emissions would change in the forecast years if consumption trends and emission factors continue as in 2018, absent any new regulations which would reduce emissions or increase building energy efficiency. Table 13 presents the growth factors utilized for BAU forecasting in addition to campus population growth and building projections presented in Table 10 and Table 11, respectively. Emissions generated by demolition and construction of projects under the 2021 LRDP also contribute to the increase. Emissions from construction and demolition projects between 2021 and 2035 were calculated using CalEEMod and emissions were amortized across the 2021 LRDP timeframe of 14 years (i.e., 2021 to 2035). Amortized construction and demolition emissions were added to year starting in 2021. Construction and operational emissions associated with interim projects were calculated using CalEEMod and were added to the specific year(s) that construction is assumed to occur and operation to start based on the construction schedule information provided by UCR.[84] 2035 emissions are projected to be 279,931 MT CO2e under the business-as-usual scenario, an increase of approximately 288 percent above the 2018 emissions level of 97,333 MT CO2e.

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[83] UC. Annual Report on Sustainability Practices. 2010. Available: <https://regents.universityofcalifornia.edu/regmeet/mar10/gb6.pdf>. Accessed July 14, 2020.

[84] UCR provided information regarding construction timeframe and operational year via email communication with Stephanie Tang, UCR Campus Planner, on June 26, 2020. Only energy emissions from interim project operation are included in the forecast as emissions associated with waste, mobile, area, etc. are captured in the forecast via other growth factors.

Table 14 BAU Forecast Scenario Summary by Sector by Target Year

Scope	2025 (MT CO_2e)	2030 (MT CO_2e)	2035 (MT CO_2e)	2045[1] (MT CO_2e)
Scope 1				
Natural Gas	33,834	45,674	57,629	57,629
Other Fuels	138	178	218	218
Building and Facility Refrigerants	569	734	899	899
UCR Fleet (Unleaded)	1,440	1,611	1,782	1,782
UCR Fleet (Diesel)	35	39	44	44
UCR Fleet (CNG)	90	101	112	112
Total Scope 1 Emissions	**36,107**	**48,337**	**60,683**	**60,683**
Scope 2				
Electricity	88,393	122,028	156,320	156,320
Total Scope 2 Emissions	**88,393**	**122,028**	**156,320**	**156,320**
Scope 3				
UCR Business Travel	1,943	2,215	2,487	2,487
On-Road Transportation (Passenger)	35,628	42,261	43,805	46,894
On-Road Transportation (Commercial/Heavy Duty)	3,643	4,551	4,609	4,723
Public Transit	891	997	1,103	1,103
Waste	293	328	362	362
2021 LRDP Demolition	44	44	44	0
2021 LRDP Construction	1,055	1,055	1,055	0
Interim Project Construction	1,820	0	0	0
Interim Project Operation	3,717	10,631	9,463	7,128
Total Scope 3 Emissions	**49,034**	**62,081**	**62,928**	**62,697**
Total Emissions	**172,425**	**232,446**	**279,931**	**279,700**

[1] As noted in Section 3.1, *Forecast Data and Methodology: Forecast Years (2025, 2030, and 2035)*, 2045 forecast data is provided for informational purposes and is utilized for developing a trajectory post-2035 to allow for UCR 2035 target setting.

Scope 1 Emissions BAU Forecast

Under the BAU forecast scenario, Scope 1 emissions are projected to continue increasing through 2035 as shown in Table 14. This increase is driven by an increase in natural gas and vehicle fleet fuel usage. 2035 Scope 1 emissions are projected to be 60,683 MT CO_2e under the business-as-usual scenario.

Scope 2 Emissions BAU Forecast

Under the BAU forecast scenario, Scope 2 emissions are projected to continue increasing through 2035 as shown in Table 14. This increase is driven by an increase in electricity usage. 2035 Scope 2 emissions are projected to be 156,320 MT CO_2e under the business-as-usual scenario.

Scope 3 Emissions BAU Forecast

Under the BAU forecast scenario, Scope 3 emissions are projected to continue increasing through 2035 as shown in Table 14. This increase is driven by emissions associated with on-site transportation by campus commuters and operation of projects defined as “Interim Projects”. 2035 Scope 3 emissions are projected to be 62,928 MT CO_2e under the business-as-usual scenario.

3.3 Adjusted Forecast Scenario Calculation Results

Existing State polices and regulations will lead to a reduction from the BAU forecast of 180,905 MT CO_2e in GHG emissions by 2045 for UCR, as shown in Table 15. The increasing decarbonization of the electricity supply due to SB 100 and the Renewable Portfolio Standard (RPS) is the largest single factor contributing to GHG emissions reductions, with a reduction of 140,652 MT CO_2e by 2045 compared with the BAU forecast.

Table 15 Summary of State Legislative Reductions

Legislation	2025 (MT CO_2e reduced)	2030 (MT CO_2e reduced)	2035 (MT CO_2e reduced)	2045[1] (MT CO_2e reduced)
Senate Bill 100	18,660	42,916	82,948	140,652
Title 24	6,532	13,064	19,595	19,595
Tailpipe	6,466	12,865	15,856	19,555
Innovative Clean Transit	284	544	852	1,103
Total	**31,941**	**69,388**	**119,252**	**180,905**

[1] As noted in Section 3.1, *Forecast Data and Methodology: Forecast Years (2025, 2030, and 2035)*, 2045 forecast data is provided for informational purposes and is utilized for developing a trajectory post-2035 to allow for UCR 2035 target setting.

Under the forecast scenario adjusted for reductions that will occur due to State and federal regulations, UCR GHG emissions are projected to decrease below 2018 emissions by 2045 assuming no additional growth post-2035 beyond that anticipated by the 2021 LRDP, as shown in

Table 16. The decrease that occurs between 2030 and 2045 is primarily driven by decarbonization of the electricity supply association with SB 100 and the Renewable Portfolio Standard. Under the forecast scenario adjusted for reductions that will occur due to State and federal regulations, 2035 emissions are projected to be 155,029 MT CO_2e, approximately 159 percent higher than the 2018 emissions level of 97,333 MT CO_2e.

Table 16 Adjusted Future GHG Forecast Scenario by Scope and Target Year

Scope	2025 (MT CO_2e)	2030 (MT CO_2e)	2035 (MT CO_2e)	2045[1] (MT CO_2e)
Scope 1				
Natural Gas	32,526	43,056	53,702	53,702
Other Fuels	138	178	218	218
Building and Facility Refrigerants	569	734	899	899
UCR Fleet (Unleaded)	1,440	1,611	1,782	1,782
UCR Fleet (Diesel)	35	39	44	44
UCR Fleet (CNG)	90	101	112	112
Total Scope 1 Emissions	**34,798**	**45,719**	**56,756**	**56,756**
Scope 2				
Electricity	64,510	68,666	57,703	0
Total Scope 2 Emissions	**64,510**	**68,666**	**57,703**	**0**
Scope 3				
UCR Business Travel	1,943	2,215	2,487	2,487
On-Road Transportation (Passenger)	29,684	30,324	29,423	28,757
On-Road Transportation (Commercial/Heavy Duty)	3,121	3,624	3,135	3,305
Public Transit	608	453	251	0
Waste	293	328	362	362
2021 LRDP Demolition	44	44	44	0
2021 LRDP Construction	1,055	1,055	1,055	0
Interim Project Construction	1,820	0	0	0
Interim Project Operation	2,905	6,697	3,814	-1,701
Total Scope 3 Emissions	**41,471**	**44,738**	**40,570**	**33,210**
Total Emissions	**139,920**	**159,124**	**155,029**	**89,966**

[1] As noted in Section 3.1, *Forecast Data and Methodology: Forecast Years (2025, 2030, and 2035)*, 2045 forecast data is provided for information purposes and is utilized for developing a trajectory post-2035 to allow for 2035 target setting.

Scope 1 Emissions Adjusted Forecast

Under the State Legislative Reductions adjusted forecast scenario, Scope 1 emissions are projected to continue increasing through 2035 as shown in Table 16. This increase is driven by an increase in natural gas and vehicle fleet fuel usage. 2035 Scope 1 emissions are projected to be 56,756 MT CO_2e under the Legislative Reductions forecast scenario

Scope 2 Emissions Adjusted Forecast

Under the State Legislative Reductions adjusted forecast scenario, Scope 2 emissions are projected to increase through 2030 to 68,666 MT CO_2e and then begin to decrease through 2035 to 57,703 MT CO_2e as shown in Table 16. The trend is primarily driven by increased decarbonization of the electricity supply between 2035 and 2045 in association with SB 100 and the Renewable Portfolio Standard.

Scope 3 Emissions Adjusted Forecast

Under the State Legislative adjusted forecast scenario, Scope 3 emissions are projected to peak in 2030 at 44,738 MT CO_2e and then begin to decrease in 2035 as shown in Table 16. This trend is driven by a decrease in operational emissions associated with the interim projects through 2035 as electricity energy intensity factors decrease due to SB100.

3.4 Summary of BAU and Adjusted Forecasts Results

Table 17 provides the summary of BAU and adjusted forecast calculation results. Figure 5 shows the overall BAU and adjusted forecast results and in comparison to baseline.

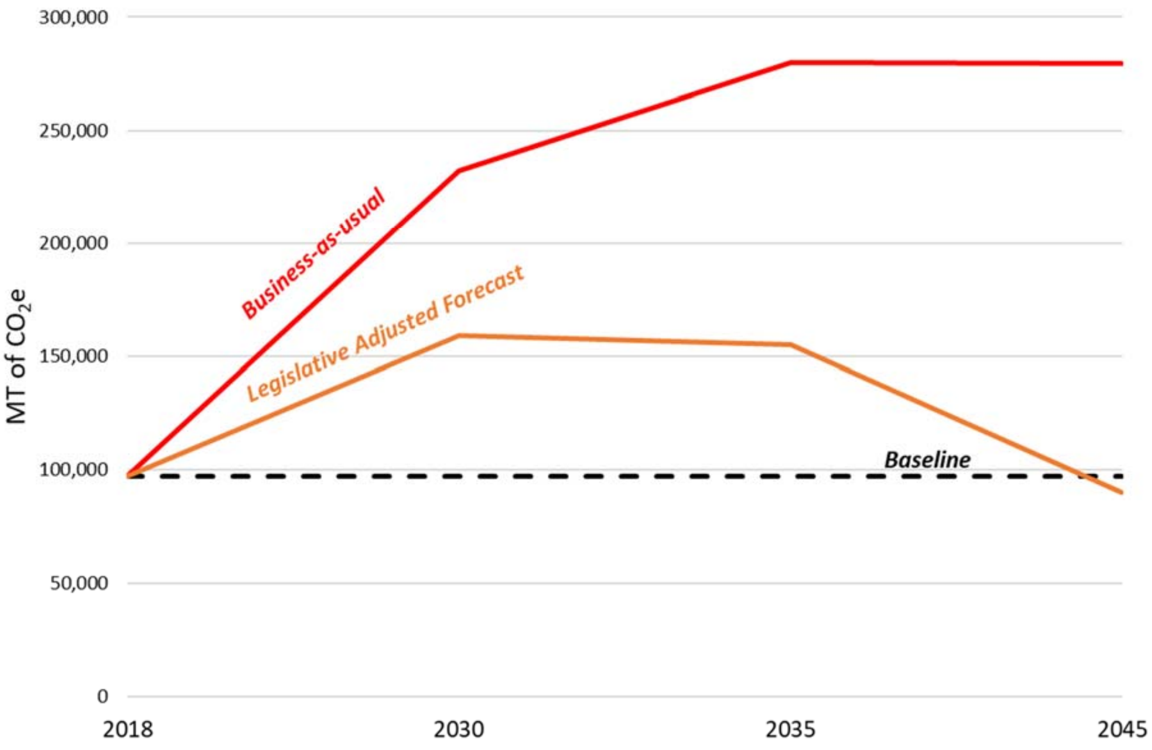
Table 17 Summary of BAU and Adjusted Forecasts by Year

Emissions Forecast	2025 (MT CO_2e)	2030 (MT CO_2e)	2035 (MT CO_2e)	2045[2] (MT CO_2e)
Baseline[1]	97,333	97,333	97,333	97,333
BAU Forecast	173,534	232,446	279,931	279,700
Adjusted Forecast	140,779	159,124	155,029	89,966

[1] Baseline emissions presented in the forecast include the construction emissions associated with interim projects that were constructed between 2018 and 2020 (97,232 MT CO_2e form the baseline inventory + 101 MT CO_2e from interim projects).

[2] As noted in Section 3.1, *Forecast Data and Methodology: Forecast Years (2025, 2030, and 2035)*, 2045 forecast data is provided for information purposes and is utilized for developing a trajectory post-2035 to allow for UCR 2035 target setting.

Figure 5 Summary of BAU and Adjusted Forecasts by Year



4 2025, 2030, & 2035 GHG Emissions Targets

4.1 Target Types and Gap Analysis Methodology

Climate action plan GHG-reduction targets can be set as either an efficiency target (MT CO_2e per service population or per service population per year) or as a mass emissions target (total MT CO_2e). Throughout this section, targets are discussed in terms of mass emissions reduction, since the majority of the UCR Scope 1 and Scope 2 emissions are directly under UCR operational control and are tracked as mass emissions.

At this time, the State has codified a goal of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and has developed a Scoping Plan to demonstrate how the State will achieve the 2030 goal and make substantial progress toward the State's long-term GHG reduction goals. While no State plan currently exists to achieve carbon neutrality by 2045, EO B-55-18 directs CARB to ensure future Scoping Plan updates identify and recommend measures to achieve the carbon neutrality goal. Executive Orders are binding only unto State agencies. In addition, showing progress toward this goal is expected to be a mandatory component of CEQA analyses upon publication of the next Scoping Plan.

Based on this information and the nature of the 2021 LRDP, targets are established for the years 2025 (UC Policy target year), 2030 (SB 32 target year), and 2035 (2021 LRDP horizon target year). The 2035 target is intended to demonstrate UCR's commitment to achieving the long-term goal presented in EO B-55-18. This section provides UCR GHG targets for 2025, 2030, and 2035 that are in line with State targets.

Targets Baseline Year

UCR has been tracking progress under the UCOP Annual Reports. UCR has utilized the 1990 GHG emissions levels discussed in Section 1.3, *Previous Inventories 1990 GHG Emissions*, for establishing targets that align with the Statewide 2020 targets established by AB 32.[85] Therefore, the 1990 GHG emissions levels are also used to establish a 2030 target that aligns with the Statewide goal of SB 32 to reduce emission by 40 percent from the 1990 levels by 2030. However, because the previous inventories are based on campus-wide operations that include both the 2021 LRDP facilities as well as additional satellite facilities the 1990 baseline levels were scaled down to be more representative of just the 2021 LRDP boundary. UCR provided dis-aggregated activity data for Scope 1 and Scope 2 emission sources for 2018 calendar year such that only activity data under the 2021 LRDP operational boundary were included. It was not possible to disaggregate 2018 data from Scope 3 sources in the same way. Additionally, as described in Section 2.4, some sources of Scope 3 emissions in this inventory for the 2021 LRDP have not been previously included in the annual inventories prepared by CCWG, including emissions associated with transit and waste generation. Therefore, it would not be appropriate to include transit and waste generation Scope 3 emissions data sources for scaling purposes.

A comparison between the UCR-wide inventory to the 2021 LRDP (i.e., main campus) inventory including just emission sources included in the CCWG reports showed that the 2021 LRDP operational boundary accounts for approximately 90 percent of campus-wide emissions (e.g., 2021

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[85] UCR. 2020. GHG Reporting Tool Fiscal Year 2018/2019 prepared by the UCR Climate Change Working Group.

LRDP inventory/UCR-wide inventory where 93,791/104,767 = 90 percent)[59]. Therefore, for the purposes of establishing a 1990 baseline consistent with the UCR-established baseline for tracking in the Annual Report, it was conservatively estimated that, for the 2021 LRDP boundary area, 1990 levels would have been approximately 73,559 MT CO_2e.

Proposed UCR Targets for 2025, 2030, and 2035

The UC Policy Carbon Neutral by 2025 goal recognizes that UC has already established aggressive emissions reduction goals and has begun working towards them. Consistent with the goals established by the UC Policy, the proposed UCR targets would achieve carbon neutrality for Scope 1 and Scope 2 emissions by 2025 and continue to reduce GHG emissions in a linear fashion until reaching carbon neutrality for Scope 1, 2, and 3 emissions by 2045 (consistent with EO B-55-18). Table 18 includes the proposed UCR targets and related emissions gaps for 2025, 2030, and 2035.

Table 18 UCR Targets by Year and Related Emissions Gaps

Year	Adjusted Forecasts (MT CO_2e)	Proposed UCR Targets (MT CO_2e)	Emissions Gaps to Target (MT CO_2e)
2025	139,920	41,471	98,448
2030	159,124	31,104	128,020
2035	155,029	20,736	134,294

Comparison of State Targets and Proposed UCR Targets

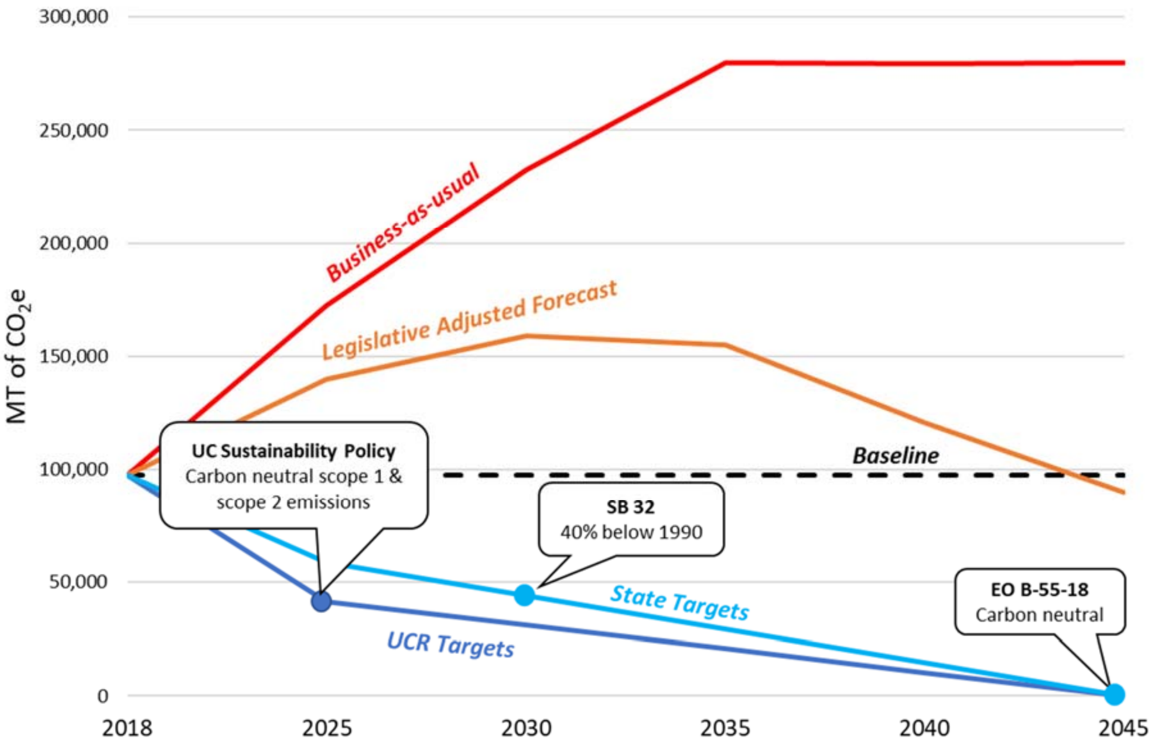
Both the UC 2020 goal (per UC Policy) and the State 2020 target (per AB 32) entail reaching 1990 GHG emissions levels by 2020. To align with the State 2030 target (per SB 32), the UCR main campus, representative of the 2021 LRDP area, would need to reduce GHG emissions 40 percent below 1990 levels representative of and scaled to the main campus (i.e., 40 percent below 73,559 MT CO_2e as detailed above in *Targets Baseline Year*). Based on the scaled main campus 1990 levels, the 2020 State target would be 73,559 MT CO_2e and the 2030 State target would be 31,104 MT CO_2e as shown in Table 19. A linear interpolation between the 2020 and 2030 State targets indicates that a 2025 target would need to be approximately 58,847 MT CO_2e to be aligned with SB 32. However, to align with the UC 2025 goal (per UC Policy) of reaching carbon neutrality related to Scope 1 and Scope 2 emissions, the 2025 UCR target would be 41,471 MT CO_2e. As shown in Table 19, this 2025 UCR target would be 17,376 MT CO_2e (or approximately 30 percent) less than the level that would need to be reached in 2025 to be aligned with SB 32. As such, the UC 2025 goal is more stringent than the State 2030 target.

The UC Policy also includes a goal of reaching carbon neutrality related to Scope 3 emissions by 2050 or sooner. As outlined in the EO B-55-18, the State goal is to reach carbon neutrality by 2045. Meeting the State target of carbon neutrality by 2045 would be aligned with the UC Policy goal to reach carbon neutrality related to Scope 3 emissions by 2050 or sooner. While the UCR forecasts and target setting will need to be revised and updated for post-2035 to accommodate a future LRDP update, aligning the UCR 2035 target with the State 2045 carbon neutrality target trajectory would ensure UCR is aligned both with State future-year targets and UCR future-year targets. As such, Table 19 and Figure 6 show a linear interpolation between the UC 2025 goal and the State 2045 carbon neutrality goal. As shown, by first meeting the UC 2025 goal, UCR would be on a pathway that aligns with UC Policy and is also more stringent than State targets through the 2021 LRDP horizon year of 2035. As such, it is recommended that UCR utilize the UC 2025 goal as its initial target and then follow a linear trajectory between 2025 and 2045 to meet carbon neutrality in 2045 in order to align UCR with both State and UC goals in 2030 and 2035.

Table 19 Difference in State Targets and Proposed UCR Targets

Year	State Targets (MT CO_2e)	Proposed UCR Targets (MT CO_2e)	Difference in Targets (MT CO_2e)
2025	58,847	41,471	17,376
2030	44,135	31,104	13,032
2035	29,424	20,736	8,688

Figure 6 Summary of State Targets and Established UC Policy Targets



4.2 Summary of Emissions Reduction Targets Results

The State currently has goals for reducing GHG emissions by 40 percent compared to 1990 levels by 2030 (per SB 32) and achieving carbon neutrality by 2045 (per EO B-55-18). It is recommended that UCR GHG emissions targets are established for the years 2025 (UC Policy target year), 2030 (SB 32 target year), and 2035 (2021 LRDP horizon target year) to show compliance with these multiple-year UC and State goals and establish substantial progress toward the State 2045 carbon neutrality goal.

The UCR targets are based on a total GHG emissions (i.e., mass emissions) metric. The UCR targets would follow a two-part trajectory. The first part of the trajectory would be a steep reduction in GHG emissions between 2020 and 2025 to achieve carbon neutrality related to Scope 1 and Scope 2 emissions. Following 2025, the second part of the trajectory would continue to decrease in a linear fashion, until reaching carbon neutrality for Scope 1, 2, and 3 emissions by 2045.

Table 20 provides total UCR 2025, 2030, 2035 and 2045 GHG emissions, and Figure 7 shows these mass emissions reduction targets in relation to baseline, BAU forecast, and adjusted forecast for the purpose of UCR 2035 target setting.

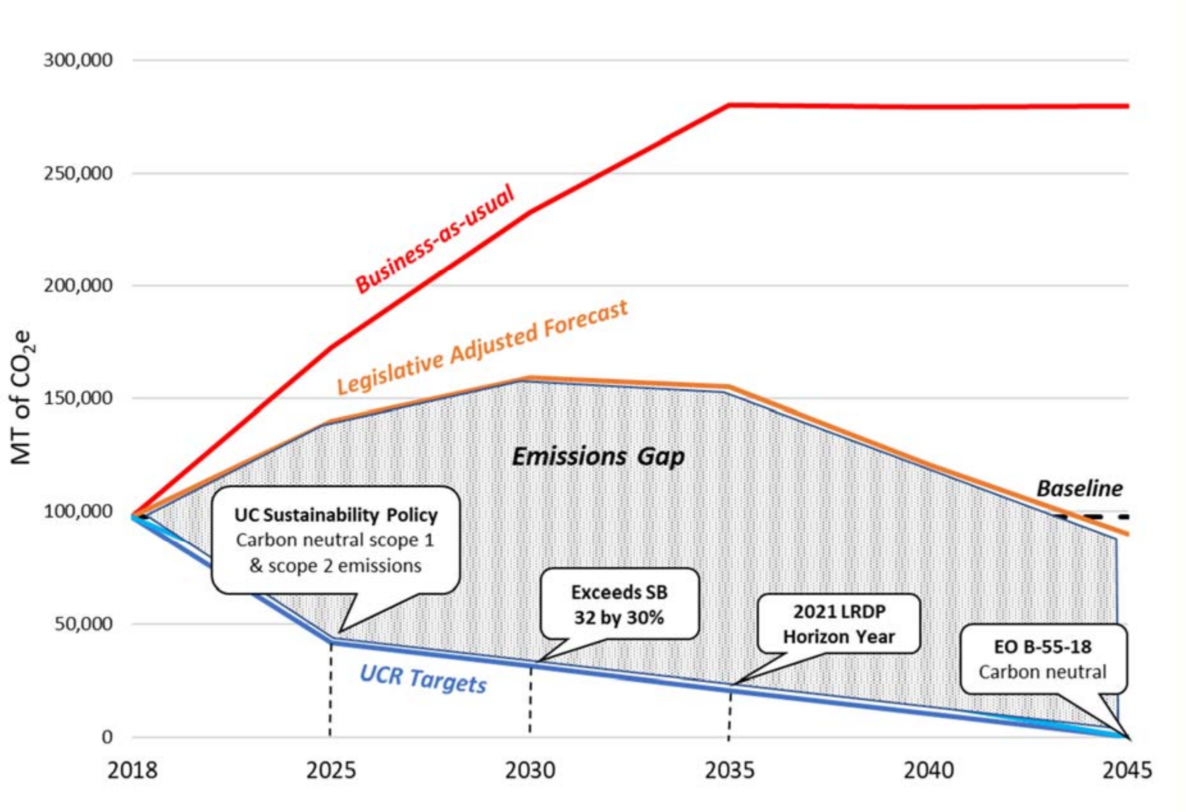
Table 20 UCR Targets Compared to Future GHG Emissions Forecasts

Emissions Forecast	2025 (MT CO_2e)	2030 (MT CO_2e)	2035 (MT CO_2e)	2045[2] (MT CO_2e)
Baseline Emissions Forecast	73,559	73,559	73,559	73,559
BAU Emissions Forecast	172,425	232,446	279,931	279,700
Adjusted Emissions Forecast	139,920	159,124	155,029	89,966
Proposed UCR Targets	41,471	31,104	20,736	0[2]

[1] SB 32 Target shown for informational purposes only.

[2] As noted in Section 3.1, *Forecast Data and Methodology: Forecast Years (2025, 2030, and 2035)*, 2045 forecast data is provided for informational purposes and is utilized for developing a trajectory post-2035 to allow for UCR 2035 target setting.

Figure 7 Proposed UCR Targets Compared to Future GHG Emissions Forecasts



Meeting the GHG Emissions Targets

The GHG emissions targets identified above will be achieved through implementation of GHG emissions reduction measures identified in the UCR GHGRS associated with the 2021 LRDP.

5 Conclusion

State regulations in addition to UC policies are expected to achieve State 2030 GHG emissions targets as well as continue to reduce emissions to carbon neutrality by 2045. However, proposed UCR targets for 2025, 2030, and 2035 require additional emissions reductions from measures included in the 2021 GHGRS. UCR would adopt the UCR targets discussed above in Section 4, *2025, 2030, and 2035 GHG Emissions Targets* as part of the 2021 LRDP, as these targets are in compliance with UC Policy emissions reduction goals and State emissions reduction goals.

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Appendix A

Inventory, Forecast, and Targets Modeling Outputs

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2018 UCR GHG Emission Inventory

General Information

GWP (AR5)	
CH4	28
N2O	265

1. The GWP values are 100-year values from the Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report (AR5) 2013.

Scope 1

Stationary Combustion

Natural Gas (Buildings and Facilities)

Data Source[1]	Natural Gas Usage		Emission Factors[3]			Emissions[4]			CO_2e (MT)[5]	Sum CO_2e (MT)
	Usage (Therms)	Usage (MMBtu)[2]	kg CO_2/MMBtu	kg CH_4/MMBtu	kg N_2O/MMBtu	CO_2 (MT)	CH_4 (MT)	N_2O (MT)		
Annual Utility Data (SCG)	3,471,747	347,091	53.06	0.001	0.0001	18416.670	0.347	0.035	18,435.59	18,410.07
Annual Utility Data (Shell)	3,466,942	346,611	53.06	0.001	0.0001	18391.180	0.347	0.035	18,410.07	

Notes:

1. A summary of the SCG and Shell invoices was provided by UCR Energy Manager
2. Converted to MMBtu for emission calc (1 MMBtu = 10.0024 Therms)
3. Emission factors obtained from TCR (April 2020) for natural gas in industrial uses: https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf
4. Conversion: 1,000 kg = 1 MT
5. Utility data reported from SCG and Shell are not different sources of natural gas being provided to the campus, rather two reports of the same quantity used on campus. To provide a conservative estimate the recorded quantity with the highest emissions was utilized in the inventory.

Energy Manager will provide rationale regarding using the Shell natural gas data.

Other Stationary Combustion (Buildings and Facilities)

Fuel Type	Data Source[1]	Fuel Usage (gallons)	Emission Factors[2,3]			Emissions[4]			CO_2e (MT)	Sum CO_2e (MT)
			kg CO_2/gallons	kg CH_4/gallons	kg N_2O/gallons	CO_2 (MT)	CH_4 (MT)	N_2O (MT)		
Diesel #2	Invoice Summary	8,003	10.21	0.00041	0.00008	81.711	0.003	0.001	81.97	81.97216804
Propane	Invoice Summary	-	5.72	0.00027	0.00005	0.000	0.000	0.000	-	

Notes:

1. A summary of the fuel usage for Diesel #2 was provided by the UCR Campus Planning Department in a fuel use summary spreadsheet based on a summary of invoices to UCR.
2. Emission factors obtained from TCR (April 2020) for CO2, and EPA 2018 Emission Factors for CH4, N2O
3. Conversions: 1,000 kg = 1 MT and 1,000,000 g = 1 MT

Fugitive Emissions

Data Source[1]	Refrigerant	CAS Number	Added		Trace Gas Used		Disposed Appliance Losses		Recovered		Startup Chg.		Net Refrigerant Emissions (lbs.)[2]	Global Warming Potentials (GWP)[3]	CO_2e (MT)[4]	Sum CO_2e (MT)
			(lbs.)	(oz)	(lbs.)	(oz)	(lbs.)	(oz)	(lbs.)	(oz)	(lbs.)	(oz)				
UCR Refrigerants	R-11	75-69-4	0	0	0	0	0	0	0	0	0	0	0	4,660	0	339
	R-12	75-71-8	0	0	0	0	0	0	0	0	0	0	0	10,200	0	
	CFC-113	76-13-1	0	0	0	0	0	0	0	0	0	0	0	13,900	0	
	R-22	75-45-6	212	6.25	0	0	0	0	49	11.5	0	0	162.67	1,760	129.86	
	R-502	75-45-6 (48.8%), 76-15-3 (51.2%)	0	0	0	0	0	0	0	0	0	0	0	4656.7	0	
	R-123	306-83-2	0	0	0	0	0	0	0	0	0	0	0	79	0	
	R-134A	811-97-2	31	5.25	0	0	0	0	14	5.5	0	0	16.98	1,120	8.63	
	R-404A	420-46-2	208	11.25	0	0	0	0	111	3	10	11.75	86.78	3,943	155.21	
	R-407C[2]	354-33-6	79	13.25	0	0	0	0	8	2	0	0	71.70	1,624	52.82	
	R-410A	75-10-5	104	15.25	0	0	0	0	53	8	0	0	51.45	1,924	44.90	

Notes:

1. A "Usage Summary Report" of refrigerants was provided by UCR Campus Planning Department; the Sustainability Officer disaggregated the data -> just main campus data is represented here
2. Refrigerant added and recovered outside the LRDP boundary was excluded from the estimate. Sustainability Officer indicated entries outside of LRDP boundary in "Refrigerant Usage by Refrigerant Type" document dated 4/6/2020.
3. GWPs for refrigerants R-134A, R-404A, R-407C, and R-410A obtained from TCR (AR5 factors); R-11, R-12, CFC-113, R-22, and R-123 obtained Greenhouse Gas Protocol (AR5) (https://ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf); R-502 obtained from CARB (AR4) (https://ww2.arb.ca.gov/resources/documents/high-gwp-refrigerants)
4. Conversion: 2204.62 lbs. = 1MT

Mobile Combustion

CO_2 Emissions from Mobile Combustion[1]

Fuel Type[3]	Consumption (gallons)[2]	Emission Factors[4]		kg CO_2	MT CO_2[5]	Sum CO_2e MT
		kg CO_2/gallon	kg CO_2/SCF			
Unleaded Gasoline	135,192	8.78		1186985.76	1186.98576	1305.040462
CNG	4,321		0.054444	29070.15439	29.07015439	
Diesel	7,306	10.21		74594.26	74.59426	

Notes:

1. ICLEI Local Government Protocol Method 7.1.1 used to determine fleet CO2 emissions
2. Annual fuel consumption based on "Key Fleet Indicators 2008-2019" spreadsheet provided by UCR's Office of Sustainability
3. CNG fuel consumption is expressed as gallon equivalents. For emissions calculations CNG fuel consumption is converted to scf where 123.57 scf CNG = 1 gasoline equivalent gallons and there are 1027 BTUs/ standard cubic foot (SCF); emission factors from TCR v.2.1 (2016) Table 13.6.
4. Emission factors obtained from TCR (April 2020) for mobile combustion: https://www.theclimateregistry.org/wp-content/uploads/2020/04/The-Climate-Registry-2020-Default-Emission-Factor-Document.pdf
5. 1000 kg = 1 Metric Ton

CH_4 and N_2O Emissions from Mobile Combustion[1]

Vehicle Class[2]	Number of Units	Average MPG[3,4]	Fuel Type	Fuel Quantity	Attribution by Fuel & Vehicle class[5]			Emission Factors[6]				g CH_4	g N_2O	MT CO2e	SUM MT CO2e
					% of Total Units by Fuel	Estimated Fuel use by Vehicle Class (gallons)	Estimated Mileage	CH_4 (g/mile)	N_2O (g/mile)	CH_4 (g/gallon)	N_2O (g/ gallon)				
MCY	3	38.40	Gasoline	135,192	0.5%	637.6981132	24487.75155	0.067	0.007			1645.576904	168.9654857	0.090852007	14.39028744
LDA	144	28.91	Gasoline		22.6%	30609.50943	884898.4832	0.008	0.011			7076.854446	10022.82203	2.854199763	
LDT1	168	24.45	Gasoline		26.4%	35711.09434	873051.1711	0.010	0.013			8560.785826	11610.86417	3.316581009	
LDT2	91	22.29	Gasoline		14.3%	19343.50943	431175.008	0.010	0.013			4227.927318	5734.273795	1.63796452	
LHD1	6	10.43	Gasoline		0.9%	1275.396226	13300.57193	0.019	0.031			247.410772	408.5166841	0.115184423	
LHD2	54	9.10	Gasoline		8.5%	11478.56604	104480.4132	0.019	0.031			1943.493846	3209.034332	0.904811926	
MDV	77	18.30	Gasoline		12.1%	16367.58491	299512.465	0.019	0.031			5571.385246	9199.291559	2.59381105	
BUS	2	5.82	Gasoline		0.3%	425.1320755	2474.450147	0.019	0.031			46.0285185	76.00080465	0.021429012	
OFFROAD	13		Gasoline		2.0%	2763.358491	N/A			9.119	0.136	25199.17236	376.1356038	0.805252761	
LDA	12	22.55	Flex Fuel		1.9%	2550.792453	57518.40141	0.008	0.007			460.1472113	402.6288099	0.119580757	
LDT1	2	19.07	Flex Fuel		0.3%	425.1320755	8106.903732	0.013	0.014			105.3897485	113.4966522	0.033027526	
LDT2	26	17.39	Flex Fuel		4.1%	5526.716981	96090.43035	0.013	0.014			1249.175595	1345.266025	0.391472413	
LHD1	1	8.13	Flex Fuel		0.2%	212.5660377	1729.07435	0.075	0.028			129.6805763	48.41408181	0.016460788	
LHD2	3	7.10	Flex Fuel		0.5%	637.6981132	4527.484572	0.075	0.028			339.5613429	126.769568	0.043101653	
MDV	34	14.27	Flex Fuel		5.3%	7227.245283	103156.7607	0.013	0.014			1341.037889	1444.19465	0.420260643	
LDA	1	47.36	Diesel	7,306	2.7%	197.4594595	9351.351284	0.001	0.001			4.675675642	9.351351284	0.002609027	
LDT1	1	24.99	Diesel		2.7%	197.4594595	4934.560873	0.001	0.002			4.934560873	7.40184131	0.002099656	
LDT2	6	34.60	Diesel		16.2%	1184.756757	40987.78762	0.001	0.002			40.98778762	61.48168143	0.017440304	
LHD2	17	18.48	Diesel		45.9%	3356.810811	62039.88415	0.005	0.005			316.4034092	297.7914439	0.087774028	
BUS	8	8.92	Diesel		21.6%	1579.675676	14090.77172	0.005	0.005			71.86293579	67.63570427	0.019935624	
OFFROAD	4		Diesel		10.8%	789.8378378	N/A			0.284	0.485	224.3139459	383.0713514	0.107794699	
LDA	10	0.23	CNG	4,321	35.7%	1543.214286	361.0358011	0.085	0.007			30.68804309	2.527250607	0.001528987	
LDT2	8	0.18	CNG		28.6%	1234.571429	222.7006506	0.126	0.014			28.06028197	3.117809108	0.001611907	
LHD2	6	0.07	CNG		21.4%	925.9285714	68.20428854	3.700	0.001			252.3558676	0.068204289	0.007084038	
BUS	4	4.50	CNG		14.3%	617.2857143	2777.438927	10.000	0.001			27774.38927	2.777438927	0.778418921	
TOTAL						146819	1009657								

Notes:

1. Only bulk fuel purchase data and a fleet list (including model years and vin numbers) were provided, therefore emissions were estimated using the alternative method 7.1.3.2.1. Hybrid vehicles and gasoline vehicles combined.
2. Vehicle class and fuel type was determined by using the provided vehicle data.
3. MPG was for each vehicle class and fuel type based on EMFAC 2017 (SC) for Riverside County except for vehicles powered by CNG and flex fuel in which MPG is based on GGE. 5.66 lbs. or 123.57 scf CNG = 1 GGE; 1 gallon of E85 (flex fuel) has on average 78% the energy of one gallon of gasoline
4. CNG is in scf instead of gallons.
5. Bulk fuel purchase data was provided, therefore fuel consumption was allocated across vehicle types in proportion to the number of vehicles using each fuel type. Annual mileage was estimated based on fuel consumption and average MPG for each fuel type and vehicle class; although actual mileage was provided it was in bulk and not by fuel.

6. TCR's 2020 emission factors for vehicles by fuel type and model year from Table 2.5 were averaged (weighted) for each vehicle class based on number of miles per vehicles model year. Emission factors for off-road equipment are from Table 2.7; weighted average based on number of units and equipment classification where EQ (tractor, spray rig) = agricultural equipment, ATV = recreational equipment, BO = boat, and GEN = generator; emission factors used average between 2-stroke and 4-stroke engine.

Class ID	*Description*[1]	*EMFAC Characterization*	*MPG*	*Number of Units*	*Unit*	*Number of Units*	*Units*	*Number of Units*	*Units*	*Number of Units*	*Units*	*Number of Units*	*Units*	
MO	NA	MCY		-	CNG	-	Diesel	3	Gasoline		Flex Fuel		Hybrid	
CS	Compact Sedan	LDA		10	CNG	-	Diesel	52	Gasoline	3	Flex Fuel	22	Hybrid	
CS-E	Compact Sedan - Enterprise	LDA		-	CNG	-	Diesel	3	Gasoline		Flex Fuel		Hybrid	
EC	Electric Carts/Gems	LDA		-	CNG	-	Diesel	3	Gasoline		Flex Fuel		Hybrid	
EXE	Executive Vehicles	LDA									Flex Fuel		Hybrid	
LS	Large Sedans	LDA		-	CNG	-	Diesel	5	Gasoline	1	Flex Fuel		Hybrid	
LW	Suburban/Expedition 2X4	LDA		-	CNG	-	Diesel	18	Gasoline	4	Flex Fuel		Hybrid	
PV	Police Vehicles	LDA		-	CNG	-	Diesel	15	Gasoline	4	Flex Fuel		Hybrid	
SW	Small Wagon - Trailblazer	LDA		-	CNG	1	Diesel	5	Gasoline		Flex Fuel		Hybrid	
UV	Utility Vehicle - 8 Passenger Club Car	LDA		-	CNG	-	Diesel	19	Gasoline		Flex Fuel		Hybrid	
WD-EXPLR	NA	LDA		-	CNG	-	Diesel	2	Gasoline		Flex Fuel		Hybrid	
CT	Compact Truck	LDT1		-	CNG	-	Diesel	126	Gasoline	1	Flex Fuel		Hybrid	
CT-E	Compact Truck - Enterprise	LDT1		-	CNG	-	Diesel	8	Gasoline		Flex Fuel		Hybrid	
CV	Cargo Van - 12 Passenger Van No Seat	LDT1		-	CNG	1	Diesel	30	Gasoline		Flex Fuel		Hybrid	
CW	Compact Wagons	LDT1		-	CNG	-	Diesel	4	Gasoline	1	Flex Fuel		Hybrid	
MT	Medium Size Trucks	LDT2		5	CNG	6	Diesel	55	Gasoline	10	Flex Fuel		Hybrid	
ST	Standard Truck	LDT2		3	CNG	-	Diesel	34	Gasoline	16	Flex Fuel		Hybrid	
ST-E	Standard Truck - Enterprise	LDT2		-	CNG	-	Diesel	2	Gasoline		Flex Fuel		Hybrid	
FS	Full Size Trucks	LHD1		-	CNG	-	Diesel	6	Gasoline	1	Flex Fuel		Hybrid	
HT	Heavy Trucks	LHD2		6	CNG	17	Diesel	37	Gasoline		Flex Fuel		Hybrid	
HTB	Heavy Duty Box Truck	LHD2		-	CNG	-	Diesel	12	Gasoline		Flex Fuel		Hybrid	
HTS	Heavy Trucks - Stakebed	LHD2		-	CNG	-	Diesel	5	Gasoline	3	Flex Fuel		Hybrid	
MP	Multi Passenger Van	MDV		-	CNG	-	Diesel	2	Gasoline		Flex Fuel		Hybrid	
MP11	Multi Passenger Van - 11 Passenger	MDV		-	CNG	-	Diesel	4	Gasoline		Flex Fuel		Hybrid	
MP12	Multi Passenger Van - 12 Passenger	MDV		-	CNG	-	Diesel	32	Gasoline	10	Flex Fuel		Hybrid	
MP8	Multi Passenger Van - 8 Passenger	MDV		-	CNG	-	Diesel	4	Gasoline		Flex Fuel		Hybrid	
MV	Minivan	MDV		-	CNG	-	Diesel	17	Gasoline	22	Flex Fuel		Hybrid	
MV-E	Minivan - Enterprise	MDV		-		-		-			Flex Fuel		Hybrid	
OVR	Outside Vehicle	MDV		-		-		-			Flex Fuel		Hybrid	
SUV	5 Passengers SUV	MDV		-	CNG	-	Diesel	3	Gasoline		Flex Fuel	5	Hybrid	
SUV-E	5 Passengers SUV - Enterprise	MDV		-	CNG	-	Diesel	2	Gasoline		Flex Fuel		Hybrid	
WD	Suburban/Expedition 4X4	MDV		-	CNG	-	Diesel	8	Gasoline	2	Flex Fuel		Hybrid	
BUS	NA[2]	BUS		4	CNG	8	Diesel	2	Gasoline		Flex Fuel		Hybrid	
EQ	NA	OFFROAD		-	CNG	2	Diesel	4	Gasoline		Flex Fuel		Hybrid	
TRLR	NA	OFFROAD		-	CNG	2	Diesel	-	Gasoline		Flex Fuel		Hybrid	
BO	NA	OFFROAD		-	CNG	-	Diesel	2	Gasoline		Flex Fuel		Hybrid	
ATV	NA	OFFROAD		-	CNG	-	Diesel	5	Gasoline		Flex Fuel		Hybrid	
GEN	NA	OFFROAD		-	CNG	-	Diesel	2	Gasoline		Flex Fuel		Hybrid	
		Total		28	CNG	37	Diesel	531	Gasoline	78	Flex Fuel	27	Hybrid	701

Notes:

1. Descriptions obtained from "Key Fleet Indicators 2008-2019" provided by Client
2. NA = Nothing Available
3. EQ = agricultural equipment (tractor, spray rig); TRLR = trailer; BO = boat

Scope 2

Electricity

Data Source[1]	*Utility*[2]	*Electricity Usage (kWh)*	*Emission Factors*[3] *MT CO_2e/Mwh*	*CO_2e (MT)*[4]	*Emission Sum CO_2e (MT)*
Annual Utilities Summary Spreadsheet 2015-2020	Riverside Public Utility (RPU)	107,088,200	0.428	45,833.75	45,833.75
	SunPower Lot 30 - SOLAR GENERATIO	5,733,909	0	-	
	SunPower Lot 32 - SOLAR GENERATIO	1,098,690	0	-	
	Solar - SunPower	5,039,876	0	-	

Notes:

1. A summary of the electricity purchased from RPU and generated by on-site solar was provided by UCR Energy Manager
3. UCR provided an emission factor of 0.4065 MT CO2e/MWh for RPU provided by Tracy Sato email correspondence. UCR Energy Manager provides emission factor of 0.428 MT CO2e/MWh
2. Conversion: 1 MT = 2204.62 lbs.

Scope 3

Business Travel

Air Travel

Data Source[1]	*Passenger Miles*	*Energy Intensity (BTU/passenger mile)*[2]	*MMBtu*	*Gallons*[3]	*Emission Factors*[3]			*Emissions*[4]			*Sum CO_2e (MT)*[5]
					kg CO_2/gallon	*kg CH_4/gallon*	*kg N_2O/gallon*	*CO_2 (MT)*	*CH_4 (MT)*	*N_2O (MT)*	
Balboa Carbon Emission Air Detail	8,273,344	2,654	21,957	182,979	8.31	0.007063	0.000107	1520.554	1.292	0.020	1561.928738

Notes:

1. UCR tracks UCR faculty/staff air travel through an invoice tracking system (Balboa Carbon Emission Air Detail). However, this does not include other faculty travel booked separately outside of Connexxus.
2. Energy intensity factor obtain from https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/media/Primer_Jan2015.pdf
3. Conversion factor for aviation gasoline is 0.120 MMBtu/gallon per TCR 2020

*average kg CO2/mile = 0.1844499 per UCR data provided

On-site Transportation

Mobile

Vehicle Type	*Trip Type (Daily VMT)*[1]					*Annual VMT*	*% of Total VMT*	*% Fuel Use by Vehicle Category*[3]			*CO_2 (g/mile)*[4]			*CH_4 (g/mile)*[4]			*N_2O (g/mile)*[4]			*Emissions*[5]			*CO_2e (MT) by Vehicle Type*[6]	*Sum CO_2e (MT)*[7]	Emission Factor (MT CO_2e/mile)	Emission Factor (g CO_2e/mile)
	External-External	*Internal-External*	*External-Internal*	*Internal-Internal*	*Accounted for UCR Cam*			*% Gasoline*	*% Diesel*	*% Natural Gas*	*Gasoline EF*	*Diesel EF*	*Natural Gas EF*	*Gasoline EF*	*Diesel EF*	*Natural Gas EF*	*Gasoline EF*	*Diesel EF*	*Natural Gas EF*	*CO_2 (MT)*	*CH_4 (MT)*	*N_2O MT*				
Passenger[2]	320,431,288	245,046	255,393	2,420	252639.5	79581442.5	97.5%	98.78%	0.84%		331.3962553	281.2887039		0.005454803	0.000850819		0.00396056	0.044214667		26239.20019	0.429361449	0.341017118	26342	28713.57818	0.000331002	331.0016886
Light Trucks	3,240,237	1,869	1,881	52	1927	607005	0.7%	44.59%	55.41%		821.2641268	513.6493167		0.008842543	0.004834858		0.0183738	0.08073852		395.0531914	0.004019587	0.032127739	404		0.000665035	665.0350336
Medium Trucks	5,401,191	1,823	1,835	3	1832	577080	0.7%	6.58%	93.42%		1679.051963	979.7309893		0.023059596	0.009423751		0.03872765	0.154000068		591.9179386	0.005955652	0.084496505	614		0.001064803	1064.802576
Heavy Trucks	16,466,030	2,839	2,851	1	2846	896490	1.1%	0.03%	99.66%	0.31%	2218.131977	1442.756916	3390.077554	0.174581754	0.007271212	5.578321069	0.20123362	0.226781296	0.691089486	1299.003686	0.021909751	0.204578527	1354		0.001510146	1510.145645

Notes:

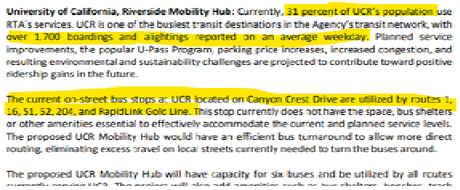
1. RivTAM model used origin-destination method where assumptions for year 2018 were population = 6,511; employment = 4,739; households = 6,511; based on Caltrans Data Fehr & Peers recommends annualizing data based on 315 days/year for the study area. Origin-Destination Model includes 50% of trips from internal-external and external internal, 100% of internal-internal trips, and excludes external-external trips.
2. Passenger category includes EMFAC2007 categories LDA, LDT1, and LDT2; overall emission factor was calculated as a weighted average based on fuel type and vehicle class
3. The percent of fuel type by vehicle type was estimated based on EMFAC2017 for Riverside County (SC) data where VMT by fuel type is divided by total VMT for the specified category (i.e. passenger, light truck etc.)
4. Emission factors (running) obtained from EMFAC2017 where model years and speed were aggregated for each fuel type by vehicle class.
5. Conversion: 1,000 kg (or 1,000,000 g) = 1 MT
6. 100 year global warming potential (GWP) values pulled from Intergovernmental Panel on Climate Change (IPCC), Fifth Assessment Report (AR5) 2013.
7. Calculated emissions are comparable to CCWG emissions reported for commuters based on survey (28,125 MT CO_2e in 2018)

Transit

TR.4 Emissions from Transit[1] (TR.4.A. & TR.4.B.)

Operation Information[2]						*Emission Factors*[3]				*MT of Emissions*[4]			*CO_2e MT*	*SUM CO_2e MT*[5]
Transit Agency	*Mode*	*Route*	*Annual Passengers*	*Annual VRMs*	*VRMs/Passenger*	*g CO2/mile*	*g CH_4/mile*	*g N_2O/mile*	*g CO2e/mile*	*MT CO_2*	*MT CH_4*	*MT N_2O*		
Riverside Transit Agency (RTA)	MB	Rapid Link Gold Line (101)	147001	240386	0.611520638	1680.300671	3.044856827	0.211646889	1821.643088	403.9207571	0.731940953	0.050876949	437.8974953	3537.159071
Riverside Transit Agency (RTA)	MB	1	1921643	868915	2.211543131	1680.300671	3.044856827	0.211646889	1821.643088	1460.038458	2.64572177	0.183903156	1582.853004	
Riverside Transit Agency (RTA)	MB	16	449937	362495	1.241222638	1680.300671	3.044856827	0.211646889	1821.643088	609.1005918	1.103745375	0.076720939	660.3365111	
Riverside Transit Agency (RTA)	MB	51	19070	32397	0.58863475	1680.300671	3.044856827	0.211646889	1821.643088	54.43670084	0.098644227	0.006856724	59.01577111	
Riverside Transit Agency (RTA)	MB	52	23762	42245	0.562480767	1680.300671	3.044856827	0.211646889	1821.643088	70.98430185	0.128629977	0.008941023	76.95531224	
Riverside Transit Agency (RTA)	MB	204	42999	133852	0.321242865	1680.300671	3.044856827	0.211646889	1821.643088	224.9116054	0.407560176	0.028329359	243.8305706	
Riverside Transit Agency (RTA)	MB	208	28036	186123	0.150631572	1680.300671	3.044856827	0.211646889	1821.643088	312.7426018	0.566717887	0.039392354	339.0496764	
Riverside Transit Agency (RTA)	MB	212	6585	75328	0.087417693	1680.300671	3.044856827	0.211646889	1821.643088	126.573689	0.229362975	0.015942937	137.2207305	

Notes:



University of California, Riverside Mobility Hub: Currently, 31 percent of UCR's population use RTA's services. UCR is one of the busiest transit destinations in the Agency's transit network, with over 1,700 boardings and alightings reported on an average weekday. Planned service improvements, the popular U-Pass Program, parking price increases, increased congestion, and resulting environmental and sustainability challenges are projected to contribute toward positive ridership gains in the future.

The current on-street bus stops at UCR located on Canyon Crest Drive are utilized by routes 1, 16, 51, 52, 204, and RapidLink Gold Line. This stop currently does not have the space, bus shelters or other amenities essential to effectively accommodate the current and planned service levels. The proposed UCR Mobility Hub would have an efficient bus turnaround to allow more direct routing, eliminating excess travel on local streets currently needed to turn the buses around.

The proposed UCR Mobility Hub will have capacity for six buses and be utilized by all routes currently serving UCR. The project will also add amenities such as bus shelters, benches, trash receptacles, security features, drought-tolerant landscaping, traffic signalization, connectivity to UCR's bicycle amenities and better integration with the existing City of Riverside bike lanes and trails. This project reflects an ongoing partnership between UCR and RTA. These two agencies entered into a Memorandum of Understanding (MOU) in June 2017 to deliver the project. In addition to the mobility hub, UCR is going to improve bicycle and pedestrian connections throughout the campus, making it easier for students and faculty to access the hub. Conceptual Planning, A&E, construction bid documents and environmental clearance are completed. Construction bids were due in April and construction is slated for late 2019. A construction schedule will be determined by the awarded contractor.

Abbreviations: MB = Bus; CB = Commuter Bus; DR =Demand Response; CR = Commuter Rail; PT = Purchased Transportation; DO = Directly Operated; VOMS = vehicles operated in maximum service; VRMs= vehicle revenue miles; TCR = The Climate Registry

1. Transit buses included here are those that stop, originate or terminate at UCR to encompass all transit use to get to Campus

2. Obtained from RTA SRTP FY19-FY21 - Table 3. https://www.riversidetransit.com/images/DOWNLOADS/PUBLICATIONS/SRTPS/FY2019-2021%20SRTP.pdf

3. Emission Factors obtained from EMFAC 2017. See EMFAC Working Page.

4. Conversion: 1,000 kg (or 1,000,000 g) = 1 MT

5. Sum of emissions include all emissions from the transit agencies that go through the UCR Campus and was a necessary step to calculating transit emissions actually associated with the UCR campus.

TR.4.D. UCR Attributed Emissions from Transit[1]

Transit Agency	*Total Annual Revenue Miles (miles)* [3]	*Total Annual Passengers* [3]	*VRMs/Passenger* [4]	*UPASS Number of Riders* [5]	*Annual VRMs for UPASS Riders* [6]	*Proportion of UPASS miles to total RTA miles*	*Annual Emissions by Mode & Agency (MT CO_2e)*	*UCR GHG Emission Attribution (MT of CO2e)*
	miles	*passengers*	*miles/passenger*					
Riverside Transit	1941741	2639033	0.735777461	554,396	407912.0812	0.210075433	3537.159071	743.0702232

Notes:

1. ICELI CP Method TR.4.D. is used to attribute transit emissions (calculated with TR.4.A. & TR.4.B.) from the UCR Campus based on geographical bounds of the jurisdiction and total emissions produced by the transit mode. However, this method is not applicable since the emissions are better attributed by ridership, to better capture those who travel to UCR from longer distances. Emissions are attributed based on ridership of the 8 routes for which emissions are calculated above.

2. Transit routes within the campus were determined via 2018 Riverside Transit Agency (RTA) Rider Guide and confirmed through each transit agency mentioned.

3. Obtained from RTA SRTP FY19-FY21 - Table 3. https://www.riversidetransit.com/images/DOWNLOADS/PUBLICATIONS/SRTPS/FY2019-2021%20SRTP.pdf

4. Based on RTA annual trip data the average miles traveled per passenger was estimated.

5. RTA UPASS data was provided by UCR and includes number of riders on RTA routes including and excluding route 51. Data was collected on a fiscal year basis there fore UPASS ridership data from 1/1/2018 through 12/31/2018 was summed for 2018.

6. It is assumed that on average UPASS riders also have a similar VRM/passenger as the overall RTA system.

Waste Generation

SW.4 UCR-Generated Waste Sent to Landfills

Data Source [1]	*Tonnage generated* [2]	*Tonnage Diverted*	*Tonnage Disposed*	*Waste Material* [#]	*Emission factor* [4,5] *(MT CO2e/wet short ton)*	*CO_2e (MT)* [6]
Zero Waste Working Group Summary	5,255.19	3,799.69	1,455.50	MSW	0.11	160.105

Notes:

1. UCR provided community waste generation reports for the fiscal year that included total waste generated (MSW and C&D), waste diverted (through composting, recycling and facility recovery programs), and the total amount disposed of at a landfill. Calculations based on tonnage disposed.

2. Because data was provided on the fiscal year basis (June to June), Fiscal year 20172018 and 2018/2019 was averaged to get an estimate waste in 2018 calendar year. MSW and C&D waste have been combined.

3. Emission factors for Mixed MSW was used to represent waste sent to landfills based on waste description in provided source data.

4. Emission factor for landfilling obtained from EPA's WARM v15 for California Collection, dry climate (k = 0.02) and landfills with LFG recovery and flaring (determined via EPA GHG reports) such that waste in place for MSW = 0.32 MT CO2e.

5. Emission factor also incorporates emission reductions from net carbon storage (-0.21 MT CO2e). Transportation emissions have been calculated separately.

Zero Waste Working Group Supporting Data

Fiscal Year	Reuse (tons)	Recycle (tons)	Organics (tons)	Allowable Residual Conversion (tons)	Landfill and Non Allowable conversion (tons)	Total MSW Generation	Total MSW Diversion	C&D Recycled (tons)	C&D Landfill and non-allowable conversion (tons)	Total C&D Generation	Total Waste Generated (tons)	Total Waste Disposed at Landfill (tons)
2017-2018	522.00	1,042.00	812.00	426.00	1,458.00	4,260.00	2,802.00	1097	33	1130	5,390.00	1,491.00
2018-2019	615.00	980.00	832.00	423.00	1,383.00	4,233.00	2,850.00	850.38	37	887.38	5,120.38	1,420.00
Average	568.50	1,011.00	822.00	424.50	1,420.50	4,246.50	2,826.00	973.69	35.00	1,008.69	**5,255.19**	**1,455.50**
%	11%	19%	16%	8%	27%			19%	1%			**28%**
		Mixed Recyclables	Mixed Organics		Mixed MSW				C&D			

SW.5 Process Emissions Associated with Landfilling

Tonnage Disposed [1]	***El Sobrante***		***Badlands***		Total Emissions (MT CO2e)
	Emission factor (MT CO_2e/ton) [2]	*Process CO_2e (MT)*	*Emission factor* [2]	*Process CO_2e (MT)*	
1,455.50	0.0214	15.55	0.087422893	63.62201041	79.16964
		0.01068			

Notes:

1. UCR provided community waste generation reports that included total waste generated, waste diverted (through composting, recycling and facility recovery programs), and the total amount disposed of at a landfill. Calculations based on tonnage disposed. Tonnage disposed based on difference between tonnage generated (WCU variable in Zero Waste Working Group) and tonnage diverted (total diversion in Zero Waste Working Group)

2. Process emission factors based on the EPA GHG FLIGHT reports were used to estimate process/stationary emissions at the landfills attributed to UCR waste disposed assuming 50% of waste goes to each landfill

SW.6 Collection and Transportation Emissions

		Collection[2]		Transport[3]					
Tonnage Generated [1]	*Total Tonnage Disposed* [1]	*Emission Factor for Collection(MT CO2e/waste tonnage)*	*Collection Emissions CO_2e (MT)*	*Primary Landfills* [4]	*% of Total Distribution* [4]	*Estimated Waste Disposed by Landfill* [5]	*Distance to facility (miles)* [6]	*Emission Factor for Transport (MTCO2e/waste tonnage/mile)* [2]	*Transport Emissions CO_2e (MT)* [7]
5,255.19	1,455.50	0.02	105.1038	Badlands Sanitary Landfil	50%	728	28	0.00012	4.80315
				El Sobrante Landfill	50%	728	27		

Notes:

1. UCR provided community waste generation reports that included total waste generated, waste diverted (through composting, recycling and facility recovery programs), and the total amount disposed of at a landfill. Collection calculations based on tonnage generated and transport calculations based on tonnage disposed of at the landfills.

2. Per Feb 14, 2020 email from UCR Facilities Services, UCR hauls own waste to be landfilled to the CR&R facility in Perris. To avoid double counting of operation of fleet vehicles for waste collection, collection emissions will not be included. Collection emissions based on assumption the UCR fleet vehicles for waste hauling are diesel (ECF Diesel = 0.02), ICELI Default equation SW.6.

3. Transportation emission factor (EFT) of waste from the CR&R Station based on assumption that 50% of transport fuel is CNG and 50% is diesel per Perris Transfer Station, Material Recovery and Anaerobic Digestion Facility(2018); EFT are Diesel = 0.00014, CNG = 0.00010 per ICLEI Defaults SW.6

4. Primary landfills determined via Perris Transfer station/MRF (2018) and assuming even distribution of waste to either landfill.

5. Waste disposal by landfill was estimated based on waste disposal report for provided by UCR and assumed % of distribution of waste by landfill.

6. Transport distance from the center of UCR to the Perris CR&R was estimated via google maps.

7. Per ICELI CP "transportation emissions should be calculated for waste delivered to facilities outside the community's boundaries…Please note that the inclusion of long-haul emissions could result in double counting of transportation emissions."

Solid Waste Reference Data (internal use only)

Facility Name or Waste Group [1]	*SWISNo*	*% of Total Distribution* [1]	*LFG Collection/ Control System* [2]	*Estimated Efficiency* [3]	*Distance to facility (miles)* [4,5]	*Equipment Fuel* [6]	*2018 Waste (MT)* [6]	*2018 Waste (short ton)* [6]	*Process Emissions from Landfill (MT CO2e)* [6]	*Stationary Combustion from Landfill (MT CO2e)* [6]	*Calculated Landfill Process Emission Factor (MT CO2e/ton landfilled waste)*	*Calculated Landfill Stationary Combustion Factor (MT*	*Calculated Landfill Stationary Combustion and Processs Factor (MT CO2e/ton*
Badlands Sanitary Landfill	33-AA-0006	50.00%	Yes	63.80%	28	Landfill gas	810130	893016	78070	0	0.08742	0	0.087422893
El Sobrante Landfill	33-AA-0217	50.00%	Yes	52.18%	27	Propane	3166615	3490596	74336	237	0.02130	6.78967E-05	0.021363975

Notes:

1. Campus Facilities hauls waste to be landfilled to Perris CR&R which sends waste to either the El Sobrante Landfill or the Badlands Landfill. (Source: Perris Transfer Station/MRF, October 2018).

2. EPA's Landfill Methane Outreach Program (LMOP) database used to identify whether or not landfill had a landfill gas (LFG) control and collection system (https://www.epa.gov/lmop/project-and-landfill-data-state)

3. LFG capture rate efficiency was estimated by dividing the EPA reported LFG generated by the LFG collected.

4. Perris CR&R facility located at 1706 Goetz Road Perris, CA 92570; transport distance from the Perris CR&R to the landfills was estimated via google maps.

5. CR&R truck/hauler fleet is in the process of converting fleet to CNG fuel vs diesel. Therefore it is assumed to run at least 50% of its vehicles using CNG and 50% using diesel to transport landfill waste.

6. Process and stationary emissions at the landfill based on the EPA's GHGRP database FLIGHT (https://ghgdata.epa.gov/ghgp/main.do); (AR4 GWP) used)

7. Process and stationary emissions at the landfill based on the EPA's GHGRP database FLIGHT (https://ghgdata.epa.gov/ghgp/main.do); (AR4 GWP) used)

8. There are 1.10231131 short tons in a metric ton

2018 UCR GHG Emission Inventory

Emissions Summary

Scope/Category	**UCR CCWG**	**2018**	**% of All Emissions**	**% within Scope**
Scope 1	**24,343.00**	**20,135.69**	**20.7%**	**100.0%**
Stationary Combustion (Natural Gas)	22,869.00	18,410.07	18.9%	91.4%
Stationary Combustion (Other)		81.97	0.1%	0.4%
Fugitive Emissions	163.00	338.61	0.3%	1.7%
Mobile Combustion (Fleet)	1,311.00	1,305.04	1.3%	6.5%
Scope 2	**50,772.57**	**45,833.75**	**47.1%**	**100.0%**
Electricity Consumption	50,772.57	45,833.75	47.1%	100.0%
Scope 3	**29,651.00**	**31,262.65**	**32.2%**	**100.0%**
Business Travel	1,526.00	1,561.93	1.6%	5.0%
Passenger Mobile_On-site Transportation	28,125.00	26,341.59	27.1%	84.3%
Commercial Mobile_On-site Transportation		2,371.99	2.4%	7.6%
Transit_On-site Transportation		743.07	0.8%	2.4%
Waste		244.08	0.3%	0.8%
Total	**104,767**	**97,232**		
% of UCR CCWG that is LRDP Boundary		***90%***		

1. Percent of UCR that is main cmpus is based on only on emission sources that UCR reports through CCWG. This include scope 1 sources (Natural Gas combustion, fugitive emissions, mobile fleet combution), all of scope 2 emissions sources, and scope 3 sources (business travel, passenger/commuter on-site mobile emissions)

EMFAC DATA INVENTORY YEAR 2018

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2018
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day ROG_RUNEX ROG_IDLEX ROG_STREX ROG_HOTSOAK ROG_RUNLOSS ROG_RESTLOSS ROG_DIURN TOG_RUNEX TOG_IDLEX TOG_STREX TOG_HOTSOAK TOG_RUNLO TOG_RESTLO TOG_DIURN CO_RUNEX CO_IDLEX CO_STREX

Region	**Calendar Year**	**Vehicle Category**	**Model Year**	**Speed**	**Fuel**	**Population**	**VMT**	**Trips**	**ROG_RUNEX**	**ROG_IDLEX**	**ROG_STREX**	**ROG_HOTSOAK**	**ROG_RUNLOSS**	**ROG_RESTLOSS**	**ROG_DIURN**	**TOG_RUNEX**	**TOG_IDLEX**	**TOG_STREX**	**TOG_HOTSOAK**	**TOG_RUNLO**	**TOG_RESTLO**	**TOG_DIURN**	**CO_RUNEX**	**CO_IDLEX**	**CO_STREX**
Riverside (SC)	2018	HHDT	Aggregated	Aggregated	GAS	10.15655092	563.7048197	203.2122708	1.021560854	0	0.000772463	0.331477112	1.396433852	0.083685554	0.144974084	1.406598277	0	0.00084575	0.331477112	1.39643385	0.08368555	0.144974084	42.95445585	0	5.174145922
Riverside (SC)	2018	HHDT	Aggregated	Aggregated	DSL	13937.90114	1747093.086	144362.4276	0.156547201	4.787596162	0	0	0	0	0	0.178217071	5.450313793	0	0	0	0	0	0.61041715	50.38425694	0
Riverside (SC)	2018	HHDT	Aggregated	Aggregated	NG	132.6075958	5385.40989	517.1696238	0.464211024	0.098378476	0	0	0	0	0	6.131186575	1.535580374	0	0	0	0	0	12.8860992	21.00115788	0
Riverside (SC)	2018	LDA	Aggregated	Aggregated	GAS	506416.9341	21886505.2	2394720.611	0.01632073	0	0.313471447	0.124764309	0.245881016	0.276114304	0.370026745	0.023467002	0	0.343190308	0.124764309	0.24588102	0.2761143	0.370026745	0.892602119	0	2.383586625
Riverside (SC)	2018	LDA	Aggregated	Aggregated	DSL	3972.142218	180788.8494	18989.08486	0.019326815	0	0	0	0	0	0	0.022002293	0	0	0	0	0	0	0.227358481	0	0
Riverside (SC)	2018	LDA	Aggregated	Aggregated	ELEC	3353.4939	123846.7604	17034.19648	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0
Riverside (SC)	2018	LDT1	Aggregated	Aggregated	GAS	54073.32552	2080381.839	242724.9474	0.056486837	0	0.635181306	0.343878861	1.138304066	0.753823873	1.150707262	0.081218455	0	0.695405411	0.343878861	1.13830407	0.75382387	1.150707262	2.313116069	0	2.775320706
Riverside (SC)	2018	LDT1	Aggregated	Aggregated	DSL	39.67801488	866.4912044	131.6189082	0.253302909	0	0	0	0	0	0	0.288368521	0	0	0	0	0	0	1.51285063	0	0
Riverside (SC)	2018	LDT1	Aggregated	Aggregated	ELEC	44.27373647	1483.049212	217.2199587	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0
Riverside (SC)	2018	LDT2	Aggregated	Aggregated	GAS	163935.0153	6759901.851	764833.1584	0.026949694	0	0.444579055	0.161393605	0.488096783	0.398914201	0.500934338	0.03840514	0	0.486728482	0.161393605	0.48809678	0.3989142	0.500934338	1.296433758	0	3.13853121
Riverside (SC)	2018	LDT2	Aggregated	Aggregated	DSL	550.4581733	27432.66729	2717.115602	0.022463717	0	0	0	0	0	0	0.025573448	0	0	0	0	0	0	0.140152113	0	0
Riverside (SC)	2018	LDT2	Aggregated	Aggregated	ELEC	417.386745	14487.3033	2146.939848	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0
Riverside (SC)	2018	LHDT1	Aggregated	Aggregated	GAS	16493.20118	557401.343	245724.1228	0.046750484	0.476576743	0.172470495	0.157360437	0.989202344	0.040282001	0.082004483	0.06553094	0.694454574	0.188734642	0.157360437	0.98920234	0.040282	0.082004483	1.270460996	3.738039469	1.912239789
Riverside (SC)	2018	LHDT1	Aggregated	Aggregated	DSL	15589.55126	571132.9909	196096.9432	0.10917461	0.109759705	0	0	0	0	0	0.124288035	0.124954127	0	0	0	0	0	0.747248502	0.909745076	0
Riverside (SC)	2018	LHDT2	Aggregated	Aggregated	GAS	2243.091526	77131.32966	33418.72153	0.028076603	0.478173293	0.151707487	0.128248919	0.813016657	0.032915337	0.06592272	0.040859487	0.697707896	0.166096321	0.128248919	0.81301666	0.03291534	0.06592272	0.766373605	3.751618729	1.80733614
Riverside (SC)	2018	LHDT2	Aggregated	Aggregated	DSL	5832.260313	217280.4939	73362.49775	0.090730775	0.109759705	0	0	0	0	0	0.103290955	0.124954127	0	0	0	0	0	0.613829126	0.909745076	0
Riverside (SC)	2018	MCY	Aggregated	Aggregated	GAS	27046.02448	195083.3295	54092.04897	2.222814414	0	1.879525715	0.775299527	2.036840332	1.47869853	2.765268315	2.702003195	0	2.044407669	0.775299527	2.03684033	1.47869853	2.765268315	20.57519223	0	8.541003749
Riverside (SC)	2018	MDV	Aggregated	Aggregated	GAS	153860.1899	5973363.917	707853.7687	0.037617045	0	0.58513726	0.179561133	0.519252987	0.457192328	0.54591759	0.052260771	0	0.640553524	0.179561133	0.51925299	0.45719233	0.54591759	1.551259093	0	3.826799371
Riverside (SC)	2018	MDV	Aggregated	Aggregated	DSL	2274.968291	106045.7708	11206.48527	0.013604592	0	0	0	0	0	0	0.015487924	0	0	0	0	0	0	0.19624681	0	0
Riverside (SC)	2018	MDV	Aggregated	Aggregated	ELEC	59.95139476	2024.361014	305.163866	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0
Riverside (SC)	2018	MH	Aggregated	Aggregated	GAS	5776.734287	48825.67457	577.904498	0.083561773	0	0.157042844	0.10323097	2.334268689	0.062642038	0.181860893	0.118928805	0	0.171854078	0.10323097	2.33426869	0.06264204	0.181860893	2.752022426	0	3.246427694
Riverside (SC)	2018	MH	Aggregated	Aggregated	DSL	1998.535936	18039.37033	199.8535936	0.075449173	0	0	0	0	0	0	0.085893868	0	0	0	0	0	0	0.366798444	0	0
Riverside (SC)	2018	MHDT	Aggregated	Aggregated	GAS	1231.972811	49072.04487	24649.31201	0.118553524	0.994156517	0.278826966	0.122503705	0.587810558	0.037500619	0.075020648	0.169879903	1.446957502	0.305007734	0.122503705	0.58781056	0.03750062	0.075020648	3.330457599	14.23433673	5.631632235
Riverside (SC)	2018	MHDT	Aggregated	Aggregated	DSL	11748.72911	697258.5636	116104.2417	0.202890773	0.180120077	0	0	0	0	0	0.2309757	0.205052996	0	0	0	0	0	0.726468133	2.43220991	0
Riverside (SC)	2018	OBUS	Aggregated	Aggregated	GAS	451.6254813	17395.98667	9036.12263	0.088903071	0.743401273	0.191654193	0.033144557	0.334316361	0.028214594	0.066763253	0.128074911	1.083309163	0.209697681	0.033144557	0.33431636	0.02821459	0.066763253	2.472495967	5.751498171	3.731405269
Riverside (SC)	2018	OBUS	Aggregated	Aggregated	DSL	222.2340298	14449.00221	2122.128661	0.31852574	1.565172546	0	0	0	0	0	0.362617308	1.7818298	0	0	0	0	0	1.038233033	12.57379782	0
Riverside (SC)	2018	SBUS	Aggregated	Aggregated	GAS	376.9613183	14179.05722	1507.845273	0.069058907	10.62815655	0.330213658	0.061331808	0.456028016	0.016350402	0.035402811	0.100770595	15.50858109	0.36154239	0.061331808	0.45602802	0.0163504	0.035402811	1.589539427	82.16102126	8.047309216
Riverside (SC)	2018	SBUS	Aggregated	Aggregated	DSL	772.6394382	24525.52044	8916.151995	0.144183169	0.301746543	0	0	0	0	0	0.164141562	0.343515469	0	0	0	0	0	0.379228837	4.557500669	0
Riverside (SC)	2018	UBUS	Aggregated	Aggregated	GAS	160.6686045	22621.30502	642.6744181	0.01192563	0	0.252114922	0.046413866	0.217701689	0.013158412	0.020864306	0.017401851	0	0.276034106	0.046413866	0.21770169	0.01315841	0.020864306	0.22438307	0	4.1929121
Riverside (SC)	2018	UBUS	Aggregated	Aggregated	DSL	1.105797941	58.57190354	4.423191762	0.000535102	0	0	0	0	0	0	0.03822159	0	0	0	0	0	0	0.057156358	0	0
Riverside (SC)	2018	UBUS	Aggregated	Aggregated	ELEC	0.058469431	1.251702935	0.233877724	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Riverside (SC)	2018	UBUS	Aggregated	Aggregated	NG	199.3922535	26236.00395	797.5690139	0.080967207	0	0	0	0	0	0	5.783371905	0	0	0	0	0	0	43.79874467	0	0

Region	Calendar Year	Vehicle Category	Fuel	Population	VMT	% of Total	Trips	CO2_RUNEX (g/mile)	CH4_RUNEX (g/mile)	N2O_RUNEX (g/mile)	CO2e (g/mile)
					Passenger Vehicles						
Riverside (SC)	2018	LDA	DSL	3972.142218	180788.8494	0.48%	180788.8494	214.3980961	0.000897694	0.0337004	223.3538362
Riverside (SC)	2018	LDT1	DSL	39.67801488	866.4912044	0.00%	866.4912044	410.803667	0.011765436	0.0645726	428.2448424
Riverside (SC)	2018	LDT2	DSL	550.4581733	27432.66729	0.07%	27432.66729	292.7118864	0.001043397	0.0460102	304.9338131
Riverside (SC)	2018	MDV	DSL	2274.968291	106045.7708	0.28%	106045.7708	391.3118004	0.000631907	0.0615088	407.6293167
Riverside (SC)	2018	LDA	ELEC	3353.4939	123846.7604	0.33%	123846.7604	0	0	0	0
Riverside (SC)	2018	LDT1	ELEC	44.27373647	1483.049212	0.00%	1483.049212	0	0	0	0
Riverside (SC)	2018	LDT2	ELEC	417.386745	14487.3033	0.04%	14487.3033	0	0	0	0
Riverside (SC)	2018	MDV	ELEC	59.95139476	2024.361014	0.01%	2024.361014	0	0	0	0
Riverside (SC)	2018	MCY	GAS	27046.02448	**195083.3295**	0.52%	195083.3295	207.5566169	0.3236514	0.065871603	234.074831
Riverside (SC)	2018	LDA	GAS	506416.9341	21886505.2	58.59%	21886505.2	287.7413246	0.003927691	0.006098569	289.4674207
Riverside (SC)	2018	LDT1	GAS	54073.32552	2080381.839	5.57%	2080381.839	338.764006	0.012260389	0.000719833	339.2980527
Riverside (SC)	2018	LDT2	GAS	163935.0153	6759901.851	18.10%	6759901.851	371.7498948	0.006135387	0.000791724	372.1314926
Riverside (SC)	2018	MDV	GAS	153860.1899	5973363.917	15.99%	5973363.917	453.9384923	0.008087889	0.000970947	454.4222541
		Passenger Vehicle Total			***37352211.39***			**330.7990891**	**0.007085614**	**0.004629168**	**332.2242159**
		Passenger Gasoline Total			**36895236.14**	**98.78%**		**331.3962553**	**0.005454803**	**0.003960557**	**332.5985374**
		Passenger Diesel Total			**315133.7787**	**0.84%**		**281.2887039**	**0.000850819**	**0.044214667**	**293.0294136**
		Passenger Electric Total			**141841.4739**	**0.38%**		**0**	**0**	**0**	**0**
					Light-Heavy Trucks						
Riverside (SC)	2018	LHDT1	DSL	15589.55126	571132.9909	40.14%	571132.9909	501.3704868	0.005070952	0.078808459	522.396715
Riverside (SC)	2018	LHDT2	DSL	5832.260313	217280.4939	15.27%	217280.4939	545.9248546	0.004214271	0.085811785	568.7829771
Riverside (SC)	2018	LHDT1	GAS	16493.20118	557401.343	39.17%	557401.343	807.1287357	0.009209913	0.018556342	812.3040438
Riverside (SC)	2018	LHDT2	GAS	2243.091526	77131.32966	5.42%	77131.32966	923.4156914	0.006187685	0.017054601	928.108416
		Light-Heavy Truck Total			***1422946.157***			**650.8236199**	**0.006622**	**0.052928293**	**665.0350336**
		Light-Heavy Truck Gasoline Total			**634532.6727**	**44.59%**		**821.2641268**	**0.008842543**	**0.018373796**	**826.380774**
		Light-Heavy Truck Diesel Total			**788413.4848**	**55.41%**		**513.6493167**	**0.004834858**	**0.08073852**	**535.1804004**
					Medium-Heavy Trucks						
Riverside (SC)	2018	MHDT	DSL	11748.72911	697258.5636	93.42%	697258.5636	979.7309893	0.009423751	0.154000068	1020.804872
Riverside (SC)	2018	MHDT	GAS	1231.972811	49072.04487	6.58%	49072.04487	1679.051963	0.023059596	0.038727655	1689.96046
		Medium-Heavy Truck Total			***746330.6085***			**1025.7121**	**0.010320322**	**0.146420782**	**1064.802576**
		Medium-Heavy Truck Gasoline Total			**49072.04487**	**6.58%**		**1679.051963**	**0.023059596**	**0.038727655**	**1689.96046**
		Medium-Heavy Truck Diesel Total			**697258.5636**	**93.42%**		**979.7309893**	**0.009423751**	**0.154000068**	**1020.804872**
					Heavy-Heavy Trucks						
Riverside (SC)	2018	HHDT	DSL	13937.90114	1747093.086	99.66%	1747093.086	1442.756916	0.007271212	0.226781296	1503.057553
Riverside (SC)	2018	HHDT	GAS	10.15655092	563.7048197	0.03%	563.7048197	2218.131977	0.174581754	0.201233616	2276.347175
Riverside (SC)	2018	HHDT	NG	132.6075958	5385.40989	0.31%	5385.40989	3390.077554	5.578321069	0.691089486	3729.409258
		Heavy-Heavy Truck Total			***1753042.201***			**1448.988484**	**0.024439481**	**0.228199452**	**1510.145645**
		Heavy-Heavy Truck Gasoline Total			**563.7048197**	**0.03%**		**2218.131977**	**0.174581754**	**0.201233616**	**2276.347175**
		Heavy-Heavy Truck Diesel Total			**1747093.086**	**99.66%**		**1442.756916**	**0.007271212**	**0.226781296**	**1503.057553**
		Heavy-Heavy Truck NG Total			**5385.40989**	**0.31%**		**3390.077554**	**5.578321069**	**0.691089486**	**3729.409258**
					Urban Buses						
Riverside (SC)	2018	UBUS	GAS	160.6686045	22621.30502	**46.30%**	22621.30502	1475.060624	0.003963582	0.017998277	1479.941148
Riverside (SC)	2018	UBUS	NG	199.3922535	26236.00395	**53.70%**	26236.00395	1857.263508	5.666787124	0.378615316	1
		Urban Bus Total			***48857.30897***			**1680.300671**	**3.044856827**	**0.211646889**	**1821.643088**
		Urban Bus Gasoline Total			**22621.30502**	**46.30%**		**1475.060624**	**0.003963582**	**0.017998277**	**1479.941148**
		Urban Bus NG Total			**26236.00395**	**53.70%**		**1857.263508**	**5.666787124**	**0.378615316**	**2116.266607**

NOx_RUNEX	NOx_IDLEX	NOx_STREX	CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	PM2_5_RUNEX	PM2_5_IDLEX	PM2_5_STREX	PM2_5_PMTW	PM2_5_PMBW	SOx_RUNEX	SOx_IDLEX	SOx_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX
6.700165136	0	0.628042704	2218.131977	0	61.33858763	0.174581754	0	0.000150502	0.001768155	0	0.002336071	0.020000006	0.061740018	0.001648984	0	0.002197768	0.005000001	0.026460008	0.021950214	0	0.000606995	0.201233616	0	0.015195314
4.762428406	64.04598899	1.472897983	1442.756916	10899.01599	0	0.007271212	0.222371442	0	0.094655644	0.217702467	0	0.035276743	0.060499614	0.090560883	0.208284755	0	0.008819186	0.025928406	0.013630452	0.102968499	0	0.226781296	1.713173537	0
4.370559855	27.20147205	0	3390.077554	4048.550986	0	5.578321069	1.417403729	0	0.008570754	0.08214541	0	0.03600001	0.061740018	0.008199987	0.078591836	0	0.009000003	0.026460008	0	0	0	0.691089486	0.825323603	0
0.062102073	0	0.235691081	287.7413246	0	60.40122281	0.003927691	0	0.067501787	0.001430963	0	0.002026923	0.008000002	0.036750011	0.001316054	0	0.001864668	0.002000001	0.015750005	0.002847434	0	0.000597719	0.006098569	0	0.029711898
0.144096972	0	0	214.3980961	0	0	0.000897694	0	0	0.011394452	0	0	0.008000002	0.036750011	0.010901533	0	0	0.002000001	0.015750005	0.002026833	0	0	0.033700395	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.008000002	0.036750011	0	0	0	0.002000001	0.015750005	0	0	0	0	0	0
0.222271601	0	0.407813967	338.764006	0	72.74122948	0.012260389	0	0.119256909	0.002801163	0	0.003633731	0.008000002	0.036750011	0.0025768	0	0.003342866	0.002000001	0.015750005	0.003352344	0	0.000719833	0.014924931	0	0.03706505
1.459319213	0	0	410.803667	0	0	0.011765436	0	0	0.199245146	0	0	0.008000002	0.036750011	0.190625889	0	0	0.002000001	0.015750005	0.003883572	0	0	0.064572616	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.008000002	0.036750011	0	0	0	0.002000001	0.015750005	0	0	0	0	0	0
0.134824896	0	0.415033683	371.7498948	0	80.00602056	0.006135387	0	0.092030159	0.001550769	0	0.002090336	0.008000002	0.036750011	0.001426738	0	0.001923266	0.002000001	0.015750005	0.003678767	0	0.000791724	0.009976777	0	0.040819615
0.094527093	0	0	292.7118864	0	0	0.001043397	0	0	0.011906547	0	0	0.008000002	0.036750011	0.011391475	0	0	0.002000001	0.015750005	0.00276718	0	0	0.046010232	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.008000002	0.036750011	0	0	0	0.002000001	0.015750005	0	0	0	0	0	0
0.314384563	0.041585137	0.591650752	807.1287357	124.3353554	19.66718943	0.009209913	0.129550202	0.033864407	0.001205737	0	0.000535417	0.008000002	0.076440022	0.001110886	0	0.000494696	0.002000001	0.032760009	0.007987193	0.001230399	0.000194623	0.018556342	0.003186557	0.044936172
3.927102338	2.513982157	0	501.3704868	140.8379554	0	0.005070952	0.005098128	0	0.024667129	0.027532686	0	0.012000003	0.076440022	0.02360004	0.026341634	0	0.003000001	0.032760009	0.004739754	0.001331425	0	0.078808459	0.022137765	0
0.267837867	0.041730043	0.587561668	923.4156914	143.3087859	22.01594333	0.006187685	0.13254647	0.030738972	0.000961317	0	0.000385566	0.008000002	0.089180026	0.000883999	0	0.000354617	0.002000001	0.038220011	0.009137947	0.001418157	0.000217866	0.017054601	0.00324386	0.04486558
3.117618493	2.5189607	0	545.9248546	226.3604234	0	0.004214271	0.005098128	0	0.021430641	0.027168531	0	0.012000003	0.089180026	0.020503561	0.025993232	0	0.003000001	0.038220011	0.005160953	0.00213992	0	0.085811785	0.035580706	0
1.141647567	0	0.261929969	207.5566169	0	61.92051458	0.3236514	0	0.247937075	0.001561023	0	0.003000047	0.004000001	0.011760003	0.001464868	0	0.002835561	0.001	0.005040001	0.002053941	0	0.000612754	0.065871603	0	0.014936437
0.173224094	0	0.510064618	453.9384923	0	98.11693176	0.008087889	0	0.114890312	0.001563472	0	0.002246463	0.008000002	0.036750011	0.001439632	0	0.002068887	0.002000001	0.015750005	0.004492089	0	0.000970947	0.012457695	0	0.044956177
0.099701948	0	0	391.3118004	0	0	0.000631907	0	0	0.006987988	0	0	0.008000002	0.036750011	0.00668569	0	0	0.002000001	0.015750005	0.003699304	0	0	0.061508766	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.008000002	0.036750011	0	0	0	0.002000001	0.015750005	0	0	0	0	0	0
0.57048517	0	0.314299602	1705.735164	0	27.34887804	0.017961081	0	0.035964633	0.001384189	0	0.000435742	0.012000003	0.130340037	0.001274541	0	0.000402161	0.003000001	0.055860016	0.016879632	0	0.000270639	0.032091265	0	0.031717076
4.911256984	0	0	954.3175829	0	0	0.00350447	0	0	0.1587474	0	0	0.016000005	0.130340037	0.151880058	0	0	0.004000001	0.055860016	0.009021733	0	0	0.150005434	0	0
0.866909838	0.088507852	0.408859534	1679.051963	559.0957838	42.55992244	0.023059596	0.243602006	0.047552436	0.001043973	0	0.000669356	0.012000003	0.130340037	0.000961754	0	0.000619894	0.003000001	0.055860016	0.01661558	0.005532706	0.000421165	0.038727655	0.006494669	0.027693413
4.212295005	10.67236193	0.91665979	979.7309893	872.5678364	0	0.009423751	0.008366111	0	0.153911508	0.053438653	0	0.012000003	0.130340037	0.147253364	0.05112692	0	0.003000001	0.055860016	0.009256013	0.008243588	0	0.154000068	0.137155513	0
0.742877561	0.064804371	0.338376793	1702.172628	388.9920632	28.33218967	0.018070401	0.191486458	0.034726244	0.000671159	0	0.000314325	0.012000003	0.130340037	0.000618082	0	0.00029135	0.003000001	0.055860016	0.016844378	0.003849392	0.00028037	0.034266494	0.00508438	0.024840495
6.110698952	26.74413256	0.881864965	1194.848416	2654.165236	0	0.014794696	0.072698211	0	0.197573847	0.195842173	0	0.012000003	0.130340037	0.18902689	0.187370128	0	0.003000001	0.055860016	0.011288335	0.025075237	0	0.187813532	0.417197814	0
0.376546848	0.92565639	0.522856132	904.0519178	2688.552693	49.23902052	0.013309052	2.384244736	0.056445059	0.000736892	0	0.000301265	0.008000002	0.744800204	0.000677545	0	0.000277002	0.002000001	0.319200087	0.008946327	0.026605408	0.00048726	0.022660083	0.086478612	0.048803067
8.185596203	51.19625771	0.454607149	1276.47381	3809.648291	0	0.006696935	0.014015345	0	0.053155008	0.067685766	0	0.012000003	0.744800213	0.050855546	0.06475771	0	0.003000001	0.319200091	0.012059492	0.035991668	0	0.200643907	0.598823659	0
0.184530403	0	0.60819851	1475.060624	0	54.99140207	0.003963582	0	0.064770417	0.00034029	0	0.000135159	0.009546243	0.105090841	0.000312884	0	0.000124273	0.002386561	0.045038932	0.014596921	0	0.000544185	0.017998277	0	0.060576953
0.477460704	0	0	1141.140363	0	0	0.037451096	0	0	0.004270345	0	0	0.012000007	0.130340079	0.004085612	0	0	0.003000002	0.055860034	0.01078788	0	0	0.179371374	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.012000007	0.130340079	0	0	0	0.003000002	0.055860034	0	0	0	0	0	0
0.442851769	0	0	1857.263508	0	0	5.666787124	0	0	0.003035405	0	0	0.029459382	0.080435367	0.002904095	0	0	0.007364845	0.0344723	0	0	0	0.378615316	0	0

Enter Forecast Data

Campus Growth

Year	Student Population	Faculty/Staff Population	Campus Population
2018	23,922	4,739	28,661
2035	35,000	7,545	42,545

Building Square Footage	Academics & Research	Academic Support	Student Life	Other	Campus LRDP Building Total
2018	1,220,283	1,458,975	1,875,963	248,279	4,803,500
2035	2,551,277	3,532,806	6,297,756	372,419	12,754,258

Electricity Emission Factors		
Baseline Year Emission factor:	0.4280	MT CO2e/MWh
Select Electricity Provider:	RPU	
	Year	RPS (percentage)
Baseline Year	2018	0.35

Transportation Forecast Data

	Forecast Year Annual VMT		
Vehicle Class	2030	2035	2045
Passenger	127,676,851	132,342,053	141,672,456
Light-Heavy Duty	1,185,276	1,224,441	1,302,770
Medium-Heavy Duty	1,100,867	1,098,630	1,094,157
Heavy-Heavy-Duty	1,715,753	1,738,033	1,782,593
Total	131,678,748	136,403,157	145,851,976

Inventory Year	**2018**

Data From Inventory (Units)	Year Activity Data	Year Emissions MTCO2e
Forecasting Factors		
Baseline Buildings (SF)	4,803,500	
Students Population	23,922	
Staff Population	4,739	
Campus Population	28,661	
Energy		
Baseline Electricity (kWh)	118,960,675	45,834
Baseline Natural Gas (Therms)	3,466,942	18,410
Baseline Diesel (Gallons)	8,003	82
Fugitive		
Baseline Refrigerant		339
Campus Fleet		
Gasoline (Gal)	135,192	1,200
Diesel (Gal)	7,306	29
CNG (scf)	4,321	75
Business Travel		
Air Travel (miles)	8,273,344	1,562
On Site Transport		
Passenger (VMT)	79,581,443	26,342
Light-Heavy Duty (VMT)	607,005	404
Medium-Heavy Duty (VMT)	577,080	614
Heavy-Heavy-Duty (VMT)	896,490	1,354
Public Transit		
Attributed VMT	407,912	743
Waste		
Waste Generation (short tons)	1,456	244

BAU Emission Growth Metrics (Units)	
Energy	
Baseline Electricity (kWh/SF)	24.765
Baseline NG (Therms/SF)	0.722
Baseline Diesel (Gal/SF)	0.002
Fugitive	
Baseline Refrigerant (MT CO2e/SF)	0.00007
Campus Fleet	
Gasoline (Gal/CP)	4.7
Diesel (Gal/CP)	0.3
CNG (scf/CP)	0.2
Business Travel	
Air Travel (miles per Staff)	1,746
On Site Transport	
Passenger (VMT/CP)	2,777
Light-Heavy Duty (VMT/CP)	21
Medium-Heavy Duty (VMT/CP)	20
Heavy-Heavy-Duty (VMT/CP)	31
Public Transit	
Attributed VMT per CP	14
Waste	
Waste Generation (short tons/CP)	0.0508

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Building Removal Operational GHG Emissions (-)

List 1 - Removal in 5-10 years

LRDP Land Use	Building Type (Brightworks)	Gross Square Footage	Current (Existing Building) EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTu/year)
Academics & Research	Lab/Complex	179,713	253	17,945,595
	Academic/Admin	112,693	107	2,876,089
Canyon Crest Gateway	Residential	186,083	83	7,226,626
Student Neighborhood	Social	72,544	180	4,570,272
List 1 Subtotal		*551,033*		*32,618,582*

List 2 - Removal in 10-15 years

LRDP Land Use	Building Type (Brightworks)	Gross Square Footage	Current EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTu/year)
Academics & Research	Lab/Complex	1,740	253	176,088
	Academic/Admin	65,258	107	2,094,719
Canyon Crest Gateway	Residential	312,949	83	11,860,573
Student Neighborhood	Social		180	
List 2 Subtotal		*379,946*		*14,131,380*
TOTAL		**930,979**		**46,749,962**

Building Demo GHG Emissions (+)

List 1 - Removal in 5-10 years

LRDP Land Use	Campus Area/Facility Name	Gross Square Footage	Demolition Emissions (MT CO$_2$e)
Academics & Research	Boyden Labs	8,781	7
Academics & Research	Fawcett Laboratory	21,001	25
Academics & Research	South Campus Drive Facilities	7,269	7
Academics & Research	South District/Toe of the Hill south of South Cam	34,626	41
Academics & Research	Northwest of East Campus Drive and north of Eu	30,416	27
Academics & Research	Northwest of East Campus Drive and south of Eu	15,067	25
Academics & Research	East of East Campus Drive and northeast of Euca	33,065	27
Academics & Research	East of East Campus Drive and southeast of Euca	22,276	26
Academics & Research	Former EH&S complex	9,736	24
Academics & Research	Reprographics Trailer on Commons Mall	1,965	6
Academics & Research	Health Services Building (Veitch - Student Health	23,333	39
Canyon Crest Gateway, Student Neighborhood, Open Space Reserve	Bannockburn Village	181,680	63
Student Neighborhood	Plaza Apartments	72,544	47
Student Neighborhood, Campus Support	Corporation Yard	73,797	47
University Avenue Gateway	Softball and soccer fields	3,629	36
Academics & Research	College Building2	18,642	9
List 1 Subtotal		*557,826*	*454*

List 2 - Removal in 10-15 years

LRDP Land Use	Campus Area/Facility Name	Gross Square Footage	Demolition Emissions (MT CO$_2$e)
Academics & Research	FMRI	1,740	6
Academics & Research	Costo Hall	20,317	25
Academics & Research	University Office Bldg.	20,288	9
Academics & Research	Campbell Hall	12,269	8
Canyon Crest Gateway	Police Facility	9,609	24
Canyon Crest Gateway, Student Neighborhood	Oban Apartments - East Side along Canyon Crest	106,840	39

Electricity (kWh/year)
7,889,329
1,966,848
2,588,672
2,487,587
14,932,436

Electricity (kWh/year)
77,413
1,432,495
4,248,614
5,758,522
20,690,958

Canyon Crest Gateway, Student Neighborhood	Falkirk Apartments - East Side along Canyon Cre:	156,390	46
List 2 Subtotal		*327,453*	*156*
TOTAL		**885,279**	**611**

LRDP Building Construction GHG Emissions (+)

**Scenarios per data source "programmodel_09182019_DRAFT"*

LRDP Land Use	2018-2035 Building Change (ASF)	New Construction (GSF)	CalEEMod Land Use	Construction Emi
Academics & Research				
Classroom & Services	176,970	**265,455**	Educational - University/College 4Yr	
Classroom & Services (seats)	6031			
Teaching Lab & Services	63071	**94,607**		
Open Lab & Service	12,757	**19,136**		
Research Lab & Service	178,090	**267,135**		
Academic Support				
Offices & Services	586,581	**879,872**	Commercial - General Office Building	
Library & Collaborative Learning Space	177,238	**265,857**	Educational - Library	
Assembly & Exhibit	62,012	**93,018**	Recreational - Movie Theater	
Other Department Space	70,398	**105,597**	Commercial - Research & Development	
Student Life				
Residences	2,117,973	**3,176,960**	Residential - Apartments Mid Rise	
Residential Dining	38,725	**58,088**	Recreational - High Turnover Restaurant	
Student Health	10,383	**15,575**	Commercial - Medical Office Building	
Student Union	90,300	**135,450**	Retail - Strip Mall	
Recreation Indoors	65,160	**97,740**	Recreational - Health Club	
Recreation Outdoors	4	**Acres**	Recreational - City park/ Golf Course?	
Athletics	0	**0**	N/A	
Other				
Corporation Yard	0	**0**	N/A	
TOTAL		5474487		

BUILDING INPUTS	*Existing Buildings*			
	EUI (kBTu/ sf-yr.)		***% Gas***	
	Current	Energy Upgrades	Current	Energy Upgrades
Academic/Admin	107.0	45.0	30%	14%
Lab/Complex	253.0	155.0	40%	50%
Residential	83.0	43.0	45%	34%
Social	180.0	100.0	35%	32%

LRDP Building C

LRDP Land Use	Brightworks Designation	2018-2035 Building Change (ASF)	New Construction (GSF)	% Attribution within LRDP Land Use
Academics & Research				

ssions (MT CO_2e)
Unmitigated
524
1303
344
68
525
921
525
341
342
8438
258
67
417
345
345
0
0
14763

				New Buildings
% Electricity		***EUI (kBTu/ sf-yr.)***		***% Ga***
Current	Energy Upgrades	Code	High Performance	Code
70%	86%	65.0	39.0	16%
60%	50%	149.0	136.0	42%
55%	66%	57.0	34.0	48%
65%	68%	107.0	88.0	29%

)perational Emissions (+) (Legislative Adjusted Forecast)

Estimated Operational Energy Use for New Buildings			Energy Factors for LRDP Land Use	
Code (New Building) EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTu/year)	Electricity (kWh/year)	Weighted LRDP Land Use EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTU/sf/year)

us	***% Electric***	
High Performance	Code	High Performance
10%	84%	90%
42%	58%	58%
34%	52%	66%
26%	71%	74%

Electricity Usage (kWh/sf/year)

Classroom & Services	Academic/Admin	176,970	**265,455**	41%
Teaching Lab & Services	Lab/Complex	63071	**94,607**	15%
Open Lab & Service	Lab/Complex	12,757	**19,136**	3%
Research Lab & Service	Lab/Complex	178,090	**267,135**	41%
Academic Support				
Offices & Services	Academic/Admin	586,581	**879,872**	65%
Library & Collaborative Learning Space	Academic/Admin	177,238	**265,857**	20%
Assembly & Exhibit	Academic/Admin	62,012	**93,018**	7%
Other Department Space	Academic/Admin	70,398	**105,597**	8%
Student Life				
Residences	Residential	2,117,973	**3,176,960**	91%
Residential Dining	Social	38,725	**58,088**	2%
Student Health	Lab/Complex	10,383	**15,575**	0%
Student Union	Social	90,300	**135,450**	4%
Recreation Indoors	Social	65,160	**97,740**	3%
Recreation Outdoors	N/A	4	**Acres**	
Athletics	N/A	0	**0**	
Other				
Corporation Yard	Academic/Admin	0	**0**	
TOTAL		**3,649,658**	**5,474,487**	

*Scenarios per data source "programmodel_09182019_DRAFT"

* LRDP Land Use designation by Brightworks building type was determined based off building data provided by UCR in the Brightworks analysis and the "Opportunity Site Potential List" for specific buildings. (See "Bldg. Summary" tab for compila

* 1 kbtu = 3.412 kWh

Existing Building EUI - For BAU forecast

LRDP Land Use	Brightworks Designation	2018-2035 Building Change (ASF)	New Construction (GSF)	% Attribution within LRDP Land Use
Academics & Research				
Classroom & Services	Academic/Admin	176,970	**265,455**	41%
Teaching Lab & Services	Lab/Complex	63071	**94,607**	15%
Open Lab & Service	Lab/Complex	12,757	**19,136**	3%
Research Lab & Service	Lab/Complex	178,090	**267,135**	41%
Academic Support				
Offices & Services	Academic/Admin	586,581	**879,872**	65%
Library & Collaborative Learning Space	Academic/Admin	177,238	**265,857**	20%
Assembly & Exhibit	Academic/Admin	62,012	**93,018**	7%
Other Department Space	Academic/Admin	70,398	**105,597**	8%
Student Life				
Residences	Residential	2,117,973	**3,176,960**	91%
Residential Dining	Social	38,725	**58,088**	2%
Student Health	Lab/Complex	10,383	**15,575**	0%
Student Union	Social	90,300	**135,450**	4%
Recreation Indoors	Social	65,160	**97,740**	3%
Recreation Outdoors	N/A	4	**Acres**	
Athletics	N/A	0	**0**	
Other				
Corporation Yard	Academic/Admin	0	**0**	

65	2,760,732	4,247,902	115	41.1
149	5,920,475	2,396,217		
149	1,197,500	484,669		
149	16,717,308	6,766,063		
65	9,150,664	14,080,007	65	10.4
65	2,764,913	4,254,335		
65	967,387	1,488,506		
65	1,098,209	1,689,800		
57	86,921,612	27,598,206	62	27.8
107	1,802,455	1,293,349		
149	974,652	394,475		
107	4,203,014	3,015,867		
107	3,032,872	2,176,233		
	-	-		
65	-	-	65	10
	137,511,792	**69,885,630**		

tion of data

Current EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTu/year)	Electricity (kWh/year)	Weighted LRDP Land Use EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTU/sf/year)
107	4,544,590	6,992,701	193	69.6
253	10,052,887	4,068,745		
253	2,033,338	822,961		
253	28,385,765	11,488,684		
107	15,063,400	23,177,858	107	17.1
107	4,551,472	7,003,290		
107	1,592,468	2,450,310		
107	1,807,821	2,781,670		
83	126,570,066	40,186,862	92	41.2
180	3,032,168	2,175,728		
253	1,654,946	669,813		
180	7,070,490	5,073,420		
180	5,102,028	3,660,953		
	-	-		
107	-	-	107	17

21.5
16.0
9.9
16

Electricity Usage (kWh/sf/year)
36.2
26.3
14.9
26

TOTAL		**3,649,658**	**5,474,487**	

1 Kbtu = 0.0100 therm

LRDP Buildin

LRDP Land Use	Brightworks Designation	2018-2035 Building Change (ASF)	New Construction (GSF)	% Attribution within LRDP Land Use
Academics & Research				
Classroom & Services	Academic/Admin	176,970	**265,455**	41%
Teaching Lab & Services	Lab/Complex	63071	**94,607**	15%
Open Lab & Service	Lab/Complex	12,757	**19,136**	3%
Research Lab & Service	Lab/Complex	178,090	**267,135**	41%
Academic Support				
Offices & Services	Academic/Admin	586,581	**879,872**	65%
Library & Collaborative Learning Space	Academic/Admin	177,238	**265,857**	20%
Assembly & Exhibit	Academic/Admin	62,012	**93,018**	7%
Other Department Space	Academic/Admin	70,398	**105,597**	8%
Student Life				
Residences	Residential	2,117,973	**3,176,960**	91%
Residential Dining	Social	38,725	**58,088**	2%
Student Health	Lab/Complex	10,383	**15,575**	0%
Student Union	Social	90,300	**135,450**	4%
Recreation Indoors	Social	65,160	**97,740**	3%
Recreation Outdoors	N/A	4	**Acres**	
Athletics	N/A	0	**0**	
Other				
Corporation Yard	Academic/Admin	0	**0**	
TOTAL		**3,649,658**	**5,474,487**	

*Scenarios per data source "programmodel_09182019_DRAFT"

* LRDP Land Use designation by Brightworks building type was determined based off building data provided by UCR in the Brightworks analysis and the "Opportunity Site Potential List" for specific buildings. (See "Bldg. Summary" tab for compila

* 1 kbtu = 3.412 kWh

Interim Projects Construction Emissions (+)

Project	Construction Emissions	Start Year	End Year	Number of years of construction
North District Development (NDD) Phase 1	2241	2019	2021	3
North District Development (NDD) Phases 2-5	7280	2022	2025	4
Dundee Glasgow	e 2005 LRDP Amendment 2 EIR - no change in e	2018	2020	
The Barn	304	2018	2020	3
Plant Growth Environments Facility (PGEF)	264	2019	2020	2
Student Success Center (SSC)	493	2019	2021	3
Parking Structure 1 (PS1)	1849	2019	2021	3

Interim Emissions by Year	Construction
2018	101
2019	1761
2020	1761
2021	1528

	211,461,439	**110,552,995**	

ng Operational Emissions (+) (UCR Adjusted Forecast)

Estimated Operational Energy Use for New Buildings			Energy Factors for LRDP Land Use	
Exceeding Code (New Building) EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTu/year)	Electricity (kWh/year)	Weighted LRDP Land Use EUI (kBTu/sf/yr.)	Natural Gas Usage (kBTU/sf/year)
39	1,035,275	2,730,794	96	35.3
136	5,403,923	2,187,151		
136	1,093,020	442,382		
136	15,258,751	6,175,735		
39	3,431,499	9,051,433	39	3.9
39	1,036,842	2,734,930		
39	362,770	956,897		
39	411,828	1,086,300		
34	36,725,652	20,894,189	39	12.7
88	1,329,042	1,108,634		
136	889,615	360,058		
88	3,099,096	2,585,142		
88	2,236,291	1,865,425		
	-	-		
65	-	-	39	4
	72,313,605	**52,179,069**		

ıtion of data

Construction Emissions per Year (MTCO2e)
747
1820
101.3333333
132
164.3333333
616.3333333

Electricity Usage (kWh/sf/year)
17.8
10.3
7.7
10

2022	1820
2023	1820
2024	1820
2025	1820
≥2026	0

Notes:

1) Operational emissions provided by UCR in the excel "UCR Interim Project" are those that include the amortized construction emissions. For the purposes of the inventory construction emissions and operational emissions are kept separate.

Interim Projects Operational Emissions (+)

CalEEMod Emission Sources

Project	Energy	Mobile	Area	Water
North District Development (NDD) Phase 1	2169	8,805	7	892
North District Development (NDD) Phases 2-5	7848	20573.00	22	2295
Dundee Glasgow	e 2005 LRDP Amendment 2 EIR - no change in emissions impact			
The Barn	184	0	0	0
Plant Growth Environments Facility (PGEF)	225	70	0	65
Student Success Center (SSC)	911	35	1	5
Parking Structure 1 (PS1)	462	0	0.1	0
Sum by Sector	11799	29483	30.1	3257

Operational Emissions by Year by Sector

Interim Emissions by Year	Energy	Mobile	Area	Water
2018	0	0	0	0
2019	0	0	0	0
2020	0	0	0	0
2021	409	70	0	65
2022	3951	8910	8	962
2023	3951	8910	8	962
2024	3951	8910	8	962
2025	3951	8910	8	962
≥2026	11799	29483	30	3257

Notes:

1) Operational emissions provided by UCR in the excel "UCR Interim Project" are those that include the amortized construction emissions. For the purposes of the inventory construction emissions and operational emissions are kept separate.

2) Operational emissions separated out to apply reduction measures to accordingly. CalEEMod Energy use is used in forecasting for interim proejcts however emissions assocaited with mobile, area, water, and waste are captured in the forecast

Interim Project Renovations[2]	Included in LRDP Baseline?	Gross Sqf	Land Use	Current Code EUI (Academic/Admin)
Batchelor Hall	Yes	106,249	Academics and Research	107
Pierce Hall	Yes	141,355	Academics and Research	107
Total		***247,604***		***107***

Notes:

1) Interim renovation projects did not have CalEEMod emission results available as they were analyzed under categorical exemption.

Waste	Total	Operational Year
61	11934	2022
276	31014	2026
	0	2021
14	198	2021
6	366	2021
9	961	2022
0	462.1	2022
366	44935.1	

Waste	Total
0	0
0	0
0	0
20	564
90	13921
90	13921
90	13921
90	13921
366	44935

through growth factors based on overall campus population growth.

Interim Projects Renovation Operational Emissions (+)[1]

Current Energy Usage		Estimated Energy Upgrades[3]	Estimated New Energy Use	
Natural Gas Usage (kBTu/year)	Electricity (kWh/year)		Natural Gas Usage (kBTu/year)	Electricity (kWh/year)
3,410,593	2,332,371	0.00%	3,410,592.90	2,332,371.07
4,537,496	3,103,016	16%	3,799,698.73	2,598,465.33
7,948,088	***5,435,387***		***7,210,292***	***4,930,836***

Net Energy Use	
Natural Gas Usage (therm/year)	Electricity (kWh/year)
-	-
(7,377.97)	(504,550.35)
(7,378)	***(504,550)***

2) Per 6.26.2020 email from UCR "Batchelor Hall and Pierce Hall renovation will include mechanical equipment system (e.g., HVAC) and electrical upgrades which would improve energy intensity. " Therefore, net new emissions from the renovat

3) Estimated improvement in EUI from the renovation energy upgrades was provided by UCR. Batchelor hall has not yet received approval to begin the project and it is currently uncertain which energy upgrade features will be included therefor

4) Net change in energy usage via natural gas or electricity is based on square footage of the building and EUI of building type as listed in the Brightworks Sustainability *UCR Program Concept Energy Analysis* .

5) 1 Kbtu = 0.0100 therm

ion project are based on improvements in building energy intensity (EUI) from the current building code, assumed to be 2016 -Title 24.
e it is conservatively assumed to have a 0% improvement in EUI.

Year	1990	2018	2020	2025	2030	2035	2040	2045	2050
Emissions (MT of CO2e)									
Business-as-usual (BAU)									
Electricity		45,834	54,759	87,284	122,028	156,320	156,320	156,320	156,320
Natural Gas		18,410	21,995	33,834	45,674	57,629	57,629	57,629	57,629
Other Fuels		82	98	138	178	218	218	218	218
Building and Facility Refrigerants		339	405	569	734	899	899	899	899
UCR Fleet (Unleaded)		1,200	1,269	1,440	1,611	1,782	1,782	1,782	1,782
UCR Fleet (Diesel)		29	31	35	39	44	44	44	44
UCR Fleet (CNG)		75	80	90	101	112	112	112	112
UCR Business Travel		1,562	1,671	1,943	2,215	2,487	2,487	2,487	2,487
On-Road Transportation (Passenger)		26,342	28,995	35,628	42,261	43,805	45,350	46,894	46,894
On-Road Transportation (Commercial/ Heavy Duty)		2,372	2,735	3,643	4,551	4,609	4,666	4,723	4,723
Public Transit		743	785	891	997	1,103	1,103	1,103	1,103
Waste		244	258	293	328	362	362	362	362
LRDP Demolition		0	0	44	44	44	0	0	0
LRDP Construction		0	0	1,055	1,055	1,055	0	0	0
Interim Project Construction		101	1,761	1,820	0	0	0	0	0
Interim Project Operation		0	0	3,717	10,631	9,463	8,295	7,128	5,960
Total		**97,333**	**114,841**	**172,425**	**232,446**	**279,931**	**279,266**	**279,700**	**278,532**
Legislative Adjusted (Leg Adj)									
Electricity		45,834	51,249	63,650	68,666	57,703	28,852	0	0
Natural Gas		18,410	21,995	32,526	43,056	53,702	53,702	53,702	53,702
Other Fuels		82	98	138	178	218	218	218	218
Building and Facility Refrigerants		339	405	569	734	899	899	899	899
UCR Fleet (Unleaded)		1,200	1,269	1,440	1,611	1,782	1,782	1,782	1,782
UCR Fleet (Diesel)		29	31	35	39	44	44	44	44
UCR Fleet (CNG)		75	80	90	101	112	112	112	112
UCR Business Travel		1,562	1,671	1,943	2,215	2,487	2,487	2,487	2,487
On-Road Transportation (Passenger)		26,342	28,926	29,684	30,324	29,423	28,381	28,757	28,506
On-Road Transportation (Commercial/ Heavy Duty)		2,372	2,566	3,121	3,624	3,135	2,630	3,305	3,282
Public Transit		743	714	608	453	251	0	0	0
Waste		244	258	293	328	362	362	362	362
LRDP Demolition		0	0	44	44	44	0	0	0
LRDP Construction		0	0	1,055	1,055	1,055	0	0	0
Interim Project Construction		101	1,761	1,820	0	0	0	0	0
Interim Project Operation		0	0	2,905	6,697	3,814	1,056	-1,701	-2,869
Total		**97,333**	**111,021**	**139,920**	**159,124**	**155,029**	**120,524**	**89,966**	**88,524**
				34,798	**45,719**	**56,756**	**56,756**	**56,756**	
Legislative Reductions									
SB 100		0	-3,510	-18,411	-42,916	-82,948	-111,800	-140,652	-140,652
Building Code		0	0	-6,532	-13,064	-19,595	-19,595	-19,595	-19,595
Tailpipe		0	-238	-6,466	-12,865	-15,856	-19,005	-19,555	-19,829
Innovative Clean Transit		0	-71	-284	-544	-852	-1,103	-1,103	-1,103
Total		**0**	**-3,820**	**-31,693**	**-69,388**	**-119,252**	**-151,504**	**-180,905**	**-181,180**

Activity Data & Emission Factors

Campus Population								
Student Population (SP)	23,922	25225	28484	31742	35,000	35,000	35,000	35,000
Faculty/Staff Population (FSP)	4,739	5069	5894	6720	7,545	7,545	7,545	7,545
Campus Population Total (CP)	28,661	30294	34378	38461	42,545	42,545	42,545	42,545
Campus Space (GSF)								
Academics & Research	1,220,283	1376871	1768339	2159808	2,551,277	2,551,277	2,551,277	2,551,277
Academic Support	1,458,975	1702955	2312906	2922856	3,532,806	3,532,806	3,532,806	3,532,806
Student Life	1,875,963	2396174	3696701	4997228	6,297,756	6,297,756	6,297,756	6,297,756
Other	248,279	262884	299395	335907	372,419	372,419	372,419	372,419
Campus LRDP Program Space Total	4,803,500	5738883	8077341	10415800	12,754,258	12,754,258	12,754,258	12,754,258
Electricity								
BAU Consumption (kWh)	118,960,675	142,125,831	226,544,239	316,721,169	405,726,534	405,726,534	405,726,534	405,726,534
Leg Adj Consumption (kWh)	118,960,675	142,125,831	212,988,450	289,609,592	365,059,169	365,059,169	365,059,169	365,059,169
Leg Adj Emission Factor (MT CO2e/MWh)	0.385284882	0.36058713	0.29884276	0.23709839	0.15806559	0.0790328	0	0
BAU Emissions Factor (MT CO2e/MWh)	0.385284882	0.38528488	0.38528488	0.38528488	0.38528488	0.38528488	0.38528488	0.38528488
Natural Gas								
BAU Consumption (Therms)	3,466,942	4,142,058	6,371,626	8,601,195	10,852,542	10,852,542	10,852,542	10,852,542
Leg Adj Consumption (Therms)	3,466,942	4,142,058	6,125,127	8,108,197	10,113,046	10,113,046	10,113,046	10,113,046
Other Stationary Combustion Fuels								
Diesel Consumption (gallons)	8,003	9,561	13,457	17,354	21,250	21,250	21,250	21,250
Fugitive Emissions								
Building and Facility Refrigerants (MT CO2e)	339	405	569	734	899	899	899	899
UCR Fleet								
Unleaded Gasoline Usage (gallons)	135,192	142,897	162,158	181,419	200,681	200,681	200,681	200,681
Diesel Usage (gallons)	7,306	7,722	8,763	9,804	10,845	10,845	10,845	10,845
CNG Usage (scf)	4,321	4,567	5,183	5,799	6,414	6,414	6,414	6,414
Business Travel								
Total Air Travel (passenger miles)	8,273,344	8,849,606	10,290,259	11,730,913	13,171,567	13,171,567	13,171,567	13,171,567
Emission Factor (MT CO2e/miles)	0	0	0	0	0	0	0	0
Waste								
Waste Landfilled (tons)	1,456	1,538	1,746	1,953	2,161	2,161	2,161	2,161

Transportation

On-Road Passenger (VMT)	79,581,443	87,597,344	107,637,097	127,676,851	132,342,053	137,007,255	141,672,456	141,672,456
On-Road Passenger BAU Emission Factor (g CO2e/mile)	331.00	331.00	331.00	331.00	331.00	331.00	331.00	331.00
On-Road Passenger Adjusted Emission Factor (g CO2e/mile)	331.00	330.21	275.78	237.50	222.33	207.15	202.98	201.21
On-Road Light-Heavy (VMT)	607,005	703,384	944,330	1,185,276	1,224,441	1,263,606	1,302,770	1,302,770
On-Road Light-Heavy BAU Emission Factor (g CO2e/mile)	665.04	665.04	665.04	665.04	665.04	665.04	665.04	665.04
On-Road Light-Heavy Adjusted Emission Factor (g CO2e/mile)	665.04	642.80	603.47	558.03	533.31	508.59	498.66	492.99
On-Road Med-Heavy (VMT)	577,080	664,378	882,623	1,100,867	1,098,630	1,096,393	1,094,157	1,094,157
On-Road Med-Heavy BAU Emission Factor (g CO2e/mile)	1064.80	1064.80	1064.80	1064.80	1064.80	1064.80	1064.80	1064.80
On-Road Med-Heavy Adjusted Emission Factor (g CO2e/mile)	1064.80	997.60	883.86	820.59	784.40	748.21	731.20	721.93
On-Road Heavy-Heavy (VMT)	896,490	1,033,034	1,374,394	1,715,753	1,738,033	1,760,313	1,782,593	1,782,593
On-Road Heavy-Heavy BAU Emission Factor (g CO2e/mile)	1510.15	1510.15	1510.15	1510.15	1510.15	1510.15	1510.15	1510.15
On-Road Heavy-Heavy Adjusted Emission Factor (g CO2e/mile)	1510.15	1404.94	1234.56	1123.21	1927.48	2731.74	948.26	938.84
On-Road Commercial (VMT)	2,080,575	2,400,795	3,201,346	4,001,897	4,061,105	4,120,312	4,179,520	4,179,520
On-Road Commercial BAU Emission Factor (g CO2e/mile)	1140.06	1139.30	1138.07	1137.33	1134.86	1132.47	1130.14	1130.14
On-Road Commercial Adjusted Emission Factor (g CO2e/mile)	1140.06	1068.92	975.04	905.67	771.95	638.22	790.78	785.33

Public Transit

Attributed Bus VMT (VMT)	407,912	431,159	489,276	547,393	605,509	605,509	605,509	605,509
Bus BAU Emission Factor (g CO2e/mile)	0.001821643	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164
Bus Adjusted Emission Factor (g CO2e/mile)	0.001821643	0.00165604	0.00124203	0.00082802	0.00041401	0	0	0

Year		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Summary																		
Business-as-usual (BAU) Forecast																		
Electricity		45,834	50,296	54,759	61,264	67,769	74,274	80,779	87,284	93,789	100,294	106,799	113,304	122,028	128,886	135,745	142,603	149,462
Natural Gas		18,410	20,203	21,995	24,363	26,731	29,099	31,467	33,834	36,202	38,570	40,938	43,306	45,674	48,065	50,456	52,847	55,238
Other Fuels		82	90	98	106	114	122	130	138	146	154	162	170	178	186	194	202	210
Building and Facility Refrigerants		339	372	405	438	470	503	536	569	602	635	668	701	734	767	800	833	866
UCR Fleet (Unleaded)		1,200	1,235	1,269	1,303	1,337	1,371	1,406	1,440	1,474	1,508	1,542	1,577	1,611	1,645	1,679	1,713	1,748
UCR Fleet (Diesel)		29	30	31	32	33	33	34	35	36	37	38	38	39	40	41	42	43
UCR Fleet (CNG)		75	78	80	82	84	86	88	90	93	95	97	99	101	103	105	108	110
UCR Business Travel		1,562	1,616	1,671	1,725	1,780	1,834	1,888	1,943	1,997	2,051	2,106	2,160	2,215	2,269	2,323	2,378	2,432
On-Road Transportation (Passenger)		26,342	27,668	28,995	30,322	31,648	32,975	34,301	35,628	36,955	38,281	39,608	40,935	42,261	42,570	42,879	43,188	43,497
On-Road Transportation (Commercial/ Heavy Duty)		2,372	2,554	2,735	2,917	3,098	3,280	3,462	3,643	3,825	4,007	4,188	4,370	4,551	4,563	4,574	4,586	4,597
Public Transit		743	764	785	807	828	849	870	891	912	934	955	976	997	1,018	1,040	1,061	1,082
Waste		244	251	258	265	272	279	286	293	300	307	314	321	328	334	341	348	355
LRDP Demolition		0	0	0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
LRDP Construction		0	0	0	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055
Interim Project Construction		101	1,761	1,761	1,528	1,820	1,820	1,820	1,820	0	0	0	0	0	0	0	0	0
Interim Project Operation		0	0	0	175	3,717	3,717	3,717	3,717	11,565	11,332	11,098	10,865	10,631	10,398	10,164	9,930	9,697
Total		**97,333**	**106,917**	**114,841**	**126,423**	**140,799**	**151,341**	**161,883**	**172,425**	**188,995**	**199,303**	**209,611**	**219,919**	**232,446**	**241,943**	**251,440**	**260,937**	**270,434**
Legislative Adjusted Forecast (Leg Adj)																		
Electricity		45,834	48,684	51,249	54,429	57,259	59,740	61,870	63,650	65,080	66,160	66,890	67,271	68,666	67,428	65,712	63,519	60,850
Natural Gas		18,410	20,203	21,995	24,101	26,207	28,313	30,419	32,526	34,632	36,738	38,844	40,950	43,056	45,185	47,314	49,444	51,573
Other Fuels		82	90	98	106	114	122	130	138	146	154	162	170	178	186	194	202	210
Building and Facility Refrigerants		339	372	405	438	470	503	536	569	602	635	668	701	734	767	800	833	866
UCR Fleet (Unleaded)		1,200	1,235	1,269	1,303	1,337	1,371	1,406	1,440	1,474	1,508	1,542	1,577	1,611	1,645	1,679	1,713	1,748
UCR Fleet (Diesel)		29	30	31	32	33	33	34	35	36	37	38	38	39	40	41	42	43
UCR Fleet (CNG)		75	78	80	82	84	86	88	90	93	95	97	99	101	103	105	108	110
UCR Business Travel		1,562	1,616	1,671	1,725	1,780	1,834	1,888	1,943	1,997	2,051	2,106	2,160	2,215	2,269	2,323	2,378	2,432
On-Road Transportation (Passenger)		26,342	27,635	28,926	29,252	29,491	29,642	29,707	29,684	29,935	30,124	30,252	30,318	30,324	30,155	29,980	29,800	29,615
On-Road Transportation (Commercial/ Heavy Duty)		2,372	2,475	2,566	2,689	2,806	2,917	3,022	3,121	3,231	3,336	3,437	3,533	3,624	3,528	3,431	3,333	3,234
Public Transit		743	730	714	697	677	656	633	608	581	552	521	488	453	417	378	337	295
Waste		244	251	258	265	272	279	286	293	300	307	314	321	328	334	341	348	355
LRDP Demolition		0	0	0	44	44	44	44	44	44	44	44	44	44	44	44	44	44
LRDP Construction		0	0	0	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055
Interim Project Construction		101	1,761	1,761	1,528	1,820	1,820	1,820	1,820	0	0	0	0	0	0	0	0	0
Interim Project Operation		0	0	0	142	3,257	3,133	3,016	2,905	8,820	8,279	7,747	7,223	6,697	6,112	5,532	4,956	4,383
Total		**97,333**	**105,158**	**111,021**	**117,885**	**126,705**	**131,549**	**135,954**	**139,920**	**148,024**	**151,074**	**153,716**	**155,947**	**159,124**	**159,267**	**158,930**	**158,112**	**156,811**
Legislative Reductions																		
SB 100		0	-1,612	-3,510	-5,790	-8,420	-11,401	-14,731	-18,411	-22,441	-26,822	-31,552	-36,632	-42,916	-49,969	-57,498	-65,504	-73,988
Building Code		0	0	0	-1,306	-2,613	-3,919	-5,225	-6,532	-7,838	-9,145	-10,451	-11,757	-13,064	-14,370	-15,676	-16,983	-18,289
Tailpipe		0	-112	-238	-1,297	-2,449	-3,695	-5,034	-6,466	-7,614	-8,828	-10,108	-11,453	-12,865	-13,450	-14,042	-14,641	-15,245
Innovative Clean Transit		0	-35	-71	-110	-151	-193	-237	-284	-332	-382	-434	-488	-544	-602	-662	-723	-787
Total		**0**	**-1,759**	**-3,820**	**-8,504**	**-13,633**	**-19,208**	**-25,227**	**-31,693**	**-38,225**	**-45,176**	**-52,545**	**-60,331**	**-69,388**	**-78,391**	**-87,878**	**-97,851**	**-108,309**
Adjusted - BAU (check)		0	-1,759	-3,820	-8,538	-14,094	-19,793	-25,929	-32,505	-40,971	-48,229	-55,896	-63,973	-73,323	-82,676	-92,510	-102,825	-113,623
Growth Metrics																		
Demographics																		
Student Population (SP)		23,922	24574	25225	25877	26529	27180	27832	28484	29135	29787	30438	31090	31742	32393	33045	33697	34348
Faculty/Staff Population (FSP)		4,739	4904	5069	5234	5399	5564	5729	5894	6059	6224	6389	6554	6720	6885	7050	7215	7380
Campus Population Total (CP)		28661	29478	30294	31111	31928	32744	33561	34378	35195	36011	36828	37645	38461	39278	40095	40911	41728
Campus Space (GSF)																		
Academics & Research		1,220,283	1298577	1376871	1455164	1533458	1611752	1690046	1768339	1846633	1924927	2003221	2081515	2159808	2238102	2316396	2394690	2472983
Academic Support		1,458,975	1580965	1702955	1824945	1946935	2068925	2190915	2312906	2434896	2556886	2678876	2800866	2922856	3044846	3166836	3288826	3410816
Student Life		1,875,963	2136068	2396174	2656279	2916385	3176490	3436596	3696701	3956807	4216912	4477018	4737123	4997228	5257334	5517439	5777545	6037650
Other		248,279	255581	262884	270186	277488	284791	292093	299395	306698	314000	321302	328605	335907	343209	350512	357814	365116
Campus LRDP Program Space Total		4,803,500	5271192	5738883	6206575	6674267	7141958	7609650	8077341	8545033	9012725	9480416	9948108	10415800	10883491	11351183	11818875	12286566
Yearly % Increase Campus Pop			3%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Yearly % Increase Campus Space			10%	9%	8%	8%	7%	7%	6%	6%	5%	5%	5%	5%	4%	4%	4%	4%
BAU Forecast																		
Building and Facility Energy Usage (BAU)																		
Natural Gas Use per Square Foot (therm/sqf)		0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.721753277	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.721753277
Baseline Natural Gas Usage (therms)		3,466,942	3,804,500	4,142,058	4,479,616	4,817,174	5,154,732	5,492,290	5,829,848	6,167,406	6,504,964	6,842,522	7,180,080	7,517,637	7,855,195	8,192,753	8,530,311	8,867,869
Natural Gas Usage of Demoed Buildings (therms)	subtract out			0	32,619	65,237	97,856	130,474	163,093	195,711	228,330	260,949	293,567	326,186	354,449	382,711	410,974	439,237
BAU Natural Gas Usage of New Buildings (therms)	add in			0	140,974	281,949	422,923	563,897	704,871	845,846	986,820	1,127,794	1,268,769	1,409,743	1,550,717	1,691,692	1,832,666	1,973,640
BAU Natural Gas Consumption (Therms)		3,466,942	3,804,500	4,142,058	4,587,971	5,033,885	5,479,799	5,925,713	6,371,626	6,817,540	7,263,454	7,709,367	8,155,281	8,601,195	9,051,464	9,501,734	9,952,003	10,402,273
NG Factor (MT CO2e/therm)		0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.005310176
Natural Gas Emissions (MT CO2e)		18,410	20,203	21,995	24,363	26,731	29,099	31,467	33,834	36,202	38,570	40,938	43,306	45,674	48,065	50,456	52,847	55,238
Diesel Use per Square Foot (gallons/sqf)		0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.001666077	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.001666077
Total Diesel Usage (gallons)		8,003	8,782	9,561	10,341	11,120	11,899	12,678	13,457	14,237	15,016	15,795	16,574	17,354	18,133	18,912	19,691	20,470
BAU Factor (MT CO2e/gallons)		0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268
Diesel Emissions (MT CO2e)		81.97216804	89.95336866	97.93456929	105.9157699	113.8969705	121.8781712	129.8593718	137.8405724	145.821773	153.802974	161.784174	169.765375	177.746576	185.727776	193.708977	201.690177	209.671378
Electricity Use per Square Foot (kWh/sqf)		24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584
Baseline Electricity Use (kWh)		118,960,675	130,543,253	142,125,831	153,708,408	165,290,986	176,873,564	188,456,142	200,038,720	211,621,297	223,203,875	234,786,453	246,369,031	257,951,609	269,534,186	281,116,764	292,699,342	304,281,920
Electricity Usage of Demoed Buildings (kWh)	subtract out			0	2,069,096	4,138,192	6,207,287	8,276,383	10,345,479	12,414,575	14,483,671	16,552,766	18,621,862	14,932,436	16,084,140	17,235,845	18,387,549	19,539,254
BAU Electricity Usage of New Buildings (kWh)	add in			0	7,370,200	14,740,399	22,110,599	29,480,799	36,850,998	44,221,198	51,591,398	58,961,597	66,331,797	73,701,997	81,072,196	88,442,396	95,812,596	103,182,795
BAU electricity Consumption (kWh)		118,960,675	130,543,253	142,125,831	159,009,512	175,893,194	192,776,876	209,660,557	226,544,239	243,427,921	260,311,602	277,195,284	294,078,966	316,721,169	334,522,242	352,323,315	370,124,388	387,925,461
BAU Factor (MT CO2e/kWh)		0.000385285	0.000385285	0.000385285	0.000385285	0.000385285	0.000385285	0.000385285	0.000385285	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.000385285
Electricity Emissions (MT CO2e)		45,834	50,296	54,759	61,264	67,769	74,274	80,779	87,284	93,789	100,294	106,799	113,304	122,028	128,886	135,745	142,603	149,462
Building and Facility Refrigerant Usage (BAU)																		
Refrigerant Usage per Square Footage (MT CO2e/sqf)		7.04917E-05	7.04917E-05	7.04917E-05	7.04917E-05	7.04917E-05	7.04917E-05	7.04917E-05	7.04917E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.04917E-05
Refrigerant Emissions (MT CO2e)		339	372	405	438	470	503	536	569	602	635	668	701	734	767	800	833	866
UCR Fleet (BAU)																		
Unleaded Gasoline Usage (gallons per Campus Pop)		4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.716932417	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.716932417
Diesel Usage (gallons per Campus Pop)		0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.254910854	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.254910854
CNG Usage (scf per Campus Pop)		0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236
Unleaded Gasoline Usage (gallons)		135,192	139,044	142,897	146,749	150,601	154,453	158,306	162,158	166,010	169,862	173,715	177,567	181,419	185,271	189,124	192,976	196,828
Diesel Usage (gallons)		7,306	7,514	7,722	7,931	8,139	8,347	8,555	8,763	8,971	9,180	9,388	9,596	9,804	10,012	10,221	10,429	10,637
CNG Usage (scf)		4,321	4,444	4,567	4,690	4,814	4,937	5,060	5,183	5,306	5,429	5,552	5,675	5,799	5,922	6,045	6,168	6,291
BAU Unleaded Gasoline Factor (MT CO2e/gallon)		0.008878852	0.008878852	0.008878852	0.008878852	0.008878852	0.008878852	0.008878852	0.008878852	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.008878852
BAU Diesel Factor (MT CO2e/gallon)		0.004011471	0.004011471	0.004011471	0.004011471	0.004011471	0.004011471	0.004011471	0.004011471	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.004011471
BAU CNG Factor(MT CO2e/scf)		0.017445708	0.017445708	0.017445708	0.017445708	0.017445708	0.017445708	0.017445708	0.017445708	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.017445708

Year		2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Summary																	
Business-as-usual (BAU) Forecast																	
Electricity		156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320
Natural Gas		57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629
Other Fuels		218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218
Building and Facility Refrigerants		899	899	899	899	899	899	899	899	899	899	899	899	899	899	899	899
UCR Fleet (Unleaded)		1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782
UCR Fleet (Diesel)		44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
UCR Fleet (CNG)		112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
UCR Business Travel		2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487
On-Road Transportation (Passenger)		43,805	44,114	44,423	44,732	45,041	45,350	45,658	45,967	46,276	46,585	46,894	46,894	46,894	46,894	46,894	46,894
On-Road Transportation (Commercial/ Heavy Duty)		4,609	4,620	4,632	4,643	4,655	4,666	4,678	4,689	4,700	4,712	4,723	4,723	4,723	4,723	4,723	4,723
Public Transit		1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103
Waste		362	362	362	362	362	362	362	362	362	362	362	362	362	362	362	362
LRDP Demolition		44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LRDP Construction		1,055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interim Project Construction		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interim Project Operation		9,463	9,230	8,996	8,763	8,529	8,295	8,062	7,828	7,595	7,361	7,128	6,894	6,660	6,427	6,193	5,960
Total		**279,931**	**278,919**	**279,006**	**279,093**	**279,180**	**279,266**	**279,353**	**279,440**	**279,526**	**279,613**	**279,700**	**279,466**	**279,233**	**278,999**	**278,766**	**278,532**
Legislative Adjusted Forecast (Leg Adj)																	
Electricity		57,703	51,933	46,163	40,392	34,622	28,852	23,081	17,311	11,541	5,770	0	0	0	0	0	0
Natural Gas		53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702
Other Fuels		218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218
Building and Facility Refrigerants		899	899	899	899	899	899	899	899	899	899	899	899	899	899	899	899
UCR Fleet (Unleaded)		1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782
UCR Fleet (Diesel)		44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
UCR Fleet (CNG)		112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
UCR Business Travel		2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487
On-Road Transportation (Passenger)		29,423	29,226	29,023	28,815	28,601	28,381	28,459	28,536	28,611	28,685	28,757	28,707	28,657	28,606	28,556	28,506
On-Road Transportation (Commercial/ Heavy Duty)		3,135	3,035	2,935	2,834	2,732	2,630	2,763	2,898	3,033	3,169	3,305	3,301	3,296	3,291	3,287	3,282
Public Transit		251	201	150	100	50	0	0	0	0	0	0	0	0	0	0	0
Waste		362	362	362	362	362	362	362	362	362	362	362	362	362	362	362	362
LRDP Demolition		44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LRDP Construction		1,055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interim Project Construction		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interim Project Operation		3,814	3,262	2,711	2,159	1,608	1,056	505	-46	-598	-1,149	-1,701	-1,934	-2,168	-2,402	-2,635	-2,869
Total		**155,029**	**147,262**	**140,587**	**133,905**	**127,218**	**120,524**	**114,414**	**108,303**	**102,192**	**96,079**	**89,966**	**89,678**	**89,389**	**89,101**	**88,812**	**88,524**
Legislative Reductions																	
SB 100		-82,948	-88,719	-94,489	-100,259	-106,030	-111,800	-117,570	-123,341	-129,111	-134,881	-140,652	-140,652	-140,652	-140,652	-140,652	-140,652
Building Code		-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595
Tailpipe		-15,856	-16,473	-17,097	-17,727	-18,363	-19,005	-19,113	-19,223	-19,333	-19,443	-19,555	-19,610	-19,665	-19,720	-19,775	-19,829
Innovative Clean Transit		-852	-902	-953	-1,003	-1,053	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103
Total		**-119,252**	**-125,690**	**-132,134**	**-138,584**	**-145,041**	**-151,504**	**-157,382**	**-163,262**	**-169,142**	**-175,023**	**-180,905**	**-180,960**	**-181,015**	**-181,070**	**-181,125**	**-181,180**
Adjusted - BAU (check)		-124,902	-131,657	-138,419	-145,187	-151,962	-158,743	-164,939	-171,137	-177,335	-183,534	-189,734	-189,788	-189,843	-189,898	-189,953	-190,008
Growth Metrics																	
Demographics																	
Student Population (SP)		35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000	35,000
Faculty/Staff Population (FSP)		7545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545	7,545
Campus Population Total (CP)		42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545	42,545
Campus Space (GSF)																	
Academics & Research		2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277	2,551,277
Academic Support		3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806	3,532,806
Student Life		6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756	6,297,756
Other		372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419	372,419
Campus LRDP Program Space Total		12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258	12,754,258
Yearly % Increase Campus Pop		2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Yearly % Increase Campus Space		4%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
BAU Forecast																	
Building and Facility Energy Usage (BAU)																	
Natural Gas Use per Square Foot (therm/sqf)		0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328	0.72175328
Baseline Natural Gas Usage (therms)		9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427
Natural Gas Usage of Demoed Buildings (therms)	subtract out	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500
BAU Natural Gas Usage of New Buildings (therms)	add in	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614	2,114,614
BAU Natural Gas Consumption (Therms)		10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542	10,852,542
NG Factor (MT CO2e/therm)		0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018
Natural Gas Emissions (MT CO2e)		57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629	57,629
Diesel Use per Square Foot (gallons/sqf)		0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608	0.00166608
Total Diesel Usage (gallons)		21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250	21,250
BAU Factor (MT CO2e/gallons)		0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268	0.01024268
Diesel Emissions (MT CO2e)		217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579	217.652579
Electricity Use per Square Foot (kWh/sqf)		24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584	24.76541584
Baseline Electricity Use (kWh)		315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498
Electricity Usage of Demoed Buildings (kWh)	subtract out	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958
BAU Electricity Usage of New Buildings (kWh)	add in	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995	110,552,995
BAU electricity Consumption (kWh)		405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534	405,726,534
BAU Factor (MT CO2e/kWh)		0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528	0.00038528
Electricity Emissions (MT CO2e)		156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320	156,320
Building and Facility Refrigerant Usage (BAU)																	
Refrigerant Usage per Square Footage (MT CO2e/sqf)		7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05	7.0492E-05
Refrigerant Emissions (MT CO2e)		899	899	899	899	899	899	899	899	899	899	899	899	899	899	899	899
UCR Fleet (BAU)																	
Unleaded Gasoline Usage (gallons per Campus Pop)		4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242	4.71693242
Diesel Usage (gallons per Campus Pop)		0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085	0.25491085
CNG Usage (scf per Campus Pop)		0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236	0.15076236
Unleaded Gasoline Usage (gallons)		200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681	200,681
Diesel Usage (gallons)		10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845	10,845
CNG Usage (scf)		6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414	6,414
BAU Unleaded Gasoline Factor (MT CO2e/gallon)		0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885	0.00887885
BAU Diesel Factor (MT CO2e/gallon)		0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147	0.00401147
BAU CNG Factor(MT CO2e/scf)		0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571	0.01744571

Unleaded Gasoline Emissions (MT CO2e)		1,200	1,235	1,269	1,303	1,337	1,371	1,406	1,440	1,474	1,508	1,542	1,577	1,611	1,645	1,679	1,713	1,748	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782	1,782
Diesel Emissions (MT CO2e)		29	30	31	32	33	33	34	35	36	37	38	38	39	40	41	42	43	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44
CNG Emissions (MT CO2e)		75	78	80	82	84	86	88	90	93	95	97	99	101	103	105	108	110	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112
Total Fleet Emissions (MT CO2e)		1,305	1,342	1,379	1,417	1,454	1,491	1,528	1,565	1,603	1,640	1,677	1,714	1,751	1,788	1,826	1,863	1,900	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937	1,937
UCR Business Travel (BAU)																																		
Air Travel (passenger miles per faculty/staff)		1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746	1,746
Total Air Travel (passenger miles)		8,273,344	8,561,475	8,849,606	9,137,736	9,425,867	9,713,998	10,002,129	10,290,259	10,578,390	10,866,521	11,154,652	11,442,782	11,730,913	12,019,044	12,307,175	12,595,306	12,883,436	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567	13,171,567
BAU Factor (MT CO2e/miles)		0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879	0.00018879
Air Travel Emissions (MT CO2e)		1,562	1,616	1,671	1,725	1,780	1,834	1,888	1,943	1,997	2,051	2,106	2,160	2,215	2,269	2,323	2,378	2,432	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487	2,487
On-road Transportation (BAU)																																		
Passenger VMT/year		79,581,443	83,589,393	87,597,344	91,605,295	95,613,245	99,621,196	103,629,147	107,637,097	111,645,048	115,652,999	119,660,950	123,668,900	127,676,851	128,609,891	129,542,932	130,475,972	131,409,012	132,342,053	133,275,093	134,208,133	135,141,174	136,074,214	137,007,255	137,940,295	138,873,335	139,806,376	140,739,416	141,672,456	141,672,456	141,672,456	141,672,456	141,672,456	141,672,456
Light-Heavy VMT/year		607,005	655,194	703,384	751,573	799,762	847,951	896,141	944,330	992,519	1,040,709	1,088,898	1,137,087	1,185,276	1,193,109	1,200,942	1,208,775	1,216,608	1,224,441	1,232,274	1,240,107	1,247,940	1,255,773	1,263,606	1,271,438	1,279,271	1,287,104	1,294,937	1,302,770	1,302,770	1,302,770	1,302,770	1,302,770	1,302,770
Medium-Heavy VMT/year		577,080	620,729	664,378	708,027	751,676	795,325	838,974	882,623	926,271	969,920	1,013,569	1,057,218	1,100,867	1,100,420	1,099,972	1,099,525	1,099,078	1,098,630	1,098,183	1,097,736	1,097,288	1,096,841	1,096,393	1,095,946	1,095,499	1,095,051	1,094,604	1,094,157	1,094,157	1,094,157	1,094,157	1,094,157	1,094,157
Heavy-Heavy VMT/year		896,490	964,762	1,033,034	1,101,306	1,169,578	1,237,850	1,306,122	1,374,394	1,442,666	1,510,937	1,579,209	1,647,481	1,715,753	1,720,209	1,724,665	1,729,121	1,733,577	1,738,033	1,742,489	1,746,945	1,751,401	1,755,857	1,760,313	1,764,769	1,769,225	1,773,681	1,778,137	1,782,593	1,782,593	1,782,593	1,782,593	1,782,593	1,782,593
Commercial VMT/year		2,080,575	2,240,685	2,400,795	2,560,905	2,721,016	2,881,126	3,041,236	3,201,346	3,361,456	3,521,566	3,681,677	3,841,787	4,001,897	4,013,738	4,025,580	4,037,422	4,049,263	4,061,105	4,072,946	4,084,788	4,096,629	4,108,471	4,120,312	4,132,154	4,143,995	4,155,837	4,167,678	4,179,520	4,179,520	4,179,520	4,179,520	4,179,520	4,179,520
Passenger Emission Factor BAU (g CO2e/mile)		331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002	331.002
Light-Heavy Emission Factor BAU (g CO2e/mile)		665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035	665.035
Medium-Heavy Emission Factor BAU (g CO2e/mile)		1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803	1,064.803
Heavy-Heavy Emission Factor BAU (g CO2e/mile)		1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146	1,510.146
Commercial Emission Factor BAU (g CO2e/mile)		1,140.063	1,139.657	1,139.305	1,138.997	1,138.725	1,138.484	1,138.268	1,138.073	1,137.897	1,137.737	1,137.591	1,137.457	1,137.334	1,136.834	1,136.338	1,135.844	1,135.353	1,134.865	1,134.379	1,133.897	1,133.417	1,132.940	1,132.466	1,131.995	1,131.526	1,131.060	1,130.596	1,130.136	1,130.136	1,130.136	1,130.136	1,130.136	1,130.136
Passenger Emissions BAU (MT CO2e)		26,342	27,668	28,995	30,322	31,648	32,975	34,301	35,628	36,955	38,281	39,608	40,935	42,261	42,570	42,879	43,188	43,497	43,805	44,114	44,423	44,732	45,041	45,350	45,658	45,967	46,276	46,585	46,894	46,894	46,894	46,894	46,894	46,894
Light-Heavy Emissions BAU (MT CO2e)		404	436	468	500	532	564	596	628	660	692	724	756	788	793	799	804	809	814	820	825	830	835	840	846	851	856	861	866	866	866	866	866	866
Medium-Heavy Emissions BAU (MT CO2e)		614	661	707	754	800	847	893	940	986	1,033	1,079	1,126	1,172	1,172	1,171	1,171	1,170	1,170	1,169	1,169	1,168	1,168	1,167	1,167	1,166	1,166	1,166	1,165	1,165	1,165	1,165	1,165	1,165
Heavy-Heavy Emissions BAU (MT CO2e)		1,354	1,457	1,560	1,663	1,766	1,869	1,972	2,076	2,179	2,282	2,385	2,488	2,591	2,598	2,604	2,611	2,618	2,625	2,631	2,638	2,645	2,652	2,658	2,665	2,672	2,679	2,685	2,692	2,692	2,692	2,692	2,692	2,692
Commercial Emissions BAU (MT CO2e)		2,372	2,554	2,735	2,917	3,098	3,280	3,462	3,643	3,825	4,007	4,188	4,370	4,551	4,563	4,574	4,586	4,597	4,609	4,620	4,632	4,643	4,655	4,666	4,678	4,689	4,700	4,712	4,723	4,723	4,723	4,723	4,723	4,723
Public Transit (BAU)																																		
Bus VMT per campus population		14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.23230457	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.23230457	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046	14.2323046
Total Bus VMT		407,912	419,535	431,159	442,782	454,406	466,029	477,652	489,276	500,899	512,522	524,146	535,769	547,393	559,016	570,639	582,263	593,886	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509
Bus Emission Factor (MT CO2e/mile)		0.001821643	0.001821643	0.001821643	0.001821643	0.001821643	0.001821643	0.001821643	0.001821643	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.001821643	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164	0.00182164
Bus Emissions (MT CO2e)		743	764	785	807	828	849	870	891	912	934	955	976	997	1,018	1,040	1,061	1,082	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103	1,103
Waste (BAU)																																		
Waste (tons/per campus population)		0.050783294	0.050783294	0.050783294	0.050783294	0.050783294	0.050783294	0.050783294	0.050783294	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.050783294	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329	0.05078329
Total waste (tons)		1,456	1,497	1,538	1,580	1,621	1,663	1,704	1,746	1,787	1,829	1,870	1,912	1,953	1,995	2,036	2,078	2,119	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161	2,161
Waste Emissions BAU (MT CO2e/ton)		0.167693434	0.167693434	0.167693434	0.167693434	0.167693434	0.167693434	0.167693434	0.167693434	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.167693434	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343	0.16769343
Waste Emissions BAU (MT CO2e)		244	251	258	265	272	279	286	293	300	307	314	321	328	334	341	348	355	362	362	362	362	362	362	362	362	362	362	362	362	362	362	362	362
Construction & Demolition (BAU)																																		
Building Demolition (sqf)		0	0	0	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	63,234	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Building Demolition (MT CO2e)		0	0	0	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Construction (sqf)		0	0	0	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	391,035	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
New Building Construction (MT CO2e)		0	0	0	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	1,055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interim Building Construction (MT CO2e)		101	1,761	1,761	1,528	1,820	1,820	1,820	1,820	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interim Project Operation (MT CO2e)		-	-	-	175	3,717	3,717	3,717	3,717	11,565	11,332	11,098	10,865	10,631	10,398	10,164	9,930	9,697	9,463	9,230	8,996	8,763	8,529	8,295	8,062	7,828	7,595	7,361	7,128	6,894	6,660	6,427	6,193	5,960

Legislative Adjusted Forecast (Leg Adj)

Building and Facility Energy Usage (Adjusted)																																		
Baseline Natural Gas Usage (therms)		3,466,942	3,804,500	4,142,058	4,479,616	4,817,174	5,154,732	5,492,290	5,829,848	6,167,406	6,504,964	6,842,522	7,180,080	7,517,637	7,855,195	8,192,753	8,530,311	8,867,869	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427	9,205,427
Natural Gas Usage of Demoed Buildings (therms)	subtract out			0	32,619	65,237	97,856	130,474	163,093	195,711	228,330	260,949	293,567	326,186	354,449	382,711	410,974	439,237	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500	467,500
Natural Gas Usage of New Buildings (therms)	add in			0	91,675	183,349	275,024	366,698	458,373	550,047	641,722	733,396	825,071	916,745	1,008,420	1,100,094	1,191,769	1,283,443	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118	1,375,118
Leg Adj Natural Gas Consumption (therms)		3,466,942	3,804,500	4,142,058	4,538,672	4,935,286	5,331,900	5,728,513	6,125,127	6,521,741	6,918,355	7,314,969	7,711,583	8,108,197	8,509,167	8,910,136	9,311,106	9,712,076	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046	10,113,046
NG Emission Factor (MT CO2e/therm)		0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.005310176	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.005310176	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018	0.00531018
Natural Gas Emissions (MT CO2e)		18,410	20,203	21,995	24,101	26,207	28,313	30,419	32,526	34,632	36,738	38,844	40,950	43,056	45,185	47,314	49,444	51,573	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702	53,702
BAU Diesel Emissions (MT CO2e)		82	90	98	106	114	122	130	138	146	154	162	170	178	186	194	202	210	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218	218
RPU Electricity Leg Adj Emission Factor (MT Co2e/MWh)		0.428	0.41	0.40	0.39	0.37	0.36	0.35	0.33	0.32	0.30	0.29	0.28	0.263	0.25	0.23	0.21	0.19	0.18	0.16	0.14	0.12	0.11	0.09	0.07	0.05	0.04	0.02	0.000	0.000	0.000	0.000	0.000	0.000
RPU RPS		35%	37%	39%	41%	43%	45%	48%	50%	52%	54%	56%	58%	60%	63%	65%	68%	71%	73%	76%	79%	81%	84%	87%	89%	92%	95%	97%	100%	100%	100%	100%	100%	100%
RPU % of electricity supplied (baseline)		90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Campus Leg Adj Electricity Emission Factor (MT CO2e/MWh)		0.385	0.373	0.361	0.348	0.336	0.324	0.311	0.299	0.286	0.274	0.262	0.249	0.237	0.221	0.205	0.190	0.174	0.158	0.142	0.126	0.111	0.095	0.079	0.063	0.047	0.032	0.016	0.000	0.000	0.000	0.000	0.000	0.000
Baseline Electricity Use (kWh)		118,960,675	130,543,253	142,125,831	153,708,408	165,290,986	176,873,564	188,456,142	200,038,720	211,621,297	223,203,875	234,786,453	246,369,031	257,951,609	269,534,186	281,116,764	292,699,342	304,281,920	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498	315,864,498
Electricity Usage of Demoed Buildings (kWh)	subtract out			0	2,069,096	4,138,192	6,207,287	8,276,383	10,345,479	12,414,575	14,483,671	16,552,766	18,621,862	14,932,436	16,084,140	17,235,845	18,387,549	19,539,254	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958	20,690,958
Electricity Usage of New Buildings (kWh)	add in			0	4,659,042	9,318,084	13,977,126	18,636,168	23,295,210	27,954,252	32,613,294	37,272,336	41,931,378	46,590,420	51,249,462	55,908,504	60,567,546	65,226,588	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630	69,885,630
Leg Adj Electricity Use (kWh)		118,960,675	130,543,253	142,125,831	156,298,355	170,470,879	184,643,402	198,815,926	212,988,450	227,160,974	241,333,498	255,506,022	269,678,546	289,609,592	304,699,508	319,789,423	334,879,338	349,969,254	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169	365,059,169
Leg Adj Electricity Emissions (MT CO2e)		45,834	48,684	51,249	54,429	57,259	59,740	61,870	63,650	65,080	66,160	66,890	67,271	68,666	67,428	65,712	63,519	60,850	57,703	51,933	46,163	40,392	34,622	28,852	23,081	17,311	11,541	5,770	0	0	0	0	0	0
Legislative Reduction SB100 (MT CO2e)		0	-1,612	-3,510	-5,790	-8,420	-11,401	-14,731	-18,411	-22,441	-26,822	-31,552	-36,632	-42,916	-49,969	-57,498	-65,504	-73,988	-82,948	-88,719	-94,489	-100,259	-106,030	-111,800	-117,570	-123,341	-129,111	-134,881	-140,652	-140,652	-140,652	-140,652	-140,652	-140,652
Legislative Reduction Building Code Electricity (MT CO2e)		0	0	0	-1,045	-2,089	-3,134	-4,178	-5,223	-6,267	-7,312	-8,357	-9,401	-10,446	-11,490	-12,535	-13,579	-14,624	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669	-15,669
Legislative Reduction Building Code Natural Gas (MT CO2e)		0	0	0	-262	-524	-785	-1,047	-1,309	-1,571	-1,833	-2,094	-2,356	-2,618	-2,880	-3,141	-3,403	-3,665	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927	-3,927
Combined building Code Reductions (Mt CO2e)		0	0	0	-1,306	-2,613	-3,919	-5,225	-6,532	-7,838	-9,145	-10,451	-11,757	-13,064	-14,370	-15,676	-16,983	-18,289	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595	-19,595
Combined Energy Legislative Reductions (MT CO2e)		0	-1,612	-3,510	-7,097	-11,033	-15,320	-19,956	-24,943	-30,280	-35,966	-42,003	-48,390	-55,980	-64,339	-73,174	-82,487	-92,277	-102,544	-108,314	-114,085	-119,855	-125,625	-131,396	-137,166	-142,936	-148,706	-154,477	-160,247	-160,247	-160,247	-160,247	-160,247	-160,247
Leg Adj-BAU (check)		0	-1,612	-3,510	-7,097	-11,033	-15,320	-19,956	-24,943	-30,280	-35,966	-42,003	-48,390	-55,980	-64,339	-73,174	-82,487	-92,277	-102,544	-108,314	-114,085	-119,855	-125,625	-131,396	-137,166	-142,936	-148,706	-154,477	-160,247	-160,247	-160,247	-160,247	-160,247	-160,247
		0%	2%	5%	8%	12%	15%	18%	21%	23%	26%	28%	31%	33%	36%	39%	42%	45%	48%	51%	53%	56%	59%	61%	64%	67%	69%	72%	75%	75%	75%	75%	75%	75%
		0%	3%	6%	9%	12%	15%	18%	21%	24%	27%	30%	32%	35%	39%	42%	46%	50%	53%	57%	60%	64%	68%	72%	75%	79%	83%	86%	90%	90%	90%	90%	90%	90%
Leg Adj On-road Transportation																																		
Passenger Emission Factor Leg Adj (g CO2e/mile)		331.002	330.607	330.212	319.325	308.439	297.552	286.665	275.779	268.124	260.469	252.814	245.158	237.503	234.468	231.432	228.397	225.362	222.326	219.291	216.255	213.220	210.184	207.149	206.316	205.483	204.650	203.817	202.984	202.628	202.273	201.918	201.563	201.207
Light-Heavy Emission Factor Leg Adj (g CO2e/mile)		665.035	653.915	642.795	634.931	627.067	619.202	611.338	603.474	594.386	585.297	576.209	567.121	558.033	553.089	548.144	543.200	538.256	533.312	528.367	523.423	518.479	513.535	508.590	506.605	504.620	502.635	500.649	498.664	497.528	496.393	495.257	494.121	492.985
Medium-Heavy Emission Factor Leg Adj (g CO2e/mile)		1,064.803	1,031.199	997.596	974.848	952.100	929.352	906.604	883.856	871.203	858.551	845.898	833.245	820.592	813.354	806.115	798.877	791.638	784.399	777.161	769.922	762.684	755.445	748.206	744.805	741.404	738.003	734.602	731.201	729.347	727.493	725.639	723.785	721.931
Heavy-Heavy Emission Factor Leg Adj (g CO2e/mile)		1,510.146	1,457.541	1,404.937	1,370.862	1,336.787	1,302.713	1,268.638	1,234.563	1,212.292	1,190.021	1,167.750	1,145.479	1,123.208	1,284.062	1,444.915	1,605.769	1,766.623	1,927.476	2,088.330	2,249.183	2,410.037	2,570.890	2,731.744	2,375.047	2,018.351	1,661.655	1,304.958	948.262	946.377	944.492	942.608	940.723	938.838
Commercial Emission Factor Leg Adj (g CO2e/mile)		1,140.063	1,104.492	1,068.920	1,050.145	1,031.369	1,012.594	993.818	975.043	961.169	947.295	933.421	919.547	905.673	878.927	852.182	825.437	798.691	771.946	745.201	718.455	691.710	664.965	638.219	668.730	699.242	729.753	760.264	790.776	789.687	788.599	787.511	786.423	785.335
Passenger Emissions Leg Adj (MT CO2e)		26,342	27,635	28,926	29,252	29,491	29,642	29,707	29,684	29,935	30,124	30,252	30,318	30,324	30,155	29,980	29,800	29,615	29,423	29,226	29,023	28,815	28,601	28,381	28,459	28,536	28,611	28,685	28,757	28,707	28,657	28,606	28,556	28,506
Light-Heavy Emissions Leg Adj (MT CO2e)		404	428	452	477	502	525	548	570	590	609	627	645	661	660	658	657	655	653	651	649	647	645	643	644	646	647	648	650	648	647	645	644	642
Medium-Heavy Emissions Leg Adj (MT CO2e)		614	640	663	690	716	739	761	780	807	833	857	881	903	895	887	878	870	862	853	845	837	829	820	816	812	808	804	800	798	796	794	792	790
Heavy-Heavy Emissions Leg Adj (MT CO2e)		1,354	1,406	1,451	1,510	1,563	1,613	1,657	1,697	1,749	1,798	1,844	1,887	1,927	2,209	2,492	2,777	3,063	3,350	3,639	3,929	4,221	4,514	4,809	4,191	3,571	2,947	2,320	1,690	1,687	1,684	1,680	1,677	1,674
Commercial Emissions Leg Adj (MT CO2e)		2,372	2,475	2,566	2,689	2,806	2,917	3,022	3,121	3,231	3,336	3,437	3,533	3,624	3,528	3,431	3,333	3,234	3,135	3,035	2,935	2,834	2,732	2,630	2,763	2,898	3,033	3,169	3,305	3,301	3,296	3,291	3,287	3,282
Legislative Reductions Passenger Emissions (MT CO2e)		0	-33	-69	-1,070	-2,157	-3,332	-4,595	-5,944	-7,020	-8,157	-9,356	-10,616	-11,938	-12,415	-12,898	-13,387	-13,882	-14,382	-14,888	-15,400	-15,917	-16,440	-16,969	-17,199	-17,431	-17,665	-17,900	-18,137	-18,187	-18,237	-18,288	-18,338	-18,388
Legislative Reductions Light-Heavy Emissions (MT CO2e)		0	-7	-16	-23	-30	-39	-48	-58	-70	-83	-97	-111	-127	-134	-140	-147	-154	-161	-168	-176	-183	-190	-198	-201	-205	-209	-213	-217	-218	-220	-221	-223	-224
Legislative Reductions Medium-Heavy Emissions (MT CO2e)		0	-21	-45	-64	-85	-108	-133	-160	-179	-200	-222	-245	-269	-277	-285	-292	-300	-308	-316	-324	-332	-339	-347	-351	-354	-358	-361	-365	-367	-369	-371	-373	-375
Legislative Reductions Heavy-Heavy Emissions (MT CO2e)		0	-51	-109	-153	-203	-257	-315	-379	-430	-484	-541	-601	-664	-389	-113	165	445	725	1,007	1,291	1,576	1,863	2,150	1,526	899	269	-365	-1,002	-1,005	-1,008	-1,012	-1,015	-1,018
Legislative Reductions Commercial Emissions (MT CO2e)		0	-79	-169	-228	-292	-363	-439	-522	-594	-671	-752	-837	-927	-1,035	-1,144	-1,253	-1,363	-1,474	-1,585	-1,697	-1,810	-1,923	-2,036	-1,914	-1,791	-1,668	-1,543	-1,418	-1,423	-1,427	-1,432	-1,437	-1,441
Combined Legislative Reduction of On-Road Emissions (MT CO2e)		0	-112	-238	-1,297	-2,449	-3,695	-5,034	-6,466	-7,614	-8,828	-10,108	-11,453	-12,865	-13,450	-14,042	-14,641	-15,245	-15,856	-16,473	-17,097	-17,727	-18,363	-19,005	-19,113	-19,223	-19,333	-19,443	-19,555	-19,610	-19,665	-19,720	-19,775	-19,829
		0%	0%	1%	4%	6%	9%	12%	15%	17%	19%	21%	23%	25%	26%	27%	28%	29%	30%	31%	32%	33%	34%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%

Leg Adj Public Transit

Leg Adj Bus Emission Factor (Innovative Clean Transit)	0.001821643	0.001738841	0.001656039	0.001573237	0.001490435	0.001407633	0.001324831	0.001242029	0.00115923	0.00107643	0.00099362	0.00091082	0.00082802	0.00074522	0.00066242	0.00057961	0.000496812	0.00041401	0.00033121	0.00024841	0.0001656	8.2802E-05	0	0	0	0	0	0	0	0	0	0	0
BAU VMT	407,912	419,535	431,159	442,782	454,406	466,029	477,652	489,276	500,899	512,522	524,146	535,769	547,393	559,016	570,639	582,263	593,886	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509	605,509
Leg Adj Public Transit Emissions	743	730	714	697	677	656	633	608	581	552	521	488	453	417	378	337	295	251	201	150	100	50	0	0	0	0	0	0	0	0	0	0	0
Legislative Reduction	0	-35	-71	-110	-151	-193	-237	-284	-332	-382	-434	-488	-544	-602	-662	-723	-787	-852	-902	-953	-1,003	-1,053	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103	-1,103

EMFAC DATA FORECAST YEAR **2020**

Paste data --> EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2020
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day.

Helper Column	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW
HHDTGAS	Riverside (SC)	2020	HHDT	Aggregated	Aggregated	GAS	7.834009455	495.6972074	156.7428612	5.401136467	0	0.607457471	0.000944923	0	0.000796605	0.005000001	0.026460008	0.00102769	0	0.00086638	0.02000001	0.06174002
HHDTDSL	Riverside (SC)	2020	HHDT	Aggregated	Aggregated	DSL	14896.97361	1849783.594	155837.5901	3.847966556	62.62895728	1.897200988	0.064071674	0.116936842	0	0.008812582	0.025908992	0.06696871	0.122224207	0	0.03525033	0.06045432
HHDTNG	Riverside (SC)	2020	HHDT	Aggregated	Aggregated	NG	195.4860734	7927.187827	762.3956863	2.765504806	23.47431555	0	0.005926184	0.049027878	0	0.009000003	0.026460008	0.006194139	0.051244701	0	0.03600001	0.06174002
LDAGAS	Riverside (SC)	2020	LDA	Aggregated	Aggregated	GAS	544330.7452	22811940.05	2577014.349	0.045201034	0	0.204976844	0.001339613	0	0.001867181	0.002000001	0.015750005	0.001456908	0	0.002030591	0.008	0.03675001
LDADSL	Riverside (SC)	2020	LDA	Aggregated	Aggregated	DSL	4801.796275	211707.5045	23004.1958	0.099093464	0	0	0.00830876	0	0	0.002000001	0.015750005	0.008684445	0	0	0.008	0.03675001
LDAELEC	Riverside (SC)	2020	LDA	Aggregated	Aggregated	ELEC	5917.336596	225470.3815	29889.44984	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001
LDT1GAS	Riverside (SC)	2020	LDT1	Aggregated	Aggregated	GAS	56941.70538	2171443.935	257765.5069	0.163137135	0	0.341346025	0.002240094	0	0.002971296	0.002000001	0.015750005	0.002436106	0	0.003231236	0.008	0.03675001
LDT1DSL	Riverside (SC)	2020	LDT1	Aggregated	Aggregated	DSL	32.63987716	703.6072479	107.6552039	1.304523511	0	0	0.167472362	0	0	0.002000001	0.015750005	0.175044719	0	0	0.008	0.03675001
LDT1ELEC	Riverside (SC)	2020	LDT1	Aggregated	Aggregated	ELEC	131.0488487	5032.136237	662.2684204	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001
LDT2GAS	Riverside (SC)	2020	LDT2	Aggregated	Aggregated	GAS	172787.9159	6953901.02	808078.8723	0.09839573	0	0.343068492	0.001409228	0	0.001892243	0.002000001	0.015750005	0.001532582	0	0.002057853	0.008	0.03675001
LDT2DSL	Riverside (SC)	2020	LDT2	Aggregated	Aggregated	DSL	801.9527862	38380.62057	3973.327641	0.061786722	0	0	0.007330449	0	0	0.002000001	0.015750005	0.007661899	0	0	0.008	0.03675001
LDT2ELEC	Riverside (SC)	2020	LDT2	Aggregated	Aggregated	ELEC	857.4023436	27869.83896	4368.931582	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001
LHDT1GAS	Riverside (SC)	2020	LHDT1	Aggregated	Aggregated	GAS	15903.23291	522854.1613	236934.4745	0.259370315	0.040662364	0.577590239	0.001013511	0	0.000418982	0.002000001	0.032760009	0.001101617	0	0.000454948	0.008	0.07644002
LHDT1DSL	Riverside (SC)	2020	LHDT1	Aggregated	Aggregated	DSL	15724.26694	546497.7935	197791.4969	3.335804582	2.409114904	0	0.021548318	0.026154927	0	0.003000001	0.032760009	0.022522638	0.027337536	0	0.012	0.07644002
LHDT2GAS	Riverside (SC)	2020	LHDT2	Aggregated	Aggregated	GAS	2247.021483	74925.36029	33477.27203	0.222576105	0.040626208	0.572547055	0.000855143	0	0.000330565	0.002000001	0.038220011	0.000929939	0	0.000359408	0.008	0.08918003
LHDT2DSL	Riverside (SC)	2020	LHDT2	Aggregated	Aggregated	DSL	5986.499893	210205.549	75302.63764	2.638318666	2.410926957	0	0.019204131	0.026007111	0	0.003000001	0.038220011	0.020072457	0.027183037	0	0.012	0.08918003
MCYGAS	Riverside (SC)	2020	MCY	Aggregated	Aggregated	GAS	27562.03276	186161.6877	55124.06552	1.133813745	0	0.262463883	0.00156173	0	0.002742616	0.001	0.005040001	0.001667444	0	0.002907865	0.004	0.01176
MDVGAS	Riverside (SC)	2020	MDV	Aggregated	Aggregated	GAS	154154.4763	5759434.716	707160.9966	0.135656352	0	0.438100033	0.001414631	0	0.002004409	0.002000001	0.015750005	0.00153732	0	0.002177981	0.008	0.03675001
MDVDSL	Riverside (SC)	2020	MDV	Aggregated	Aggregated	DSL	2774.383834	122611.3071	13585.962	0.07467919	0	0	0.005657552	0	0	0.002000001	0.015750005	0.005913361	0	0	0.008	0.03675001
MDVELEC	Riverside (SC)	2020	MDV	Aggregated	Aggregated	ELEC	297.2379218	9882.784579	1525.076046	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001
MHGAS	Riverside (SC)	2020	MH	Aggregated	Aggregated	GAS	5298.489729	42692.11287	530.0609125	0.486618124	0	0.322131136	0.001145711	0	0.000346324	0.003000001	0.055860016	0.001245459	0	0.000376157	0.012	0.13034004
MHDSL	Riverside (SC)	2020	MH	Aggregated	Aggregated	DSL	1995.592802	16646.26539	199.5592802	4.662561416	0	0	0.142771223	0	0	0.004000001	0.055860016	0.149226705	0	0	0.01600001	0.13034004
MHDTGAS	Riverside (SC)	2020	MHDT	Aggregated	Aggregated	GAS	1269.719696	51275.62336	25404.55167	0.590666358	0.089022597	0.386426527	0.000858672	0	0.000451389	0.003000001	0.055860016	0.000933885	0	0.000490926	0.012	0.13034004
MHDTDSL	Riverside (SC)	2020	MHDT	Aggregated	Aggregated	DSL	11983.99633	722759.9463	118821.8643	3.203130997	9.135461176	1.194648029	0.104954052	0.03426208	0	0.003000001	0.055860016	0.109699609	0.035811259	0	0.012	0.13034004
OBUSGAS	Riverside (SC)	2020	OBUS	Aggregated	Aggregated	GAS	443.2109762	16098.84235	8867.765211	0.611907206	0.064871022	0.332450693	0.000650772	0	0.00025553	0.003000001	0.055860016	0.000707434	0	0.000277116	0.012	0.13034004
OBUSDSL	Riverside (SC)	2020	OBUS	Aggregated	Aggregated	DSL	223.9038271	15117.15957	2143.053993	4.425559333	23.24074598	1.245849654	0.114937547	0.11098792	0	0.003000001	0.055860016	0.120134513	0.116006301	0	0.012	0.13034004
SBUSGAS	Riverside (SC)	2020	SBUS	Aggregated	Aggregated	GAS	395.8309322	14360.45933	1583.323729	0.347214625	0.9265304	0.550194512	0.000627284	0	0.000267564	0.002000001	0.319200087	0.000682229	0	0.000291001	0.008	0.7448002
SBUSDSL	Riverside (SC)	2020	SBUS	Aggregated	Aggregated	DSL	812.4348173	25716.68219	9375.385152	7.585470318	48.55939488	0.595369184	0.045849014	0.055706484	0	0.003000001	0.319200091	0.047922103	0.058225284	0	0.012	0.74480021
UBUSGAS	Riverside (SC)	2020	UBUS	Aggregated	Aggregated	GAS	162.5145119	22881.1992	650.0580478	0.124199278	0	0.514913539	0.001046461	0	0.000431367	0.002386561	0.045038932	0.001138122	0	0.000469151	0.00954624	0.10509084
UBUSDSL	Riverside (SC)	2020	UBUS	Aggregated	Aggregated	DSL	1.105797941	58.57190354	4.423191762	0.477460704	0	0	0.004085612	0	0	0.003000002	0.055860034	0.004270345	0	0	0.01200001	0.13034008
UBUSELEC	Riverside (SC)	2020	UBUS	Aggregated	Aggregated	ELEC	0.058469431	1.251702935	0.233877724	0	0	0	0	0	0	0.003000002	0.055860034	0	0	0	0.01200001	0.13034008
UBUSNG	Riverside (SC)	2020	UBUS	Aggregated	Aggregated	NG	201.6964296	26538.11439	806.7857186	0.442847878	0	0	0.002904072	0	0	0.007364732	0.034472854	0.003035381	0	0	0.02945893	0.08043666

Helper Column	Region	Calendar Year	Vehicle Category	Fuel	Population	VMT	% of Total	Trips	CO2_RUNEX (g/mile)	CH4_RUNEX (g/mile)	N2O_RUNEX (g/mile)	CO2e (g/mile)
	Passenger Vehicles											
LDADSL	Riverside (SC)	2020	LDA	DSL	4801.796275	211707.5045	0.55%	211707.5045	204.4716582	0.000726465	0.0000000	204.4919992
LDT1DSL	Riverside (SC)	2020	LDT1	DSL	32.63987716	703.6072479	0.00%	703.6072479	404.309644	0.010358787	0.0000000	404.59969
LDT2DSL	Riverside (SC)	2020	LDT2	DSL	801.9527862	38380.62057	0.10%	38380.62057	274.9744929	0.000777006	0.0000000	274.9962491
MDVDSL	Riverside (SC)	2020	MDV	DSL	2774.383834	122611.3071	0.32%	122611.3071	372.9108444	0.00056362	0.0000000	372.9266258
LDAELEC	Riverside (SC)	2020	LDA	ELEC	5917.336596	225470.3815	0.59%	225470.3815	0	0	0.0000000	0
LDT1ELEC	Riverside (SC)	2020	LDT1	ELEC	131.0488487	5032.136237	0.01%	5032.136237	0	0	0.0000000	0
LDT2ELEC	Riverside (SC)	2020	LDT2	ELEC	857.4023436	27869.83896	0.07%	27869.83896	0	0	0.0000000	0
MDVELEC	Riverside (SC)	2020	MDV	ELEC	297.2379218	9882.784579	0.03%	9882.784579	0	0	0.0000000	0
MCYGAS	Riverside (SC)	2020	MCY	GAS	27562.03276	186161.6877	0.48%	186161.6877	207.3125153	0.318787748	0.2454222	281.2754603
LDAGAS	Riverside (SC)	2020	LDA	GAS	544330.7452	22811940.05	59.21%	22811940.05	274.1597695	0.002840208	0.0574992	289.476573
LDT1GAS	Riverside (SC)	2020	LDT1	GAS	56941.70538	2171443.935	5.64%	2171443.935	321.8230417	0.008944652	0.0985134	348.1795392
LDT2GAS	Riverside (SC)	2020	LDT2	GAS	172787.9159	6953901.02	18.05%	6953901.02	347.8501844	0.004558055	0.0796464	369.0841118
MDVGAS	Riverside (SC)	2020	MDV	GAS	154154.4763	5759434.716	14.95%	5759434.716	432.0191681	0.006400531	0.1006846	458.8798062
			Passenger Vehicle Total			***38524539.59***			**311.4503659**	**0.00551283**	**0.07021529**	**330.211777**
			Passenger Gasoline Total			**37882881.41**	**98.33%**		**313.0711927**	**0.004032776**	**0.070198555**	**331.7867274**
			Passenger Diesel Total			**373403.0394**	**0.97%**		**267.4039226**	**0.000696338**	**0**	**267.42342**
			Passenger Electric Total			**268255.1413**	**0.70%**		**0**	**0**	**0**	**0**
	Light Trucks											
LHDT1DSL	Riverside (SC)	2020	LHDT1	DSL	15724.26694	546497.7935	40.35%	546497.7935	492.0502563	0.004578723	0.0000000	492.1784605
LHDT2DSL	Riverside (SC)	2020	LHDT2	DSL	5986.499893	210205.549	15.52%	210205.549	535.9060307	0.003826912	0.0000000	536.0131842
LHDT1GAS	Riverside (SC)	2020	LHDT1	GAS	15903.23291	522854.1613	38.60%	522854.1613	795.6050085	0.007192705	0.0303336	803.8448159
LHDT2GAS	Riverside (SC)	2020	LHDT2	GAS	2247.021483	74925.36029	5.53%	74925.36029	909.5122114	0.004856392	0.0281201	917.1000084
			Light-Heavy Truck Total			***1354482.864***			**639.1263731**	**0.00548645**	**0.013264819**	**642.7951708**
			Light-Heavy Truck Gasoline Total			**597779.5216**	**44.13%**		**809.8820754**	**0.006899873**	**0.030056182**	**818.0401602**
			Light-Heavy Truck Diesel Total			**756703.3425**	**55.87%**		**504.2330056**	**0.004369877**	**0**	**504.3553622**
	Medium Trucks											
MHDTGAS	Riverside (SC)	2020	MHDT	GAS	1269.719696	51275.62336	**6.62%**	51275.62336	1649.872709	0.01500247	0.0414986	1661.289894
MHDTDSL	Riverside (SC)	2020	MHDT	DSL	11983.99633	722759.9463	**93.38%**	722759.9463	950.3271498	0.006548667	0.0000000	950.5105125
			Medium-Heavy Truck Total			***774035.5697***			**996.6682173**	**0.007108685**	**0.002749052**	**997.5957593**
	Heavy Trucks											
HHDTGAS	Riverside (SC)	2020	HHDT	GAS	7.834009455	495.6972074	**0.03%**	495.6972074	2137.052433	0.123645218	0.0002130	2140.570942
HHDTDSL	Riverside (SC)	2020	HHDT	DSL	14896.97361	1849783.594	**99.55%**	1849783.594	1395.766753	0.004878989	0.0000000	1395.903365
HHDTNG	Riverside (SC)	2020	HHDT	NG	195.4860734	7927.187827	**0.43%**	7927.187827	3328.879	4.926461335	0.0000000	3466.819917
			Heavy-Heavy Truck Total			***1858206.479***			**1404.211238**	**0.025906351**	**5.68182E-08**	**1404.936631**
	Urban Buses											
UBUSGAS	Riverside (SC)	2020	UBUS	GAS	162.5145119	22881.1992	**46.25%**	22881.1992	1392.787724	0.003871665	0.0524545	1406.796571
UBUSDSL	Riverside (SC)	2020	UBUS	DSL	1.105797941	58.57190354	**0.12%**	58.57190354	1141.140363	0.037451096	0.0000000	1142.188994
UBUSNG	Riverside (SC)	2020	UBUS	NG	201.6964296	26538.11439	**53.64%**	26538.11439	1857.249841	5.666721558	0.0000000	2015.918045
			Urban Bus Total			***49477.88549***			**1641.610187**	**3.041255408**	**0.02425774**	**1733.193639**

CO2_RUNEX	CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_RESTLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_RESTLOSS	TOG_DIURN	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
2137.052433	0	50.03068205	0.123645218	0	0.000212993	0.174661051	0	0.013395631	0.640494788	0	0.001092076	0.168989118	0.89349555	0.058761672	0.096425904	0.934608492	0	0.001195686	0.168989118	0.89349555	0.058761672	0.096425904	32.10732755	0	5.926908749	0.021147866	0	0.000495094
1395.766753	11437.15955	0	0.004878989	0.218733758	0	0.219395096	1.797762209	0	0.10504329	4.709277818	0	0	0	0	0	0.11958379	5.36115432	0	0	0	0	0	0.425117846	57.31651367	0	0.013186512	0.108052612	0
3328.879	3939.157685	0	4.926461335	1.310770359	0	0.678613761	0.803023063	0	0.300668518	0.065550623	0	0	0	0	0	5.29019069	1.391085716	0	0	0	0	0	13.59941426	21.38855545	0	0	0	0
274.1597695	0	57.5059428	0.002840208	0	0.057499161	0.004980263	0	0.027721517	0.011012453	0	0.256909425	0.106628573	0.220515683	0.236086268	0.304712568	0.016055338	0	0.28128127	0.106628573	0.220515683	0.236086268	0.304712568	0.721375171	0	2.251954384	0.002713033	0	0.000569068
204.4716582	0	0	0.000726465	0	0	0.032140097	0	0	0.015640354	0	0	0	0	0	0	0.017805503	0	0	0	0	0	0	0.202761203	0	0	0.001932992	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
321.8230417	0	68.96382258	0.008944652	0	0.098513386	0.011557847	0	0.033667099	0.039700778	0	0.511156157	0.291864641	0.952501169	0.655644537	0.969167772	0.057880147	0	0.559647709	0.291864641	0.952501169	0.655644537	0.969167772	1.772565743	0	2.559916331	0.0031847	0	0.000682453
404.309644	0	0	0.010358787	0	0	0.063551846	0	0	0.223018579	0	0	0	0	0	0	0.253891825	0	0	0	0	0	0	1.36127214	0	0	0.00382218	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
347.8501844	0	75.02433769	0.004558055	0	0.079646422	0.007874742	0	0.036711289	0.01861055	0	0.373288485	0.143546414	0.445616529	0.371288439	0.45145738	0.0271337	0	0.408702113	0.143546414	0.445616529	0.371288439	0.45145738	1.037296826	0	2.905228034	0.00344226	0	0.000742427
274.9744929	0	0	0.000777006	0	0	0.043222161	0	0	0.016728472	0	0	0	0	0	0	0.019044253	0	0	0	0	0	0	0.118866793	0	0	0.002599498	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
795.6050085	123.2589812	19.2772164	0.007192705	0.128003554	0.030333629	0.015555837	0.00319538	0.044159586	0.034783777	0.465855326	0.152076856	0.146066526	0.921294453	0.0385302	0.075880348	0.050104348	0.679503728	0.166476994	0.146066526	0.921294453	0.0385302	0.075880348	0.945529908	3.746762343	1.80323615	0.007873157	0.001219748	0.000190764
492.0502563	139.0264342	0	0.004578723	0.005098128	0	0.077343448	0.021853019	0	0.098577218	0.109759705	0	0	0	0	0	0.112223609	0.124954127	0	0	0	0	0	0.670593784	0.909745076	0	0.004651644	0.0013143	0
909.5122114	141.9037357	21.77850572	0.004856392	0.130019907	0.028120068	0.014528834	0.003218205	0.04394523	0.021556173	0.465746366	0.138358536	0.123464533	0.755613828	0.032189894	0.062009129	0.031350126	0.679574624	0.151480908	0.123464533	0.755613828	0.032189894	0.062009129	0.583850809	3.758093194	1.711467616	0.009000361	0.001404252	0.000215516
535.9060307	223.5046664	0	0.003826912	0.005098128	0	0.084236965	0.035131821	0	0.082391163	0.109759705	0	0	0	0	0	0.093796861	0.124954127	0	0	0	0	0	0.553605655	0.909745076	0	0.005066239	0.002112923	0
207.3125153	0	61.2727931	0.318787748	0	0.245422219	0.065472394	0	0.014962082	2.172750939	0	1.859797359	0.787002703	1.919709665	1.505114663	2.818861701	2.660458295	0	2.023421113	0.787002703	1.919709665	1.505114663	2.818861701	19.76232271	0	8.583718157	0.002051525	0	0.000606344
432.0191681	0	93.6435144	0.006400531	0	0.100684616	0.010219122	0	0.041019833	0.028713163	0	0.50315745	0.171690782	0.499112001	0.455040666	0.525957639	0.040381956	0	0.55083408	0.171690782	0.499112001	0.455040666	0.525957639	1.306134873	0	3.541526945	0.00427518	0	0.000926678
372.9108444	0	0	0.00056362	0	0	0.058616392	0	0	0.012134413	0	0	0	0	0	0	0.013814222	0	0	0	0	0	0	0.18890582	0	0	0.003525349	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
1691.263956	0	26.71611257	0.014617978	0	0.034305275	0.028581274	0	0.033669769	0.064778578	0	0.143337219	0.097534676	2.158894901	0.059685451	0.167523925	0.093733811	0	0.156911184	0.097534676	2.158894901	0.059685451	0.167523925	2.086869749	0	3.064342848	0.016736428	0	0.000264378
948.9129331	0	0	0.003432359	0	0	0.149155899	0	0	0.073896663	0	0	0	0	0	0	0.084126438	0	0	0	0	0	0	0.355394015	0	0	0.00897064	0	0
1649.872709	552.588477	40.23272652	0.01500247	0.252107164	0.04149855	0.027750683	0.007041431	0.028190471	0.074130704	0.99926745	0.229498708	0.095845869	0.493182282	0.030444615	0.059115815	0.108171349	1.458128717	0.251272197	0.095845869	0.493182282	0.030444615	0.059115815	2.048370944	14.31856358	5.051026719	0.016326828	0.005468311	0.000398135
950.3271498	843.1528284	0	0.006548667	0.006290705	0	0.149378194	0.132531883	0	0.140990995	0.13543715	0	0	0	0	0	0.160507515	0.154184886	0	0	0	0	0	0.530064037	2.332141131	0	0.00897822	0.00796569	0
1678.972286	385.8468321	27.53476018	0.014660503	0.192274377	0.032466766	0.028798506	0.005181201	0.024849431	0.071384604	0.743732475	0.175437611	0.032847234	0.350558408	0.028605375	0.066314821	0.103664667	1.084795824	0.192037432	0.032847234	0.350558408	0.028605375	0.066314821	1.955345243	5.757508575	3.570024627	0.016614792	0.003818267	0.000272479
1161.989968	2657.858577	0	0.009036385	0.059157975	0	0.182648641	0.417778355	0	0.194550885	1.273654982	0	0	0	0	0	0.221481373	1.449959245	0	0	0	0	0	0.684226375	12.33766034	0	0.010977905	0.02511013	0
899.0442897	2677.457392	48.41478789	0.009392166	2.38232159	0.054943379	0.021581264	0.085829986	0.050655628	0.04648751	10.64151815	0.319546758	0.063118606	0.387580901	0.017576136	0.035415451	0.067834465	15.5280783	0.349863478	0.063118606	0.387580901	0.017576136	0.035415451	1.044255823	82.24087757	7.650093844	0.008896772	0.026495611	0.000479104
1254.640506	3777.928241	0	0.006297302	0.013376076	0	0.197212016	0.593837709	0	0.135579186	0.287983254	0	0	0	0	0	0.154346582	0.327847013	0	0	0	0	0	0.364594344	5.079022242	0	0.011853221	0.035691993	0
1392.787724	0	52.66141273	0.003871665	0	0.052454492	0.013261263	0	0.05749177	0.011503557	0	0.203894706	0.022851834	0.102214235	0.006945728	0.012037883	0.016785963	0	0.223239038	0.022851834	0.102214235	0.006945728	0.012037883	0.182155383	0	4.380377904	0.013782764	0	0.000521127
1141.140363	0	0	0.037451096	0	0	0.179371374	0	0	0.000535102	0	0	0	0	0	0	0.03822159	0	0	0	0	0	0	0.057156358	0	0	0.01078788	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1857.249841	0	0	5.666721558	0	0	0.37861253	0	0	0.08096627	0	0	0	0	0	0	5.783304989	0	0	0	0	0	0	43.79817908	0	0	0	0	0

EMFAC DATA FORECAST YEAR **2025**

Paste data --> EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2025
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day.

Helper Column	**Region**	**Calendar Year**	**Vehicle Category**	**Model Year**	**Speed**	**Fuel**	**Population**	**VMT**	**Trips**	**NOx_RUNEX**	**NOx_IDLEX**	**NOx_STREX**	**PM2.5_RUNEX**	**PM2.5_IDLEX**	**PM2.5_STREX**	**PM2.5_PMTW**	**PM2.5_PMBW**	**PM10_RUNEX**	**PM10_IDLEX**	**PM10_STREX**	**PM10_PMTW**	**PM10_PMBW**	**CO2_RUNEX**
HHDTGAS	Riverside (SC)	2025	HHDT	Aggregated	Aggregated	GAS	5.917085626	489.3585501	118.3890492	3.386183663	0	0.113293785	0.000891675	0	0.000533223	0.005000001	0.026460008	0.000969778	0	0.000579929	0.02000001	0.06174002	1859.068895
HHDTDSL	Riverside (SC)	2025	HHDT	Aggregated	Aggregated	DSL	16787.91989	2073941.582	177897.7482	1.947821562	55.65074882	2.511240927	0.023399284	0.022579722	0	0.008801891	0.02587756	0.024457296	0.023600677	0	0.03520757	0.06038097	1220.386579
HHDTNG	Riverside (SC)	2025	HHDT	Aggregated	Aggregated	NG	366.9607711	14928.54824	1431.147007	1.207892251	19.73040555	0	0.003892218	0.020577646	0	0.009000003	0.026460008	0.004068207	0.021508076	0	0.03600001	0.06174002	3059.937465
LDAGAS	Riverside (SC)	2025	LDA	Aggregated	Aggregated	GAS	634445.4088	24819468.5	2999831.308	0.025937555	0	0.152866177	0.001096772	0	0.001550978	0.002000001	0.015750005	0.001192839	0	0.00168683	0.008	0.03675001	240.1096538
LDADSL	Riverside (SC)	2025	LDA	Aggregated	Aggregated	DSL	6750.331621	273894.7973	32236.019	0.039460201	0	0	0.004010709	0	0	0.002000001	0.015750005	0.004192056	0	0	0.008	0.03675001	180.8476117
LDAELEC	Riverside (SC)	2025	LDA	Aggregated	Aggregated	ELEC	17340.99834	715536.0137	86549.86824	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT1GAS	Riverside (SC)	2025	LDT1	Aggregated	Aggregated	GAS	64862.57189	2387662.891	297460.563	0.080036352	0	0.224259489	0.001489405	0	0.002066289	0.002000001	0.015750005	0.001619863	0	0.002247278	0.008	0.03675001	281.476261
LDT1DSL	Riverside (SC)	2025	LDT1	Aggregated	Aggregated	DSL	22.09264048	500.8045087	74.57591289	0.861881958	0	0	0.11012703	0	0	0.002000001	0.015750005	0.115106486	0	0	0.008	0.03675001	372.8764631
LDT1ELEC	Riverside (SC)	2025	LDT1	Aggregated	Aggregated	ELEC	840.0670631	35870.85658	4237.919514	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT2GAS	Riverside (SC)	2025	LDT2	Aggregated	Aggregated	GAS	196401.0012	7476968.972	920583.0346	0.051520429	0	0.219961104	0.001136712	0	0.00157853	0.002000001	0.015750005	0.001236279	0	0.001716795	0.008	0.03675001	291.960893
LDT2DSL	Riverside (SC)	2025	LDT2	Aggregated	Aggregated	DSL	1411.82251	60038.76398	6916.520273	0.034017297	0	0	0.004035167	0	0	0.002000001	0.015750005	0.004217619	0	0	0.008	0.03675001	238.1716277
LDT2ELEC	Riverside (SC)	2025	LDT2	Aggregated	Aggregated	ELEC	3434.450512	100004.4721	17256.03431	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LHDT1GAS	Riverside (SC)	2025	LHDT1	Aggregated	Aggregated	GAS	14855.10977	474380.1042	221319.0015	0.152531263	0.036018299	0.496957507	0.000931255	0	0.000348083	0.002000001	0.032760009	0.001012825	0	0.000378571	0.008	0.07644002	752.1983655
LHDT1DSL	Riverside (SC)	2025	LHDT1	Aggregated	Aggregated	DSL	15929.66362	511419.863	200375.1288	2.019895045	2.022562002	0	0.015930088	0.02598244	0	0.003000001	0.032760009	0.016650376	0.02715725	0	0.012	0.07644002	461.8679033
LHDT2GAS	Riverside (SC)	2025	LHDT2	Aggregated	Aggregated	GAS	2257.609118	71801.06903	33635.01202	0.131369083	0.035835042	0.492955781	0.000827727	0	0.000290038	0.002000001	0.038220011	0.000900229	0	0.000315443	0.008	0.08918003	860.4473653
LHDT2DSL	Riverside (SC)	2025	LHDT2	Aggregated	Aggregated	DSL	6279.413605	200055.2549	78987.12365	1.626437918	2.022626013	0	0.01618995	0.026158371	0	0.003000001	0.038220011	0.016921988	0.027341137	0	0.012	0.08918003	503.8737569
MCYGAS	Riverside (SC)	2025	MCY	Aggregated	Aggregated	GAS	29089.61205	176339.2601	58179.22411	1.119383515	0	0.26305578	0.001748522	0	0.002532061	0.001	0.005040001	0.001872313	0	0.002698308	0.004	0.01176	207.4293794
MDVGAS	Riverside (SC)	2025	MDV	Aggregated	Aggregated	GAS	154545.0839	5434458.472	708075.5859	0.068286585	0	0.284423528	0.001145026	0	0.001626311	0.002000001	0.015750005	0.001245313	0	0.001768748	0.008	0.03675001	369.5944041
MDVDSL	Riverside (SC)	2025	MDV	Aggregated	Aggregated	DSL	3932.245175	155115.8465	18927.02863	0.036746435	0	0	0.003502835	0	0	0.002000001	0.015750005	0.003661218	0	0	0.008	0.03675001	325.3993277
MDVELEC	Riverside (SC)	2025	MDV	Aggregated	Aggregated	ELEC	2250.064657	66744.92315	11374.61152	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
MHGAS	Riverside (SC)	2025	MH	Aggregated	Aggregated	GAS	4266.702301	32841.07891	426.8408982	0.312793224	0	0.346393086	0.000950413	0	0.00027931	0.003000001	0.055860016	0.001033661	0	0.000303775	0.012	0.13034004	1602.717016
MHDSL	Riverside (SC)	2025	MH	Aggregated	Aggregated	DSL	1959.172346	14490.48271	195.9172346	4.017638479	0	0	0.120080244	0	0	0.004000001	0.055860016	0.12550974	0	0	0.01600001	0.13034004	912.9869246
MHDTGAS	Riverside (SC)	2025	MHDT	Aggregated	Aggregated	GAS	1438.72636	58388.27343	28786.037	0.232717361	0.089745115	0.342077215	0.000847767	0	0.000384135	0.003000001	0.055860016	0.000922024	0	0.000417782	0.012	0.13034004	1517.43699
MHDTDSL	Riverside (SC)	2025	MHDT	Aggregated	Aggregated	DSL	12401.54695	763294.7123	124114.8543	0.951709773	4.457611471	2.147585163	0.009762661	0.003724224	0	0.003000001	0.055860016	0.010204085	0.003892617	0	0.012	0.13034004	834.6715024
OBUSGAS	Riverside (SC)	2025	OBUS	Aggregated	Aggregated	GAS	435.7273524	14480.56576	8718.032866	0.367231937	0.064991088	0.313195548	0.000773063	0	0.000256996	0.003000001	0.055860016	0.000840776	0	0.000279506	0.012	0.13034004	1555.060029
OBUSDSL	Riverside (SC)	2025	OBUS	Aggregated	Aggregated	DSL	238.3575855	16706.49314	2277.720008	1.322419923	11.12427013	2.205657442	0.014955852	0.003587362	0	0.003000001	0.055860016	0.01563209	0.003749566	0	0.012	0.13034004	1039.963755
SBUSGAS	Riverside (SC)	2025	SBUS	Aggregated	Aggregated	GAS	450.3676781	15279.04245	1801.470712	0.354992113	0.9265304	0.608145921	0.000746935	0	0.000324524	0.002000001	0.319200087	0.00081236	0	0.00035295	0.008	0.7448002	876.0940342
SBUSDSL	Riverside (SC)	2025	SBUS	Aggregated	Aggregated	DSL	916.0655598	29066.07334	10571.26955	6.027764064	41.50901721	0.949897146	0.033226219	0.036121867	0	0.003000001	0.319200091	0.034728562	0.037755138	0	0.012	0.74480021	1176.739192
UBUSGAS	Riverside (SC)	2025	UBUS	Aggregated	Aggregated	GAS	167.3661527	23564.28502	669.4646108	0.148619548	0	0.491986202	0.001222458	0	0.000524879	0.002386561	0.045038932	0.001329535	0	0.000570853	0.00954624	0.10509084	1336.205443
UBUSDSL	Riverside (SC)	2025	UBUS	Aggregated	Aggregated	DSL	0.141961099	11.67769301	0.567844395	0.477528271	0	0	0.004084051	0	0	0.003000002	0.055860034	0.004268714	0	0	0.01200001	0.13034008	1093.673357
UBUSELEC	Riverside (SC)	2025	UBUS	Aggregated	Aggregated	ELEC	0.058469431	1.251702935	0.233877724	0	0	0	0	0	0	0.003000002	0.055860034	0	0	0	0.01200001	0.13034008	0
UBUSNG	Riverside (SC)	2025	UBUS	Aggregated	Aggregated	NG	208.7163855	27379.0524	834.865542	0.442623237	0	0	0.002902615	0	0	0.007356972	0.034510881	0.003033859	0	0	0.02942789	0.08052539	1856.440922

Helper Column	Region	Calendar Year	Vehicle Category	Fuel	Population	VMT	% of Total	Trips	CO2_RUNEX (g/mile)	CH4_RUNEX (g/mile)	N2O_RUNEX (g/mile)	CO2e (g/mile)
	Passenger Vehicles											
LDADSL	Riverside (SC)	2025	LDA	DSL	6750.331621	273894.7973	0.66%	273894.7973	180.8476117	0.000409874	0.0000000	180.8590882
LDT1DSL	Riverside (SC)	2025	LDT1	DSL	22.09264048	500.8045087	0.00%	500.8045087	372.8764631	0.006936263	0.0000000	373.0706785
LDT2DSL	Riverside (SC)	2025	LDT2	DSL	1411.82251	60038.76398	0.14%	60038.76398	238.1716277	0.000566644	0.0000000	238.1874937
MDVDSL	Riverside (SC)	2025	MDV	DSL	3932.245175	155115.8465	0.37%	155115.8465	325.3993277	0.000390163	0.0000000	325.4102523
LDAELEC	Riverside (SC)	2025	LDA	ELEC	17340.99834	715536.0137	1.72%	715536.0137	0	0	0.0000000	0
LDT1ELEC	Riverside (SC)	2025	LDT1	ELEC	840.0670631	35870.85658	0.09%	35870.85658	0	0	0.0000000	0
LDT2ELEC	Riverside (SC)	2025	LDT2	ELEC	3434.450512	100004.4721	0.24%	100004.4721	0	0	0.0000000	0
MDVELEC	Riverside (SC)	2025	MDV	ELEC	2250.064657	66744.92315	0.16%	66744.92315	0	0	0.0000000	0
MCYGAS	Riverside (SC)	2025	MCY	GAS	29089.61205	176339.2601	0.42%	176339.2601	207.4293794	0.311277616	0.2399358	279.72815
LDAGAS	Riverside (SC)	2025	LDA	GAS	634445.4088	24819468.5	59.52%	24819468.5	240.1096538	0.00156859	0.0401032	250.7809117
LDT1GAS	Riverside (SC)	2025	LDT1	GAS	64862.57189	2387662.891	5.73%	2387662.891	281.476261	0.004404957	0.0611346	297.8002709
LDT2GAS	Riverside (SC)	2025	LDT2	GAS	196401.0012	7476968.972	17.93%	7476968.972	291.960893	0.002635444	0.0554628	306.7323155
MDVGAS	Riverside (SC)	2025	MDV	GAS	154545.0839	5434458.472	13.03%	5434458.472	369.5944041	0.003411775	0.0687987	387.9215996
			Passenger Vehicle Total			***41702604.57***			**263.150576**	**0.003424154**	**0.047291896**	**275.7788048**
			Passenger Gasoline Total			**40294898.1**	**96.62%**		**268.5946088**	**0.00217634**	**0.047894032**	**281.3474648**
			Passenger Diesel Total			**489550.2123**	**1.17%**		**233.8760715**	**0.000429531**	**0**	**233.8880984**
			Passenger Electric Total			**918156.2655**	**2.20%**		**0**	**0**	**0**	**0**
	Light Trucks	***Light Trucks***										
LHDT1DSL	Riverside (SC)	2025	LHDT1	DSL	15929.66362	511419.863	40.66%	511419.863	461.8679033	0.003334475	0.0000000	461.9612686
LHDT2DSL	Riverside (SC)	2025	LHDT2	DSL	6279.413605	200055.2549	15.91%	200055.2549	503.8737569	0.002903659	0.0000000	503.9550594
LHDT1GAS	Riverside (SC)	2025	LHDT1	GAS	14855.10977	474380.1042	37.72%	474380.1042	752.1983655	0.00402855	0.0224096	758.2497208
LHDT2GAS	Riverside (SC)	2025	LHDT2	GAS	2257.609118	71801.06903	5.71%	71801.06903	860.4473653	0.002565587	0.0211724	866.1298981
			Light-Heavy Truck Total			***1257656.291***			**600.8159763**	**0.003483849**	**0.009661538**	**603.4738315**
			Light-Heavy Truck Gasoline Total			**546181.1732**	**43.43%**		**766.4287972**	**0.003836229**	**0.022247002**	**772.4316671**
			Light-Heavy Truck Diesel Total			**711475.1179**	**56.57%**		**473.6792675**	**0.003213337**	**0**	**473.7692409**
	Medium Trucks	***Medium Trucks***										
MHDTGAS	Riverside (SC)	2025	MHDT	GAS	1438.72636	58388.27343	7.11%	58388.27343	1517.43699	0.005605461	0.0343975	1526.709291
MHDTDSL	Riverside (SC)	2025	MHDT	DSL	12401.54695	763294.7123	92.89%	763294.7123	834.6715024	0.000341025	0.0000000	834.6810511
			Medium-Heavy Truck Total			***821682.9857***			**883.1883862**	**0.000715112**	**0.002444268**	**883.8561403**
	Heavy Trucks	***Heavy Trucks***										
HHDTGAS	Riverside (SC)	2025	HHDT	GAS	5.917085626	489.3585501	0.02%	489.3585501	1859.068895	0.072477006	0.0002928	1861.175834
HHDTDSL	Riverside (SC)	2025	HHDT	DSL	16787.91989	2073941.582	99.26%	2073941.582	1220.386579	0.000807626	0.0000000	1220.409193
HHDTNG	Riverside (SC)	2025	HHDT	NG	366.9607711	14928.54824	0.71%	14928.54824	3059.937465	4.302249368	0.0000000	3180.400447
			Heavy-Heavy Truck Total			***2089359.489***			**1233.679825**	**0.031558367**	**6.85703E-08**	**1234.563477**
	Urban Buses	***Urban Buses***										
UBUSGAS	Riverside (SC)	2025	UBUS	GAS	167.3661527	23564.28502	46.25%	23564.28502	1336.205443	0.003566981	0.0570241	1351.4167
UBUSDSL	Riverside (SC)	2025	UBUS	DSL	0.141961099	11.67769301	0.02%	11.67769301	1093.673357	0.037458544	0.0000000	1094.722196
UBUSNG	Riverside (SC)	2025	UBUS	NG	208.7163855	27379.0524	53.73%	27379.0524	1856.440922	5.662736779	0.0000000	2014.997552
			Urban Bus Total			***50955.01511***			**1615.681805**	**3.044349166**	**0.026370941**	**1707.911881**

CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_RESTLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_RESTLOSS	TOG_DIURN	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0	46.06539707	0.072477006	0	0.000292767	0.133718336	0	0.003629335	0.3359628	0	0.001499214	0.110504271	0.50965202	0.037085039	0.060093787	0.490236128	0	0.00164145	0.110504271	0.50965202	0.037085039	0.060093787	25.13078024	0	5.468566411	0.018396994	0	0.000455854
10932.68307	0	0.000807626	0.214273106	0	0.191827775	1.718465532	0	0.017387967	4.613241217	0	0	0	0	0	0.019794877	5.25182396	0	0	0	0	0	0.15090213	67.8211908	0	0.011529607	0.103286569	0
3592.027107	0	4.302249368	1.209233351	0	0.62378827	0.732258224	0	0.140936561	0.033385466	0	0	0	0	0	4.481302954	1.252464367	0	0	0	0	0	14.30619372	21.84687983	0	0	0	0
0	50.30197489	0.00156859	0	0.04010316	0.003557657	0	0.02310735	0.005490885	0	0.167011827	0.080992061	0.190470615	0.17668152	0.215869853	0.008012287	0	0.182856928	0.080992061	0.190470615	0.17668152	0.215869853	0.518584089	0	1.953005868	0.00237608	0	0.000497779
0	0	0.000409874	0	0	0.028426726	0	0	0.008824337	0	0	0	0	0	0	0.010045921	0	0	0	0	0	0	0.158334389	0	0	0.00170966	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	59.91051375	0.004404957	0	0.061134608	0.006645347	0	0.026484719	0.018755865	0	0.295945624	0.191726207	0.636664928	0.453305455	0.626235047	0.027368514	0	0.324023207	0.191726207	0.636664928	0.453305455	0.626235047	1.001815824	0	2.120806821	0.002785436	0	0.000592863
0	0	0.006936263	0	0	0.058610987	0	0	0.14933365	0	0	0	0	0	0	0.170006432	0	0	0	0	0	0	0.932264491	0	0	0.003525024	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	63.11599525	0.002635444	0	0.055462755	0.004935364	0	0.027796971	0.01012142	0	0.245389702	0.110827506	0.378523762	0.318472854	0.368772897	0.014769152	0	0.268670836	0.110827506	0.378523762	0.318472854	0.368772897	0.706546533	0	2.459241373	0.00288919	0	0.000624584
0	0	0.000566644	0	0	0.037437263	0	0	0.012199505	0	0	0	0	0	0	0.013888326	0	0	0	0	0	0	0.11077608	0	0	0.002251578	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
118.4068454	18.45289293	0.00402855	0.117029361	0.022409645	0.009566676	0.003048852	0.039515296	0.018516269	0.412891886	0.110600814	0.121128572	0.77993358	0.03323602	0.061821438	0.027018897	0.602490871	0.12109397	0.121128572	0.77993358	0.03323602	0.061821438	0.518392968	3.761130761	1.609345788	0.007443613	0.001171732	0.000182606
132.6011947	0	0.003334475	0.005098128	0	0.072599203	0.020843061	0	0.071789278	0.109759705	0	0	0	0	0	0.08172732	0.124954127	0	0	0	0	0	0.471398268	0.909745076	0	0.004366313	0.001253558	0
136.2198426	20.88791884	0.002565587	0.117632977	0.021172439	0.009159471	0.003030928	0.039167717	0.010552342	0.411170728	0.102611938	0.103361362	0.576391237	0.028730783	0.050765668	0.015397952	0.599979361	0.112347156	0.103361362	0.576391237	0.028730783	0.050765668	0.29309399	3.770564255	1.520365092	0.008514824	0.001348006	0.000206703
213.427833	0	0.002903659	0.005098128	0	0.079201938	0.033547883	0	0.062514062	0.109759705	0	0	0	0	0	0.071168104	0.124954127	0	0	0	0	0	0.404748748	0.909745076	0	0.004763419	0.002017661	0
0	59.79585402	0.311277616	0	0.239935839	0.064744013	0	0.014990769	2.09159562	0	1.817336305	0.782062572	1.65908321	1.514593612	2.879023229	2.596338483	0	1.978232889	0.782062572	1.65908321	1.514593612	2.879023229	18.29916334	0	8.680785122	0.002052682	0	0.000591728
0	80.35868142	0.003411775	0	0.068798739	0.006151447	0	0.031241881	0.013500754	0	0.325074208	0.146435308	0.451163759	0.428555893	0.472712282	0.019696643	0	0.355914999	0.146435308	0.451163759	0.428555893	0.472712282	0.804698607	0	2.80678359	0.003657436	0	0.000795214
0	0	0.000390163	0	0	0.051148243	0	0	0.00839997	0	0	0	0	0	0	0.009562808	0	0	0	0	0	0	0.16565094	0	0	0.003076194	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	25.25945019	0.008758762	0	0.031786251	0.021126573	0	0.038421628	0.035578793	0	0.12380774	0.080995856	1.677853456	0.051062934	0.131321208	0.051916491	0	0.135553892	0.080995856	1.677853456	0.051062934	0.131321208	1.030934853	0	2.657870334	0.015860184	0	0.000249963
0	0	0.003164241	0	0	0.14350883	0	0	0.068124237	0	0	0	0	0	0	0.077554914	0	0	0	0	0	0	0.317830044	0	0	0.00863101	0	0
518.8695079	36.10206309	0.005605461	0.264956918	0.034397541	0.013551429	0.007938445	0.028396585	0.026085636	1.009868647	0.179770619	0.068604789	0.337743932	0.021400134	0.037906238	0.038064099	1.473597959	0.1968262	0.068604789	0.337743932	0.021400134	0.037906238	0.685436858	14.43650206	3.832319002	0.015016269	0.005134634	0.000357259
729.9041967	0	0.000341025	0.002967288	0	0.131198737	0.114730775	0	0.007342166	0.063884902	0	0	0	0	0	0.008358497	0.072728098	0	0	0	0	0	0.054883022	2.34753793	0	0.007885562	0.006895773	0
367.8743931	25.6713968	0.008714095	0.194201683	0.028564837	0.018535899	0.005422197	0.024376329	0.042197117	0.745218535	0.151776124	0.032947972	0.367695258	0.029236466	0.065534531	0.061573934	1.087421137	0.166175752	0.032947972	0.367695258	0.029236466	0.065534531	1.097907821	5.768300824	3.175956174	0.01538858	0.003640415	0.000254039
2397.257198	0	0.000483728	0.036457723	0	0.16346782	0.376815448	0	0.010414522	0.784924781	0	0	0	0	0	0.01185614	0.893577113	0	0	0	0	0	0.086090622	12.70438364	0	0.009825062	0.022648097	0
2614.16713	46.99795254	0.008075466	2.365005854	0.05595214	0.021836348	0.083917715	0.054214428	0.040048567	10.64151815	0.327979725	0.088475695	0.535415599	0.024489967	0.048427204	0.058438776	15.5280783	0.359096516	0.088475695	0.535415599	0.024489967	0.048427204	0.905363122	82.24087757	7.300562365	0.008669661	0.025869303	0.000465083
3617.805225	0	0.005132526	0.012315314	0	0.184967014	0.5686686	0	0.110501877	0.26514534	0	0	0	0	0	0.125797975	0.301847787	0	0	0	0	0	0.318716662	6.43661887	0	0.011117248	0.03417923	0
0	50.46145954	0.003566981	0	0.057024082	0.014807346	0	0.052942895	0.010603587	0	0.221790005	0.03419833	0.174937682	0.009464103	0.015510571	0.01547273	0	0.242832138	0.03419833	0.174937682	0.009464103	0.015510571	0.214154059	0	4.248732329	0.013222836	0	0.000499357
0	0	0.037458544	0	0	0.171910221	0	0	0.000535209	0	0	0	0	0	0	0.038229192	0	0	0	0	0	0	0.057172756	0	0	0.010339146	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	5.662736779	0	0	0.378447626	0	0	0.080909335	0	0	0	0	0	0	5.779238231	0	0	0	0	0	0	43.76158961	0	0	0	0	0

EMFAC DATA FORECAST YEAR **2030**

Paste data -->

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2030
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day.

Helper Column	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	CO2_RUNEX
HHDTGAS	Riverside (SC)	2030	HHDT	Aggregated	Aggregated	GAS	6.067136543	575.8781518	121.391268	2.756389109	0	0.040590858	0.000889132	0	0.000395572	0.005000001	0.026460008	0.000967012	0	0.000430221	0.02000001	0.06174002	1663.315653
HHDTDSL	Riverside (SC)	2030	HHDT	Aggregated	Aggregated	DSL	17773.29887	2271030.46	191184.1033	1.830489465	55.36842672	2.513755663	0.022899166	0.020692849	0	0.008797199	0.025863765	0.023934565	0.021628488	0	0.0351888	0.06034879	1105.431203
HHDTNG	Riverside (SC)	2030	HHDT	Aggregated	Aggregated	NG	532.4740132	21687.8252	2076.648651	0.73281425	18.56250598	0	0.003310072	0.012130173	0	0.009000003	0.026460008	0.003459739	0.012678646	0	0.03600001	0.06174002	2852.856717
LDAGAS	Riverside (SC)	2030	LDA	Aggregated	Aggregated	GAS	715227.8197	26282324.74	3367539.012	0.019826288	0	0.126594367	0.000832104	0	0.001229871	0.002000001	0.015750005	0.000904989	0	0.001337597	0.008	0.03675001	214.2094479
LDADSL	Riverside (SC)	2030	LDA	Aggregated	Aggregated	DSL	8217.15108	311906.7144	39169.0124	0.016353888	0	0	0.00176593	0	0	0.002000001	0.015750005	0.001845777	0	0	0.008	0.03675001	163.0327464
LDAELEC	Riverside (SC)	2030	LDA	Aggregated	Aggregated	ELEC	31589.03941	1174529.388	154977.4385	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT1GAS	Riverside (SC)	2030	LDT1	Aggregated	Aggregated	GAS	73433.15901	2574226.102	338237.7272	0.043264462	0	0.16239	0.001005485	0	0.001459817	0.002000001	0.015750005	0.001093557	0	0.001587684	0.008	0.03675001	251.6258224
LDT1DSL	Riverside (SC)	2030	LDT1	Aggregated	Aggregated	DSL	9.294707647	328.9266732	42.51634629	0.141592594	0	0	0.009775705	0	0	0.002000001	0.015750005	0.010217719	0	0	0.008	0.03675001	312.9180592
LDT1ELEC	Riverside (SC)	2030	LDT1	Aggregated	Aggregated	ELEC	1718.405366	65233.45576	8487.476192	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT2GAS	Riverside (SC)	2030	LDT2	Aggregated	Aggregated	GAS	221857.6725	7975748.044	1037256.055	0.032798337	0	0.161076084	0.00086015	0	0.001254613	0.002000001	0.015750005	0.000935492	0	0.001364506	0.008	0.03675001	253.80815
LDT2DSL	Riverside (SC)	2030	LDT2	Aggregated	Aggregated	DSL	1944.648271	74491.26436	9364.031571	0.028075231	0	0	0.003711024	0	0	0.002000001	0.015750005	0.003878821	0	0	0.008	0.03675001	215.695914
LDT2ELEC	Riverside (SC)	2030	LDT2	Aggregated	Aggregated	ELEC	6596.872184	171672.0302	32475.58135	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LHDT1GAS	Riverside (SC)	2030	LHDT1	Aggregated	Aggregated	GAS	14719.69829	462837.0738	219301.5722	0.085731837	0.031127677	0.399707436	0.000920978	0	0.000328304	0.002000001	0.032760009	0.001001648	0	0.00035706	0.008	0.07644002	696.2808331
LHDT1DSL	Riverside (SC)	2030	LHDT1	Aggregated	Aggregated	DSL	16082.3234	495405.7507	202295.3968	1.08061356	1.634775047	0	0.011108485	0.025982035	0	0.003000001	0.032760009	0.011610761	0.027156828	0	0.012	0.07644002	425.8257004
LHDT2GAS	Riverside (SC)	2030	LHDT2	Aggregated	Aggregated	GAS	2310.878744	71347.94826	34428.65008	0.077335113	0.031307549	0.407793557	0.000845126	0	0.000282024	0.002000001	0.038220011	0.000919152	0	0.000306726	0.008	0.08918003	798.7232903
LHDT2DSL	Riverside (SC)	2030	LHDT2	Aggregated	Aggregated	DSL	6520.498698	195813.0331	82019.67084	0.934623548	1.652496508	0	0.013892671	0.026392274	0	0.003000001	0.038220011	0.014520836	0.027585616	0	0.012	0.08918003	465.9631392
MCYGAS	Riverside (SC)	2030	MCY	Aggregated	Aggregated	GAS	30660.06028	174391.9176	61320.12055	1.110041527	0	0.262825855	0.00186826	0	0.002518475	0.001	0.005040001	0.00200296	0	0.002692835	0.004	0.01176	207.1386727
MDVGAS	Riverside (SC)	2030	MDV	Aggregated	Aggregated	GAS	159091.2688	5362564.988	730060.1042	0.03984139	0	0.194785369	0.000886036	0	0.001304645	0.002000001	0.015750005	0.000963645	0	0.001418921	0.008	0.03675001	318.0581518
MDVDSL	Riverside (SC)	2030	MDV	Aggregated	Aggregated	DSL	4876.504988	176358.1396	23150.93365	0.019513614	0	0	0.002062228	0	0	0.002000001	0.015750005	0.002155472	0	0	0.008	0.03675001	290.3930762
MDVELEC	Riverside (SC)	2030	MDV	Aggregated	Aggregated	ELEC	4670.491383	123005.7182	23086.60539	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
MHGAS	Riverside (SC)	2030	MH	Aggregated	Aggregated	GAS	3513.615082	27586.6346	351.5020529	0.186406275	0	0.374163733	0.000844179	0	0.000249116	0.003000001	0.055860016	0.000918122	0	0.000270936	0.012	0.13034004	1483.287979
MHDSL	Riverside (SC)	2030	MH	Aggregated	Aggregated	DSL	1869.680968	13149.06474	186.9680968	3.370030291	0	0	0.095846479	0	0	0.004000001	0.055860016	0.100180232	0	0	0.01600001	0.13034004	864.5351266
MHDTGAS	Riverside (SC)	2030	MHDT	Aggregated	Aggregated	GAS	1662.069097	65180.36447	33254.67849	0.12352399	0.090036861	0.3224222	0.00087982	0	0.000380825	0.003000001	0.055860016	0.000956884	0	0.000414182	0.012	0.13034004	1399.943371
MHDTDSL	Riverside (SC)	2030	MHDT	Aggregated	Aggregated	DSL	13927.58228	791350.3068	141662.7816	0.930216518	3.820067762	2.158200075	0.009987888	0.001843198	0	0.003000001	0.055860016	0.010439496	0.001926539	0	0.012	0.13034004	772.1782663
OBUSGAS	Riverside (SC)	2030	OBUS	Aggregated	Aggregated	GAS	439.780953	14096.42165	8799.137307	0.211609938	0.065142963	0.307441326	0.000838757	0	0.000255865	0.003000001	0.055860016	0.000912225	0	0.000278277	0.012	0.13034004	1423.340971
OBUSDSL	Riverside (SC)	2030	OBUS	Aggregated	Aggregated	DSL	276.9150354	18004.47266	2660.54226	1.276138751	11.49552556	2.212386069	0.014862314	0.003717812	0	0.003000001	0.055860016	0.015534321	0.003885915	0	0.012	0.13034004	955.9476518
SBUSGAS	Riverside (SC)	2030	SBUS	Aggregated	Aggregated	GAS	499.496623	16119.6836	1997.986492	0.322753014	0.9265304	0.660225584	0.000848363	0	0.00037281	0.002000001	0.319200087	0.000922672	0	0.000405464	0.008	0.7448002	848.6204813
SBUSDSL	Riverside (SC)	2030	SBUS	Aggregated	Aggregated	DSL	1026.146421	32699.81232	11841.58743	4.521552202	33.20092427	1.314345507	0.024136375	0.023326175	0	0.003000001	0.319200091	0.025227715	0.024380882	0	0.012	0.74480021	1088.127131
UBUSGAS	Riverside (SC)	2030	UBUS	Aggregated	Aggregated	GAS	172.2177935	24247.37084	688.8711739	0.140092389	0	0.466214707	0.001397387	0	0.000589293	0.002386561	0.045038932	0.001519786	0	0.00064091	0.00954624	0.10509084	1239.009708
UBUSDSL	Riverside (SC)	2030	UBUS	Aggregated	Aggregated	DSL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UBUSNG	Riverside (SC)	2030	UBUS	Aggregated	Aggregated	NG	214.9729351	28186.02559	859.8917402	0.442552432	0	0	0.002902192	0	0	0.007354915	0.034520958	0.003033416	0	0	0.02941966	0.0805489	1856.192269

Helper Column	Region	Calendar Year	Vehicle Category	Fuel	Population	VMT	% of Total	Trips	CO2_RUNEX (g/mile)	CH4_RUNEX (g/mile)	N2O_RUNEX (g/mile)	CO2e (g/mile)
	Passenger Vehicles											
LDADSL	Riverside (SC)	2030	LDA	DSL	8217.15108	311906.7144	0.70%	311906.7144	163.0327464	0.000251968	0.0000000	163.0398015
LDT1DSL	Riverside (SC)	2030	LDT1	DSL	9.294707647	328.9266732	0.00%	328.9266732	312.9180592	0.000991504	0.0000000	312.9458213
LDT2DSL	Riverside (SC)	2030	LDT2	DSL	1944.648271	74491.26436	0.17%	74491.26436	215.695914	0.000544755	0.0000000	215.7111671
MDVDSL	Riverside (SC)	2030	MDV	DSL	4876.504988	176358.1396	0.40%	176358.1396	290.3930762	0.000283086	0.0000000	290.4010026
LDAELEC	Riverside (SC)	2030	LDA	ELEC	31589.03941	1174529.388	2.64%	1174529.388	0	0	0.0000000	0
LDT1ELEC	Riverside (SC)	2030	LDT1	ELEC	1718.405366	65233.45576	0.15%	65233.45576	0	0	0.0000000	0
LDT2ELEC	Riverside (SC)	2030	LDT2	ELEC	6596.872184	171672.0302	0.39%	171672.0302	0	0	0.0000000	0
MDVELEC	Riverside (SC)	2030	MDV	ELEC	4670.491383	123005.7182	0.28%	123005.7182	0	0	0.0000000	0
MCYGAS	Riverside (SC)	2030	MCY	GAS	30660.06028	174391.9176	0.39%	174391.9176	207.1386727	0.306138232	0.2356240	278.1509146
LDAGAS	Riverside (SC)	2030	LDA	GAS	715227.8197	26282324.74	59.11%	26282324.74	214.2094479	0.00103611	0.0293793	222.0239857
LDT1GAS	Riverside (SC)	2030	LDT1	GAS	73433.15901	2574226.102	5.79%	2574226.102	251.6258224	0.002298652	0.0395992	262.1839613
LDT2GAS	Riverside (SC)	2030	LDT2	GAS	221857.6725	7975748.044	17.94%	7975748.044	253.80815	0.00171335	0.0405325	264.5972466
MDVGAS	Riverside (SC)	2030	MDV	GAS	159091.2688	5362564.988	12.06%	5362564.988	318.0581518	0.002056654	0.0476805	330.7510823
			Passenger Vehicle Total			***44466781.43***			**228.5287795**	**0.002505247**	**0.033601554**	**237.5033382**
			Passenger Gasoline Total			**42369255.79**	**95.28%**		**236.1991309**	**0.001365207**	**0.034295198**	**245.3255843**
			Passenger Diesel Total			**563085.045**	**1.27%**		**209.9764155**	**0.000300879**	**0**	**209.9848401**
			Passenger Electric Total			**1534440.592**	**3.45%**		**0**	**0**	**0**	**0**
	Light Trucks											
LHDT1DSL	Riverside (SC)	2030	LHDT1	DSL	16082.3234	495405.7507	40.43%	495405.7507	425.8257004	0.002346804	0.0000000	425.8914109
LHDT2DSL	Riverside (SC)	2030	LHDT2	DSL	6520.498698	195813.0331	15.98%	195813.0331	465.9631392	0.002195095	0.0000000	466.0246019
LHDT1GAS	Riverside (SC)	2030	LHDT1	GAS	14719.69829	462837.0738	37.77%	462837.0738	696.2808331	0.002208449	0.0162381	700.6457686
LHDT2GAS	Riverside (SC)	2030	LHDT2	GAS	2310.878744	71347.94826	5.82%	71347.94826	798.7232903	0.001515617	0.0157468	802.9386243
			Light-Heavy Truck Total			***1225403.806***			**556.1024084**	**0.00222191**	**0.007050002**	**558.0328724**
			Light-Heavy Truck Gasoline Total			**534185.0221**	**43.59%**		**709.963469**	**0.002115912**	**0.016172485**	**714.308423**
			Light-Heavy Truck Diesel Total			**691218.7838**	**56.41%**		**437.1960998**	**0.002303827**	**0**	**437.2606069**
	Medium Trucks											
MHDTGAS	Riverside (SC)	2030	MHDT	GAS	1662.069097	65180.36447	**7.61%**	65180.36447	1399.943371	0.00299992	0.0311156	1408.272993
MHDTDSL	Riverside (SC)	2030	MHDT	DSL	13927.58228	791350.3068	**92.39%**	791350.3068	772.1782663	0.000333355	0.0000000	772.1876002
			Medium-Heavy Truck Total			***856530.6713***			**819.9500037**	**0.000536276**	**0.002367836**	**820.5924959**
	Heavy Trucks											
HHDTGAS	Riverside (SC)	2030	HHDT	GAS	6.067136543	575.8781518	**0.03%**	575.8781518	1663.315653	0.060806204	0.0003069	1665.099552
HHDTDSL	Riverside (SC)	2030	HHDT	DSL	17773.29887	2271030.46	**99.03%**	2271030.46	1105.431203	0.00079181	0.0000000	1105.453374
HHDTNG	Riverside (SC)	2030	HHDT	NG	532.4740132	21687.8252	**0.95%**	21687.8252	2852.856717	4.113584718	0.0000000	2968.037089
			Heavy-Heavy Truck Total			***2293294.163***			**1122.096807**	**0.039701818**	**7.70639E-08**	**1123.208478**
	Urban Buses											
UBUSGAS	Riverside (SC)	2030	UBUS	GAS	172.2177935	24247.37084	**46.24%**	24247.37084	1239.009708	0.003482083	0.0549825	1253.677575
UBUSDSL	Riverside (SC)	2030	UBUS	DSL	0	0	**0.00%**	0	0	0	0.0000000	0
UBUSNG	Riverside (SC)	2030	UBUS	NG	214.9729351	28186.02559	**53.76%**	28186.02559	1856.192269	5.661543863	0.0000000	2014.715497
			Urban Bus Total			***52433.39643***			**1570.78153**	**3.045022112**	**0.025426192**	**1662.78009**

CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_RESTLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_RESTLOSS	TOG_DIURN	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0	40.53130678	0.060806204	0	0.000306888	0.122902686	0	0.001379204	0.264594509	0	0.001569199	0.060449121	0.274649934	0.021249665	0.033441898	0.386095686	0	0.001718076	0.060449121	0.274649934	0.021249665	0.033441898	24.88201336	0	4.845915526	0.016459857	0	0.00040109
10066.05439	0	0.00079181	0.214753714	0	0.173758391	1.582243572	0	0.017047444	4.623588578	0	0	0	0	0	0.019407217	5.263603642	0	0	0	0	0	0.149552454	68.13030084	0	0.010443566	0.095099091	0
3339.386198	0	4.113584718	1.179354649	0	0.581573504	0.680755722	0	0.091947863	0.02358105	0	0	0	0	0	4.236011433	1.211286408	0	0	0	0	0	14.52518943	22.02459439	0	0	0	0
0	44.65562506	0.00103611	0	0.029379346	0.003075847	0	0.02016992	0.003376418	0	0.116991497	0.065910657	0.174903115	0.143082152	0.170528324	0.004926861	0	0.128090963	0.065910657	0.174903115	0.143082152	0.170528324	0.438662802	0	1.670838632	0.002119776	0	0.000441904
0	0	0.000251968	0	0	0.025626477	0	0	0.005424712	0	0	0	0	0	0	0.006175674	0	0	0	0	0	0	0.13498492	0	0	0.001541246	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	53.03695357	0.002298652	0	0.039599157	0.004464638	0	0.022218444	0.009229522	0	0.177750924	0.125724553	0.435042216	0.311501611	0.405270163	0.013467697	0	0.194614888	0.125724553	0.435042216	0.311501611	0.405270163	0.652048609	0	1.77653362	0.002490041	0	0.000524844
0	0	0.000991504	0	0	0.049186361	0	0	0.021346502	0	0	0	0	0	0	0.024301573	0	0	0	0	0	0	0.201736589	0	0	0.002958201	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	54.62850344	0.00171335	0	0.040532539	0.003748427	0	0.022790055	0.006203329	0	0.171084682	0.087434828	0.317429208	0.271041511	0.306204331	0.009051883	0	0.187316192	0.087434828	0.317429208	0.271041511	0.306204331	0.566125401	0	2.148438951	0.002511637	0	0.000540593
0	0	0.000544755	0	0	0.033904394	0	0	0.011728255	0	0	0	0	0	0	0.013351839	0	0	0	0	0	0	0.115078741	0	0	0.002039102	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
111.1756325	17.38729936	0.002208449	0.10479815	0.016238109	0.005951617	0.002851923	0.034289495	0.009245859	0.357017559	0.077706702	0.101953362	0.748524306	0.028485997	0.050814573	0.013491536	0.520959185	0.085079057	0.101953362	0.748524306	0.028485997	0.050814573	0.278019202	3.768706975	1.496861445	0.006890263	0.001100173	0.000172061
123.8645975	0	0.002346804	0.005098128	0	0.06693387	0.01946979	0	0.050525306	0.109759705	0	0	0	0	0	0.057519702	0.124954127	0	0	0	0	0	0.309248204	0.909745076	0	0.004025584	0.001170966	0
128.1495867	19.72416034	0.001515617	0.10577222	0.01574678	0.006001028	0.002831184	0.034497807	0.005626915	0.35942206	0.073966688	0.081984954	0.437985045	0.025211546	0.04147514	0.008210781	0.524467827	0.080984213	0.081984954	0.437985045	0.025211546	0.04147514	0.166883286	3.777246523	1.417227435	0.007904014	0.001268144	0.000195187
200.0118023	0	0.002195095	0.005098128	0	0.073242917	0.03143907	0	0.047259102	0.109759705	0	0	0	0	0	0.053801345	0.124954127	0	0	0	0	0	0.284451163	0.909745076	0	0.004405027	0.001890831	0
0	58.56376794	0.306138232	0	0.235624043	0.064276432	0	0.014988703	2.04027206	0	1.782020276	0.761134687	1.404294963	1.489106083	2.883443968	2.55138921	0	1.940574247	0.761134687	1.404294963	1.489106083	2.883443968	17.43059513	0	8.766900296	0.002049805	0	0.000579536
0	69.032068	0.002056654	0	0.047680544	0.00427281	0	0.024834912	0.007682947	0	0.213008029	0.119996729	0.382900908	0.389491026	0.425895931	0.011210938	0	0.23321698	0.119996729	0.382900908	0.389491026	0.425895931	0.60652064	0	2.32766502	0.003147443	0	0.000683128
0	0	0.000283086	0	0	0.045645748	0	0	0.006094676	0	0	0	0	0	0	0.006938384	0	0	0	0	0	0	0.149696547	0	0	0.002745259	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	23.64405007	0.004670125	0	0.030295302	0.015720884	0	0.042801838	0.01556689	0	0.112061705	0.058924719	1.004962773	0.041134478	0.096162757	0.02271517	0	0.122693461	0.058924719	1.004962773	0.041134478	0.096162757	0.351236962	0	2.372222509	0.014678337	0	0.000233977
0	0	0.002748042	0	0	0.135892883	0	0	0.059163734	0	0	0	0	0	0	0.067353978	0	0	0	0	0	0	0.266878487	0	0	0.008172966	0	0
484.1037713	32.97416827	0.00299992	0.268769818	0.031115564	0.00921011	0.00822116	0.028474336	0.012652048	1.014122687	0.156297481	0.055408482	0.263734763	0.018603147	0.030611986	0.018461839	1.479805444	0.171126069	0.055408482	0.263734763	0.018603147	0.030611986	0.301664017	14.4839326	3.224915772	0.013853575	0.004790599	0.000326306
663.7380671	0	0.000333355	0.002724436	0	0.12137567	0.104330381	0	0.007177041	0.05865636	0	0	0	0	0	0.008170514	0.066775801	0	0	0	0	0	0.055178768	2.353510012	0	0.007295157	0.006270668	0
345.7784114	23.80282788	0.004627149	0.195915946	0.026305166	0.012435664	0.005566945	0.02459023	0.020918058	0.747522566	0.137146043	0.031356311	0.365931302	0.026995939	0.057645887	0.030523582	1.090783173	0.150157655	0.031356311	0.365931302	0.026995939	0.057645887	0.519199098	5.78210788	2.818443558	0.014085113	0.003421758	0.000235548
2335.619372	0	0.000481657	0.037991742	0	0.150261659	0.36712684	0	0.010369951	0.817951789	0	0	0	0	0	0.0118054	0.931175848	0	0	0	0	0	0.085677561	13.1810004	0	0.009031319	0.022065774	0
2538.421096	45.58378575	0.006614099	2.352753757	0.056485865	0.020732609	0.083211485	0.057343143	0.032631047	10.64151815	0.331746358	0.109280967	0.656879912	0.030503503	0.059721273	0.047615148	15.5280783	0.363220505	0.109280967	0.656879912	0.030503503	0.059721273	0.73418846	82.24087757	7.07323596	0.008397788	0.025119735	0.000451089
3372.952702	0	0.00402809	0.012315443	0	0.171038432	0.530181194	0	0.086723677	0.265148114	0	0	0	0	0	0.098728305	0.301850944	0	0	0	0	0	0.27469559	7.931816063	0	0.010280086	0.031865985	0
0	47.0592714	0.003482083	0	0.054982523	0.014397721	0	0.050775007	0.010351234	0	0.211471449	0.043369187	0.202330491	0.012386636	0.019758457	0.015104497	0	0.231534619	0.043369187	0.202330491	0.012386636	0.019758457	0.209953403	0	4.177699374	0.012261005	0	0.00046569
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	5.661543863	0	0	0.378396937	0	0	0.080892291	0	0	0	0	0	0	5.778020772	0	0	0	0	0	0	43.75129964	0	0	0	0	0

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Paste data --> Region: Riverside (SC)
Calendar Year: 2040
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day

	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	CO2_RUNEX
	Riverside (SC)	2040	HHDT	Aggregated	Aggregated	GAS	8.124886922	694.511498	162.5627375	2.897257867	0	0.230472949	0.000910466	0	0.000398988	0.005000001	0.026460008	0.000990215	0	0.000433936	0.02000001	0.06174002	1503.675531
Helper Column	**Riverside (SC)**	**2040**	**HHDT**	**Aggregated**	**Aggregated2**	**DSL**	**18618.69407**	**2606721.375**	**204419.8195**	**1.68437187**	**57.70939899**	**2.515864344**	**0.021265614**	**0.020126074**	**0**	**0.008794529**	**0.025855915**	**0.022227151**	**0.021036086**	**03**	**0.035178115**	**0.060330468**	**953.7673638**
HHDTNG	Riverside (SC)	2040	HHDT	Aggregated	Aggregated	NG	752.7479905	30682.87514	2935.717163	0.503075055	17.99082503	0	0.003045145	0.008114607	0	0.009000003	0.026460008	0.003182833	0.008481513	0	0.03600001	0.06174002	2619.087599
LDAGAS	Riverside (SC)	2040	LDA	Aggregated	Aggregated	GAS	852555.6492	28828531.06	3992443.135	0.016977753	0	0.114109609	0.000495953	0	0.000737941	0.002000001	0.015750005	0.000539394	0	0.000802578	0.008	0.03675001	193.7559849
LDADSL	Riverside (SC)	2040	LDA	Aggregated	Aggregated	DSL	10443.92772	357353.0917	49163.70723	0.008668227	0	0	0.00079023	0	0	0.002000001	0.015750005	0.000825961	0	0	0.008	0.03675001	149.4381893
LDAELEC	Riverside (SC)	2040	LDA	Aggregated	Aggregated	ELEC	52845.7585	1674934.107	251487.5439	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT1GAS	Riverside (SC)	2040	LDT1	Aggregated	Aggregated	GAS	90264.3132	2917283.683	415139.7563	0.019776261	0	0.126764124	0.000554965	0	0.000826875	0.002000001	0.015750005	0.000603575	0	0.000899302	0.008	0.03675001	225.7546335
LDT1DSL	Riverside (SC)	2040	LDT1	Aggregated	Aggregated	DSL	12.06522994	397.7699388	56.06289505	0.03946062	0	0	0.004206022	0	0	0.002000001	0.015750005	0.0043962	0	0	0.008	0.03675001	284.6987673
LDT1ELEC	Riverside (SC)	2040	LDT1	Aggregated	Aggregated	ELEC	3205.210505	100693.5818	15205.77842	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT2GAS	Riverside (SC)	2040	LDT2	Aggregated	Aggregated	GAS	267281.1831	8853193.744	1242641.877	0.019110238	0	0.123218329	0.000514666	0	0.000755635	0.002000001	0.015750005	0.000559746	0	0.000821822	0.008	0.03675001	223.0213349
LDT2DSL	Riverside (SC)	2040	LDT2	Aggregated	Aggregated	DSL	2669.202637	90290.35875	12564.36276	0.027153166	0	0	0.003839773	0	0	0.002000001	0.015750005	0.00401339	0	0	0.008	0.03675001	198.1276981
LDT2ELEC	Riverside (SC)	2040	LDT2	Aggregated	Aggregated	ELEC	11506.89393	252074.9044	54727.42969	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LHDT1GAS	Riverside (SC)	2040	LHDT1	Aggregated	Aggregated	GAS	16331.79402	490932.6532	243319.3965	0.032499979	0.02508139	0.294344286	0.00090524	0	0.000302246	0.002000001	0.032760009	0.000984531	0	0.000328721	0.008	0.07644002	636.5296282
LHDT1DSL	Riverside (SC)	2040	LHDT1	Aggregated	Aggregated	DSL	17335.07519	509105.1029	218053.4383	0.237983978	1.070357746	0	0.005956798	0.026267843	0	0.003000001	0.032760009	0.006226138	0.027455558	0	0.012	0.07644002	383.648813
LHDT2GAS	Riverside (SC)	2040	LHDT2	Aggregated	Aggregated	GAS	2556.874497	75450.55392	38093.62027	0.036114377	0.025064012	0.291939128	0.000894611	0	0.000292547	0.002000001	0.038220011	0.000972971	0	0.000318172	0.008	0.08918003	730.6320516
LHDT2DSL	Riverside (SC)	2040	LHDT2	Aggregated	Aggregated	DSL	7240.680011	202538.2176	91078.64576	0.34517404	1.138711104	0	0.011665852	0.026214228	0	0.003000001	0.038220011	0.01219333	0.027399519	0	0.012	0.08918003	421.7609039
MCYGAS	Riverside (SC)	2040	MCY	Aggregated	Aggregated	GAS	34845.94277	182904.0071	69691.88555	1.102244205	0	0.262807771	0.001996647	0	0.002708296	0.001	0.005040001	0.002141629	0	0.0029024	0.004	0.01176	206.6752722
MDVGAS	Riverside (SC)	2040	MDV	Aggregated	Aggregated	GAS	179699.1479	5676216.57	824712.5138	0.022553453	0	0.142080935	0.00054115	0	0.00080511	0.002000001	0.015750005	0.00058855	0	0.000875631	0.008	0.03675001	272.7681005
MDVDSL	Riverside (SC)	2040	MDV	Aggregated	Aggregated	DSL	6247.352713	202958.1774	29135.98582	0.010217801	0	0	0.000985897	0	0	0.002000001	0.015750005	0.001030474	0	0	0.008	0.03675001	259.7295165
MDVELEC	Riverside (SC)	2040	MDV	Aggregated	Aggregated	ELEC	8569.582824	187584.8748	40751.38161	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
MHGAS	Riverside (SC)	2040	MH	Aggregated	Aggregated	GAS	2983.257089	24721.90276	298.4450392	0.10052677	0	0.353812638	0.000874967	0	0.000273275	0.003000001	0.055860016	0.000951606	0	0.000297211	0.012	0.13034004	1325.260137
MHDSL	Riverside (SC)	2040	MH	Aggregated	Aggregated	DSL	1687.17327	11766.32886	168.717327	2.2409846	0	0	0.048536039	0	0	0.004000001	0.055860016	0.050730623	0	0	0.016	0.13034004	788.2896076
MHDTGAS	Riverside (SC)	2040	MHDT	Aggregated	Aggregated	GAS	2095.927505	74872.81877	41935.31751	0.083111262	0.090189281	0.327568541	0.000907295	0	0.000394951	0.003000001	0.055860016	0.000986766	0	0.000429545	0.012	0.13034004	1289.319558
MHDTDSL	Riverside (SC)	2040	MHDT	Aggregated	Aggregated	DSL	14920.90135	847358.4654	155430.3819	0.876523717	3.374785136	2.162233005	0.009428075	0.000903233	0	0.003000001	0.055860016	0.00985437	0.000944073	0	0.012	0.13034004	699.6805114
OBUSGAS	Riverside (SC)	2040	OBUS	Aggregated	Aggregated	GAS	493.5220247	14946.53169	9874.38867	0.125143833	0.065297017	0.29492544	0.000897123	0	0.000271656	0.003000001	0.055860016	0.000975703	0	0.00029545	0.012	0.13034004	1301.988541
OBUSDSL	Riverside (SC)	2040	OBUS	Aggregated	Aggregated	DSL	305.0416488	19882.7848	2915.060062	1.19075697	11.12694733	2.221303898	0.013837013	0.003588303	0	0.003000001	0.055860016	0.014462661	0.00375055	0	0.012	0.13034004	878.7930039
SBUSGAS	Riverside (SC)	2040	SBUS	Aggregated	Aggregated	GAS	452.1810879	13603.01699	1808.724352	0.150387552	0.9265304	0.649029011	0.001252564	0	0.00056523	0.002000001	0.319200087	0.001362278	0	0.000614739	0.008	0.7448002	763.5198722
SBUSDSL	Riverside (SC)	2040	SBUS	Aggregated	Aggregated	DSL	1158.764484	37047.88258	13371.98149	1.975839665	16.93858292	2.034479569	0.005639959	0.004570321	0	0.003000001	0.319200091	0.005894973	0.004776971	0	0.012	0.74480021	918.4982486
UBUSGAS	Riverside (SC)	2040	UBUS	Aggregated	Aggregated	GAS	181.921075	25613.54248	727.6843	0.159206825	0	0.481911826	0.001398566	0	0.000589391	0.002386561	0.045038932	0.001521068	0	0.000641017	0.00954624	0.10509084	1103.539732
UBUSDSL	Riverside (SC)	2040	UBUS	Aggregated	Aggregated	DSL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UBUSNG	Riverside (SC)	2040	UBUS	Aggregated	Aggregated	NG	227.0851731	29774.11319	908.3406924	0.443039317	0	0	0.002900574	0	0	0.007354915	0.034520958	0.003031726	0	0	0.02941966	0.0805489	1857.673012

Helper Column	Region	Calendar Year	Vehicle Category	Fuel	Population	VMT	% of Total	Trips	CO2_RUNEX (g/mile)	CH4_RUNEX (g/mile)	N2O_RUNEX (g/mile)	CO2e (g/mile)
	Passenger Vehicles											
LDADSL	Riverside (SC)	2040	LDA	DSL	10443.92772	357353.0917	0.72%	357353.0917	149.4381893	0.000179292	0.0000000	149.4432095
LDT1DSL	Riverside (SC)	2040	LDT1	DSL	12.06522994	397.7699388	0.00%	397.7699388	284.6987673	0.000585582	0.0000000	284.7151636
LDT2DSL	Riverside (SC)	2040	LDT2	DSL	2669.202637	90290.35875	0.18%	90290.35875	198.1276981	0.000559656	0.0000000	198.1433685
MDVDSL	Riverside (SC)	2040	MDV	DSL	6247.352713	202958.1774	0.41%	202958.1774	259.7295165	0.000205016	0.0000000	259.7352569
LDAELEC	Riverside (SC)	2040	LDA	ELEC	52845.7585	1674934.107	3.40%	1674934.107	0	0	0.0000000	0
LDT1ELEC	Riverside (SC)	2040	LDT1	ELEC	3205.210505	100693.5818	0.20%	100693.5818	0	0	0.0000000	0
LDT2ELEC	Riverside (SC)	2040	LDT2	ELEC	11506.89393	252074.9044	0.51%	252074.9044	0	0	0.0000000	0
MDVELEC	Riverside (SC)	2040	MDV	ELEC	8569.582824	187584.8748	0.38%	187584.8748	0	0	0.0000000	0
MCYGAS	Riverside (SC)	2040	MCY	GAS	34845.94277	182904.0071	0.37%	182904.0071	206.6752722	0.302853447	0.2311250	276.4033052
LDAGAS	Riverside (SC)	2040	LDA	GAS	852555.6492	28828531.06	58.45%	28828531.06	193.7559849	0.000648263	0.0197320	199.0031097
LDT1GAS	Riverside (SC)	2040	LDT1	GAS	90264.3132	2917283.683	5.91%	2917283.683	225.7546335	0.000805763	0.0219859	231.6034561
LDT2GAS	Riverside (SC)	2040	LDT2	GAS	267281.1831	8853193.744	17.95%	8853193.744	223.0213349	0.000947656	0.0266396	230.1073604
MDVGAS	Riverside (SC)	2040	MDV	GAS	179699.1479	5676216.57	11.51%	5676216.57	272.7681005	0.001063768	0.0296162	280.6461861
			Passenger Vehicle Total			***49324415.93***			**201.2989486**	**0.001845265**	**0.021879837**	**207.1487729**
			Passenger Gasoline Total			**46458129.07**	**94.19%**		**210.233017**	**0.00076342**	**0.022319807**	**216.1691417**
			Passenger Diesel Total			**650999.3978**	**1.32%**		**190.6586922**	**0.000240315**	**0**	**190.665421**
			Passenger Electric Total			**2215287.468**	**4.49%**		**0**	**0**	**0**	**0**
	Light Trucks											
LHDT1DSL	Riverside (SC)	2040	LHDT1	DSL	17335.07519	509105.1029	39.84%	509105.1029	383.648813	0.00147682	0.0000000	383.6901639
LHDT2DSL	Riverside (SC)	2040	LHDT2	DSL	7240.680011	202538.2176	15.85%	202538.2176	421.7609039	0.001599136	0.0000000	421.8056797
LHDT1GAS	Riverside (SC)	2040	LHDT1	GAS	16331.79402	490932.6532	38.41%	490932.6532	636.5296282	0.000923188	0.0106675	639.3823581
LHDT2GAS	Riverside (SC)	2040	LHDT2	GAS	2556.874497	75450.55392	5.90%	75450.55392	730.6320516	0.000917134	0.0099741	733.3008703
			Light-Heavy Truck Total			***1278026.528***			**507.3134464**	**0.001250494**	**0.004686572**	**508.5904019**
			Light-Heavy Truck Gasoline Total			**566383.2071**	**44.32%**		**649.0654518**	**0.000922381**	**0.010575108**	**651.8936821**
			Light-Heavy Truck Diesel Total			**711643.3205**	**55.68%**		**394.4957566**	**0.001511632**	**0**	**394.5380823**
	Medium Trucks											
MHDTGAS	Riverside (SC)	2040	MHDT	GAS	2095.927505	74872.81877	**8.12%**	74872.81877	1289.319558	0.002132158	0.0298372	1297.28612
MHDTDSL	Riverside (SC)	2040	MHDT	DSL	14920.90135	847358.4654	**91.88%**	847358.4654	699.6805114	0.00031952	0.0000000	699.689458
			Medium-Heavy Truck Total			***922231.2842***			**747.5512985**	**0.000466682**	**0.002422382**	**748.2062968**
	Heavy Trucks											
HHDTGAS	#N/A	#N/A	HHDT	GAS	0	0	**0.00%**	0	0	0	0.0000000	0
HHDTDSL	#N/A	#N/A	HHDT	DSL	0	0	**0.00%**	0	0	0	0.0000000	0
HHDTNG	Riverside (SC)	2040	HHDT	NG	752.7479905	30682.87514	**100.00%**	30682.87514	2619.087599	4.023427451	0.0000000	2731.743568
			Heavy-Heavy Truck Total			***30682.87514***			**2619.087599**	**4.023427451**	**0**	**2731.743568**
	Urban Buses											
UBUSGAS	Riverside (SC)	2040	UBUS	GAS	181.921075	25613.54248	**46.24%**	25613.54248	1103.539732	0.003418268	0.0590540	1119.284745
UBUSDSL	Riverside (SC)	2040	UBUS	DSL	0	0	**0.00%**	0	0	0	0.0000000	0
UBUSNG	Riverside (SC)	2040	UBUS	NG	227.0851731	29774.11319	**53.76%**	29774.11319	1857.673012	5.667455554	0.0000000	2016.361768
			Urban Bus Total			***55387.65567***			**1508.930597**	**3.048170483**	**0.027308996**	**1601.516255**

[redacted]

CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_RESTLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_RESTLOSS	TOG_DIURN	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0	35.74625828	0.06203429	0	0.000271584	0.127288702	0	0.010623108	0.268646119	0	0.001374946	0.049915787	0.239664972	0.019310779	0.029797871	0.392007786	0	0.001505393	0.049915787	0.239664972	0.019310779	0.029797871	26.22300794	0	4.686527085	0.014880088	0	0.000353738
9339.765129	**04**	**0.000761106**	**0.225901139**	**05**	**0.149918948**	**1.468081014**	**06**	**0.016386396**	**4.863589569**	**07**	**08**	**09**	**010**	**011**	**0.018654665**	**5.536826502**	**012**	**013**	**014**	**015**	**016**	**0.147647479**	**71.82116096**	**017**	**0.009010721**	**0.08823747**	**018**
3061.31218	0	4.023427451	1.165236263	0	0.533918141	0.624068514	0	0.068247994	0.018835201	0	0	0	0	0	4.118463873	1.191700072	0	0	0	0	0	14.63207193	22.12471068	0	0	0	0
0	39.59777333	0.000648263	0	0.019731975	0.002883082	0	0.01883933	0.001838008	0	0.071755653	0.041448307	0.155159102	0.091673395	0.101257002	0.002682017	0	0.078563409	0.041448307	0.155159102	0.091673395	0.101257002	0.386397323	0	1.408850329	0.001917373	0	0.000391852
0	0	0.000179292	0	0	0.023489602	0	0	0.003860052	0	0	0	0	0	0	0.004394413	0	0	0	0	0	0	0.123430879	0	0	0.001412728	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	46.52513947	0.000805763	0	0.021985891	0.003105487	0	0.020121694	0.002482157	0	0.082785435	0.058613077	0.22099014	0.158165003	0.170121872	0.003621958	0	0.090639631	0.058613077	0.22099014	0.158165003	0.170121872	0.410210173	0	1.471981044	0.002234025	0	0.000460404
0	0	0.000585582	0	0	0.044750682	0	0	0.012607228	0	0	0	0	0	0	0.014352491	0	0	0	0	0	0	0.132331433	0	0	0.002691427	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	47.02696359	0.000947656	0	0.026639589	0.002972565	0	0.019834145	0.002911668	0	0.10187685	0.053331343	0.204818756	0.186121795	0.200654063	0.004248699	0	0.111542328	0.053331343	0.204818756	0.186121795	0.200654063	0.458699378	0	1.858289718	0.002206977	0	0.00046537
0	0	0.000559656	0	0	0.031142915	0	0	0.012049059	0	0	0	0	0	0	0.013717053	0	0	0	0	0	0	0.123894304	0	0	0.001873019	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
101.0265158	15.83387686	0.000923188	0.088827248	0.010667474	0.003168983	0.002537291	0.028861676	0.002933194	0.288068334	0.046850158	0.061436811	0.297792151	0.022187801	0.034640983	0.004280109	0.420348637	0.051295026	0.061436811	0.297792151	0.022187801	0.034640983	0.107085656	3.781397237	1.358457256	0.006298977	0.000999739	0.000156689
110.2665763	0	0.00147682	0.005098128	0	0.060304251	0.01733237	0	0.031795065	0.109759705	0	0	0	0	0	0.036196568	0.124954127	0	0	0	0	0	0.162555892	0.909745076	0	0.003626861	0.001042416	0
116.3597416	18.07908931	0.000917134	0.089077308	0.009974109	0.003564743	0.002515222	0.028530808	0.002903841	0.287868738	0.042691083	0.054512029	0.270883064	0.021338186	0.032883111	0.004237278	0.420057387	0.046741362	0.054512029	0.270883064	0.021338186	0.032883111	0.105726124	3.781397237	1.353599994	0.007230196	0.001151474	0.000178907
180.3187885	0	0.001599136	0.005098128	0	0.066294941	0.028343602	0	0.03442846	0.109759705	0	0	0	0	0	0.039194512	0.124954127	0	0	0	0	0	0.181260142	0.909745076	0	0.003987157	0.001704661	0
0	57.21662262	0.302853447	0	0.231125043	0.063846482	0	0.014954659	2.011431567	0	1.750859042	0.740140947	1.219100492	1.462606406	2.895489041	2.524403501	0	1.907397194	0.740140947	1.219100492	1.462606406	2.895489041	16.72139177	0	8.870886869	0.002045219	0	0.000566205
0	58.10231918	0.001063768	0	0.029616227	0.003210369	0	0.02120621	0.003405667	0	0.119098799	0.083143409	0.242362045	0.306926008	0.328876707	0.004969542	0	0.130398194	0.083143409	0.242362045	0.306926008	0.328876707	0.473564028	0	1.945117057	0.002699261	0	0.00057497
0	0	0.000205016	0	0	0.040825863	0	0	0.004413881	0	0	0	0	0	0	0.00502491	0	0	0	0	0	0	0.137420012	0	0	0.002455378	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	20.92212521	0.002941268	0	0.028559413	0.011897797	0	0.041960673	0.008093515	0	0.099835883	0.028429077	0.325668354	0.027180026	0.054450721	0.011810039	0	0.109307725	0.028429077	0.325668354	0.027180026	0.054450721	0.156020082	0	2.129411696	0.013114523	0	0.000207041
0	0	0.001887717	0	0	0.123908149	0	0	0.040641427	0	0	0	0	0	0	0.046267563	0	0	0	0	0	0	0.158841336	0	0	0.007452172	0	0
443.1393193	29.87735368	0.002132158	0.267287841	0.029837217	0.007463035	0.008125138	0.029343186	0.008080244	1.016330693	0.146855749	0.047844395	0.228626823	0.018416218	0.028546035	0.011790673	1.483027361	0.16078856	0.047844395	0.228626823	0.018416218	0.028546035	0.171293862	14.50860793	2.839766292	0.012758862	0.004385223	0.000295661
585.9779084	0	0.00031952	0.002625776	0	0.109980033	0.092107567	0	0.006879183	0.056532238	0	0	0	0	0	0.007831427	0.06435765	0	0	0	0	0	0.054946235	2.376620696	0	0.006610235	0.005536029	0
318.0759553	21.69462723	0.003006724	0.195770953	0.024492215	0.009314554	0.00558933	0.024393881	0.012508219	0.74980715	0.125497296	0.029468027	0.328642842	0.026349515	0.053029493	0.018251964	1.094116833	0.137403743	0.029468027	0.328642842	0.026349515	0.053029493	0.288123033	5.79590819	2.50368565	0.012884232	0.003147619	0.000214686
2047.57235	0	0.000468903	0.036468785	0	0.138134022	0.321849859	0	0.010095356	0.785162946	0	0	0	0	0	0.011492795	0.893848246	0	0	0	0	0	0.084923005	12.70782063	0	0.008302401	0.019344448	0
2303.707561	41.34581731	0.002603345	2.34192554	0.051486011	0.013331897	0.087826936	0.057423233	0.011829833	10.64151815	0.300607327	0.102260256	0.645488628	0.030967715	0.060720509	0.017262064	15.5280783	0.329127185	0.102260256	0.645488628	0.030967715	0.060720509	0.217663344	82.24087757	6.550385455	0.007555648	0.022797054	0.00040915
2845.379449	0	0.001040071	0.012609333	0	0.144375134	0.447254025	0	0.022392435	0.271475491	0	0	0	0	0	0.025492083	0.309054182	0	0	0	0	0	0.148658789	10.91645777	0	0.008677516	0.026881734	0
0	42.9991611	0.003418268	0	0.059053966	0.015642855	0	0.050615358	0.010159383	0	0.228238723	0.056801582	0.294870764	0.015293043	0.023885705	0.014824547	0	0.249892672	0.056801582	0.294870764	0.015293043	0.023885705	0.229087225	0	4.150417705	0.01092042	0	0.000425512
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	5.667455554	0	0	0.378698796	0	0	0.080976757	0	0	0	0	0	0	5.784054087	0	0	0	0	0	0	43.77692612	0	0	0	0	0

EMFAC DATA FORECAST YEAR 2045

Paste data -->

EMFAC2017 (v1.0.2) Emission Rates
Region Type: Sub-Area
Region: Riverside (SC)
Calendar Year: 2045
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN. Note 'day' in the unit is operation day.

Helper Column	Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	NOx_RUNEX	NOx_IDLEX	NOx_STREX	PM2.5_RUNEX	PM2.5_IDLEX	PM2.5_STREX	PM2.5_PMTW	PM2.5_PMBW	PM10_RUNEX	PM10_IDLEX	PM10_STREX	PM10_PMTW	PM10_PMBW	CO2_RUNEX
HHDTGAS	Riverside (SC)	2045	HHDT	Aggregated	Aggregated	GAS	8.877764033	726.7370788	177.6263028	2.934663154	0	1.227379152	0.000911343	0	0.000401569	0.005000001	0.026460008	0.000991169	0	0.000436743	0.02000001	0.06174002	1485.446747
HHDTDSL	Riverside (SC)	2045	HHDT	Aggregated	Aggregated	DSL	19771.30613	2780447.525	217566.651	1.671732441	58.15102141	2.509248224	0.021308299	0.020141412	0	0.008796264	0.025861017	0.022271765	0.021052118	0	0.03518506	0.06034237	927.4186026
HHDTNG	Riverside (SC)	2045	HHDT	Aggregated	Aggregated	NG	815.1095049	33231.43013	3178.927069	0.451898303	17.87617346	0	0.002965356	0.007139165	0	0.009000003	0.026460008	0.003099436	0.007461966	0	0.03600001	0.06174002	2566.574632
LDAGAS	Riverside (SC)	2045	LDA	Aggregated	Aggregated	GAS	913041.1954	29936920.33	4270004.783	0.016762374	0	0.114170557	0.000443279	0	0.000641075	0.002000001	0.015750005	0.000482106	0	0.000697227	0.008	0.03675001	191.3565906
LDADSL	Riverside (SC)	2045	LDA	Aggregated	Aggregated	DSL	11293.09269	372770.2538	52981.43862	0.007863792	0	0	0.000683755	0	0	0.002000001	0.015750005	0.000714671	0	0	0.008	0.03675001	147.8706363
LDAELEC	Riverside (SC)	2045	LDA	Aggregated	Aggregated	ELEC	59370.65147	1789142.326	280210.5535	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT1GAS	Riverside (SC)	2045	LDT1	Aggregated	Aggregated	GAS	97601.24874	3053548.556	447992.7338	0.018078909	0	0.12492393	0.000482532	0	0.000700613	0.002000001	0.015750005	0.000524798	0	0.000761981	0.008	0.03675001	220.9610655
LDT1DSL	Riverside (SC)	2045	LDT1	Aggregated	Aggregated	DSL	13.36988892	423.1438278	61.78023564	0.030060894	0	0	0.004018207	0	0	0.002000001	0.015750005	0.004199892	0	0	0.008	0.03675001	280.297165
LDT1ELEC	Riverside (SC)	2045	LDT1	Aggregated	Aggregated	ELEC	3760.389977	110270.4539	17576.87295	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LDT2GAS	Riverside (SC)	2045	LDT2	Aggregated	Aggregated	GAS	286641.7728	9212604.061	1331164.16	0.016947962	0	0.118118207	0.000458037	0	0.000657003	0.002000001	0.015750005	0.000498157	0	0.00071455	0.008	0.03675001	218.5158177
LDT2DSL	Riverside (SC)	2045	LDT2	Aggregated	Aggregated	DSL	2922.745156	95055.81694	13674.76376	0.027060605	0	0	0.003867772	0	0	0.002000001	0.015750005	0.004042656	0	0	0.008	0.03675001	195.8471726
LDT2ELEC	Riverside (SC)	2045	LDT2	Aggregated	Aggregated	ELEC	13044.94563	270545.539	61436.42034	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
LHDT1GAS	Riverside (SC)	2045	LHDT1	Aggregated	Aggregated	GAS	17385.47919	508957.9371	259017.7355	0.086674669	0.023779254	0.296317957	0.000909842	0	0.000301649	0.002000001	0.032760009	0.000989536	0	0.000328071	0.008	0.07644002	625.5191515
LHDT1DSL	Riverside (SC)	2045	LHDT1	Aggregated	Aggregated	DSL	18251.48509	524334.345	229580.7221	0.103706007	0.920566481	0	0.0049423	0.026361106	0	0.003000001	0.032760009	0.005165769	0.027553038	0	0.012	0.07644002	374.5174276
LHDT2GAS	Riverside (SC)	2045	LHDT2	Aggregated	Aggregated	GAS	2730.304577	78385.83641	40677.47005	0.100801525	0.023597681	0.2873297	0.000907986	0	0.000298993	0.002000001	0.038220011	0.000987518	0	0.000325182	0.008	0.08918003	717.0096924
LHDT2DSL	Riverside (SC)	2045	LHDT2	Aggregated	Aggregated	DSL	7719.58461	209370.591	97102.66315	0.222172022	1.015345605	0	0.011358403	0.026274622	0	0.003000001	0.038220011	0.011871979	0.027462643	0	0.012	0.08918003	412.2775702
MCYGAS	Riverside (SC)	2045	MCY	Aggregated	Aggregated	GAS	37096.05585	188809.8895	74192.1117	1.101201558	0	0.263134606	0.002015761	0	0.002750869	0.001	0.005040001	0.002162253	0	0.0029495	0.004	0.01176	206.6487191
MDVGAS	Riverside (SC)	2045	MDV	Aggregated	Aggregated	GAS	191212.4565	5876551.774	877329.9185	0.019234121	0	0.133566659	0.000471033	0	0.000684248	0.002000001	0.015750005	0.000512291	0	0.000744183	0.008	0.03675001	265.7930527
MDVDSL	Riverside (SC)	2045	MDV	Aggregated	Aggregated	DSL	6780.221321	212382.9174	31472.0097	0.008974773	0	0	0.000807757	0	0	0.002000001	0.015750005	0.00084428	0	0	0.008	0.03675001	254.965906
MDVELEC	Riverside (SC)	2045	MDV	Aggregated	Aggregated	ELEC	9876.702478	203287.9052	46396.49349	0	0	0	0	0	0	0.002000001	0.015750005	0	0	0	0.008	0.03675001	0
MHGAS	Riverside (SC)	2045	MH	Aggregated	Aggregated	GAS	3010.928726	24934.76398	301.2133098	0.179205415	0	0.297292263	0.00089594	0	0.000286029	0.003000001	0.055860016	0.000974416	0	0.000311083	0.012	0.13034004	1291.716384
MHDSL	Riverside (SC)	2045	MH	Aggregated	Aggregated	DSL	1613.699809	11445.56394	161.3699809	1.86169254	0	0	0.029314159	0	0	0.004000001	0.055860016	0.030639615	0	0	0.01600001	0.13034004	759.7508321
MHDTGAS	Riverside (SC)	2045	MHDT	Aggregated	Aggregated	GAS	2277.981298	78186.47446	45577.8498	0.079633457	0.090193009	0.436361103	0.000910228	0	0.000399641	0.003000001	0.055860016	0.000989955	0	0.000434646	0.012	0.13034004	1273.613483
MHDTDSL	Riverside (SC)	2045	MHDT	Aggregated	Aggregated	DSL	15596.29794	884260.9126	163342.5907	0.861280204	3.290550831	2.162436477	0.00932785	0.000811287	0	0.003000001	0.055860016	0.009749614	0.000847969	0	0.012	0.13034004	682.53591
OBUSGAS	Riverside (SC)	2045	OBUS	Aggregated	Aggregated	GAS	517.1940128	15484.64697	10348.01781	0.366418488	0.065345415	0.381421967	0.000898814	0	0.000274002	0.003000001	0.055860016	0.000977542	0	0.000298002	0.012	0.13034004	1284.408673
OBUSDSL	Riverside (SC)	2045	OBUS	Aggregated	Aggregated	DSL	323.7986058	20625.42276	3087.063048	1.201711465	10.96691832	2.222326664	0.014072546	0.003532072	0	0.003000001	0.055860016	0.014708844	0.003691777	0	0.012	0.13034004	868.1772572
SBUSGAS	Riverside (SC)	2045	SBUS	Aggregated	Aggregated	GAS	441.2354067	12913.02809	1764.941627	0.151344513	0.9265304	0.552234304	0.001453831	0	0.000661043	0.002000001	0.319200087	0.001581174	0	0.000718945	0.008	0.7448002	719.7254244
SBUSDSL	Riverside (SC)	2045	SBUS	Aggregated	Aggregated	DSL	1258.18681	39972.61658	14519.30134	1.834345423	15.53279713	2.137846139	0.003930455	0.003711073	0	0.003000001	0.319200091	0.004108172	0.003878871	0	0.012	0.74480021	879.5542934
UBUSGAS	Riverside (SC)	2045	UBUS	Aggregated	Aggregated	GAS	186.7727158	26296.6283	747.0908631	0.193960702	0	0.438239476	0.001398566	0	0.000589391	0.002386561	0.045038932	0.001521068	0	0.000641017	0.00954624	0.10509084	1097.602888
UBUSDSL	Riverside (SC)	2045	UBUS	Aggregated	Aggregated	DSL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
UBUSNG	Riverside (SC)	2045	UBUS	Aggregated	Aggregated	NG	233.1412921	30568.15698	932.5651685	0.443039317	0	0	0.002900574	0	0	0.007354915	0.034520958	0.003031726	0	0	0.02941966	0.0805489	1857.673012

Helper Column	Region	Calendar Year	Vehicle Category	Fuel	Population	VMT	% of Total	Trips	CO2_RUNEX (g/mile)	CH4_RUNEX (g/mile)	N2O_RUNEX (g/mile)	CO2e (g/mile)
	Passenger Vehicles											
LDADSL	Riverside (SC)	2045	LDA	DSL	11293.09269	372770.2538	0.73%	372770.2538	147.8706363	0.000171582	0.0000000	147.8754406
LDT1DSL	Riverside (SC)	2045	LDT1	DSL	13.36988892	423.1438278	0.00%	423.1438278	280.297165	0.000570643	0.0000000	280.313143
LDT2DSL	Riverside (SC)	2045	LDT2	DSL	2922.745156	95055.81694	0.19%	95055.81694	195.8471726	0.000561088	0.0000000	195.8628831
MDVDSL	Riverside (SC)	2045	MDV	DSL	6780.221321	212382.9174	0.41%	212382.9174	254.965906	0.000192139	0.0000000	254.9712859
LDAELEC	Riverside (SC)	2045	LDA	ELEC	59370.65147	1789142.326	3.49%	1789142.326	0	0	0.0000000	0
LDT1ELEC	Riverside (SC)	2045	LDT1	ELEC	3760.389977	110270.4539	0.21%	110270.4539	0	0	0.0000000	0
LDT2ELEC	Riverside (SC)	2045	LDT2	ELEC	13044.94563	270545.539	0.53%	270545.539	0	0	0.0000000	0
MDVELEC	Riverside (SC)	2045	MDV	ELEC	9876.702478	203287.9052	0.40%	203287.9052	0	0	0.0000000	0
MCYGAS	Riverside (SC)	2045	MCY	GAS	37096.05585	188809.8895	0.37%	188809.8895	206.6487191	0.302079877	0.2297145	275.9812907
LDAGAS	Riverside (SC)	2045	LDA	GAS	913041.1954	29936920.33	58.33%	29936920.33	191.3565906	0.000590638	0.0180805	196.1644506
LDT1GAS	Riverside (SC)	2045	LDT1	GAS	97601.24874	3053548.556	5.95%	3053548.556	220.9610655	0.000636149	0.0191131	226.0438396
LDT2GAS	Riverside (SC)	2045	LDT2	GAS	286641.7728	9212604.061	17.95%	9212604.061	218.5158177	0.00081037	0.0240945	224.9235625
MDVGAS	Riverside (SC)	2045	MDV	GAS	191212.4565	5876551.774	11.45%	5876551.774	265.7930527	0.000890812	0.0259785	272.7023088
			Passenger Vehicle Total			***51322312.97***			**197.6803582**	**0.00174425**	**0.019828531**	**202.9837581**
			Passenger Gasoline Total			**48268434.61**	**94.05%**		**206.7270003**	**0.000669691**	**0.02018449**	**212.0946414**
			Passenger Diesel Total			**680632.132**	**1.33%**		**188.0710454**	**0.000232642**	**0**	**188.0775594**
			Passenger Electric Total			**2373246.224**	**4.62%**		**0**	**0**	**0**	**0**
	Light Trucks											
LHDT1DSL	Riverside (SC)	2045	LHDT1	DSL	18251.48509	524334.345	39.69%	524334.345	374.5174276	0.001337104	0.0000000	374.5548665
LHDT2DSL	Riverside (SC)	2045	LHDT2	DSL	7719.58461	209370.591	15.85%	209370.591	412.2775702	0.001469124	0.0000000	412.3187057
LHDT1GAS	Riverside (SC)	2045	LHDT1	GAS	17385.47919	508957.9371	38.53%	508957.9371	625.5191515	0.000878804	0.0094495	628.0478821
LHDT2GAS	Riverside (SC)	2045	LHDT2	GAS	2730.304577	78385.83641	5.93%	78385.83641	717.0096924	0.000868697	0.0089110	719.3954386
			Light-Heavy Truck Total			***1321048.71***			**497.5270672**	**0.001153666**	**0.004169346**	**498.6642465**
			Light-Heavy Truck Gasoline Total			**587343.7735**	**44.46%**		**637.7293134**	**0.000877455**	**0.009377658**	**640.2389616**
			Light-Heavy Truck Diesel Total			**733704.936**	**55.54%**		**385.2926902**	**0.001374777**	**0**	**385.331184**
	Medium Trucks											
MHDTGAS	Riverside (SC)	2045	MHDT	GAS	2277.981298	78186.47446	**8.12%**	78186.47446	1273.613483	0.002048282	0.0295108	1281.491194
MHDTDSL	Riverside (SC)	2045	MHDT	DSL	15596.29794	884260.9126	**91.88%**	884260.9126	682.53591	0.000317026	0.0000000	682.5447867
			Medium-Heavy Truck Total			***962447.3871***			**730.5533624**	**0.000457668**	**0.002397372**	**731.2014807**
	Heavy Trucks											
HHDTGAS	Riverside (SC)	2045	HHDT	GAS	8.877764033	726.7370788	**0.03%**	726.7370788	1485.446747	0.061720867	0.0002283	1487.235438
HHDTDSL	Riverside (SC)	2045	HHDT	DSL	19771.30613	2780447.525	**98.79%**	2780447.525	927.4186026	0.00076067	0.0000000	927.4399014
HHDTNG	Riverside (SC)	2045	HHDT	NG	815.1095049	33231.43013	**1.18%**	33231.43013	2566.574632	4.002252492	0.0000000	2678.637702
			Heavy-Heavy Truck Total			***2814405.692***			**946.9172268**	**0.048024502**	**5.89592E-08**	**948.2619284**
	Urban Buses											
UBUSGAS	Riverside (SC)	2045	UBUS	GAS	186.7727158	26296.6283	**46.24%**	26296.6283	1097.602888	0.003476395	0.0481530	1110.460773
UBUSDSL	Riverside (SC)	2045	UBUS	DSL	0	0	**0.00%**	0	0	0	0.0000000	0
UBUSNG	Riverside (SC)	2045	UBUS	NG	233.1412921	30568.15698	**53.76%**	30568.15698	1857.673012	5.667455554	0.0000000	2016.361768
			Urban Bus Total			***56864.78528***			**1506.185155**	**3.048197363**	**0.022267941**	**1597.435685**

[redacted]

CO2_IDLEX	CO2_STREX	CH4_RUNEX	CH4_IDLEX	CH4_STREX	N2O_RUNEX	N2O_IDLEX	N2O_STREX	ROG_RUNEX	ROG_IDLEX	ROG_STREX	ROG_HOTSOAK	ROG_RUNLOSS	ROG_RESTLOSS	ROG_DIURN	TOG_RUNEX	TOG_IDLEX	TOG_STREX	TOG_HOTSOAK	TOG_RUNLOSS	TOG_RESTLOSS	TOG_DIURN	CO_RUNEX	CO_IDLEX	CO_STREX	SOx_RUNEX	SOx_IDLEX	SOx_STREX
0	34.83528111	0.061720867	0	0.000228329	0.123177233	0	0.055252844	0.267004019	0	0.001149875	0.050397127	0.246770094	0.01985502	0.030579651	0.389611637	0	0.001258968	0.050397127	0.246770094	0.01985502	0.030579651	26.24131394	0	4.607459274	0.0146997	0	0.000344723
9227.348569	0	0.00076067	0.228045609	0	0.145777289	1.450410697	0	0.016377006	4.909759432	0	0	0	0	0	0.018643974	5.589387376	0	0	0	0	0	0.147698935	72.52175776	0	0.008761791	0.087175414	0
2999.135183	0	4.002252492	1.161674178	0	0.523213029	0.611393327	0	0.063064765	0.017788746	0	0	0	0	0	4.091292322	1.186930381	0	0	0	0	0	14.65425779	22.13215773	0	0	0	0
0	38.83483648	0.000590638	0	0.018080461	0.002869267	0	0.018845405	0.001602793	0	0.063686288	0.036415049	0.151000705	0.080118901	0.088060811	0.002338791	0	0.069728469	0.036415049	0.151000705	0.080118901	0.088060811	0.377576606	0	1.359633695	0.001893629	0	0.000384302
0	0	0.000171582	0	0	0.023243205	0	0	0.00369406	0	0	0	0	0	0	0.004205441	0	0	0	0	0	0	0.122087363	0	0	0.001397909	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	45.17187806	0.000636149	0	0.019113064	0.002993309	0	0.020064754	0.001762888	0	0.068330125	0.047736038	0.188035847	0.130404513	0.138724768	0.002572403	0	0.074812886	0.047736038	0.188035847	0.130404513	0.138724768	0.383639559	0	1.395317786	0.002186589	0	0.000447012
0	0	0.000570643	0	0	0.044058811	0	0	0.012285614	0	0	0	0	0	0	0.013986355	0	0	0	0	0	0	0.129891157	0	0	0.002649816	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
0	45.7487529	0.00081037	0	0.024094545	0.002847911	0	0.019544155	0.002321473	0	0.088941106	0.04536411	0.180187624	0.164472399	0.177080895	0.003387488	0	0.097379315	0.04536411	0.180187624	0.164472399	0.177080895	0.437499455	0	1.796504087	0.002162391	0	0.000452721
0	0	0.000561088	0	0	0.030784448	0	0	0.012079893	0	0	0	0	0	0	0.013752155	0	0	0	0	0	0	0.125170507	0	0	0.00185146	0	0
0	0	0	0	0	0	0	0	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0.004888026	0	0.00943641	0.028301668	0	0	0	0	0	0
98.53666385	15.48838287	0.000878804	0.085257326	0.009449525	0.007279191	0.002342905	0.027452076	0.002755866	0.273112856	0.040169971	0.055657845	0.271361532	0.021645314	0.033055809	0.004021353	0.398525638	0.043981062	0.055657845	0.271361532	0.021645314	0.033055809	0.104835491	3.781397237	1.348913846	0.006190019	0.0009751	0.00015327
106.3434989	0	0.001337104	0.005098128	0	0.058868924	0.016715717	0	0.028787061	0.109759705	0	0	0	0	0	0.032772155	0.124954127	0	0	0	0	0	0.139414516	0.909745076	0	0.003540537	0.001005328	0
113.265478	17.64162142	0.000868697	0.084963867	0.008911029	0.008226932	0.002310905	0.026755152	0.002715344	0.271027428	0.037001392	0.050967532	0.258995281	0.021023333	0.032200308	0.003962223	0.395482587	0.040511867	0.050967532	0.258995281	0.021023333	0.032200308	0.103920635	3.781397237	1.347080756	0.007095392	0.001120854	0.000174578
174.9347262	0	0.001469124	0.005098128	0	0.064804293	0.027497303	0	0.031629375	0.109759705	0	0	0	0	0	0.036007941	0.124954127	0	0	0	0	0	0.163698061	0.909745076	0	0.003897506	0.001653762	0
0	56.86203728	0.302079877	0	0.229714472	0.06375877	0	0.014946126	2.006395509	0	1.741538379	0.733138072	1.219506506	1.462714931	2.909408865	2.518923543	0	1.897427128	0.733138072	1.219506506	1.462714931	2.909408865	16.61238896	0	8.886861273	0.002044957	0	0.000562696
0	56.11695778	0.000890812	0	0.025978541	0.003020549	0	0.020784034	0.00267655	0	0.100116687	0.073713895	0.206301891	0.284368989	0.303657703	0.003905616	0	0.109615171	0.073713895	0.206301891	0.284368989	0.303657703	0.449810313	0	1.841199127	0.002630238	0	0.000555323
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434.0084953	29.24424235	0.002048282	0.265985346	0.029510789	0.00723709	0.008077443	0.03454269	0.007668649	1.016384149	0.145468856	0.048024716	0.234710138	0.01896282	0.029289918	0.011190074	1.483105364	0.159270087	0.048024716	0.234710138	0.01896282	0.029289918	0.159724361	14.50920751	2.788093048	0.012603438	0.004294866	0.000289395
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309.7119787	20.88965708	0.002541351	0.196834495	0.023565578	0.021141558	0.005189474	0.027867254	0.010016835	0.750514416	0.118371475	0.02635551	0.297114529	0.025660549	0.050633112	0.014616542	1.095148875	0.129601866	0.02635551	0.297114529	0.025660549	0.050633112	0.215576179	5.800202883	2.3100276	0.012710265	0.003064851	0.00020672
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2181.635572	39.60998418	0.002598988	2.333898538	0.050345655	0.012966338	0.091801005	0.049614582	0.01185076	10.64151815	0.294954699	0.094318124	0.598726776	0.028698728	0.056469778	0.017292601	15.5280783	0.322938268	0.094318124	0.598726776	0.028698728	0.056469778	0.213189531	82.24087757	6.551567893	0.007122267	0.021589053	0.000391973
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0	42.69804804	0.003476395	0	0.048153005	0.018349014	0	0.045573525	0.010197108	0	0.181890588	0.025015923	0.099469406	0.007960922	0.013473709	0.014879596	0	0.199147299	0.025015923	0.099469406	0.007960922	0.013473709	0.186732703	0	4.176994247	0.01086167	0	0.000422532
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	5.667455554	0	0	0.378698796	0	0	0.080976757	0	0	0	0	0	0	5.784054087	0	0	0	0	0	0	43.77692612	0	0	0	0	0

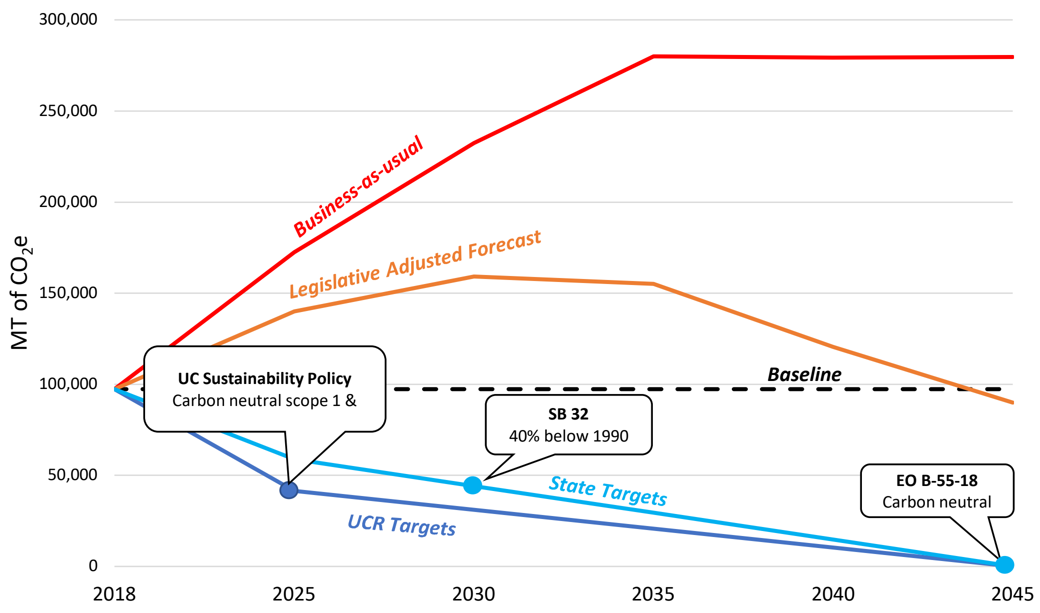
	1990	2018	2020	2025	2030	2035	2040	2045	2050
Absolute Emissions (MT CO2e)									
Business-as-usual Emissions Forecast	73,559	97,333	114,841	172,425	232,446	279,931	279,266	279,700	278,532
Legislative Adjusted Absolute Emissions Forecast	73,559	97,333	111,021	139,920	159,124	155,029	120,524	89,966	88,524
State Emissions Targets[2]	73,559	97,333	73,559	58,847	44,135	29,424	14,712	0	0
UCR Emissions Targets[3]	73,559	97,333	73,559	41,471	31,104	20,736	10,368	0	0
Emissions Gap		0	37,462	98,448	128,020	134,293	110,156	89,966	88,524

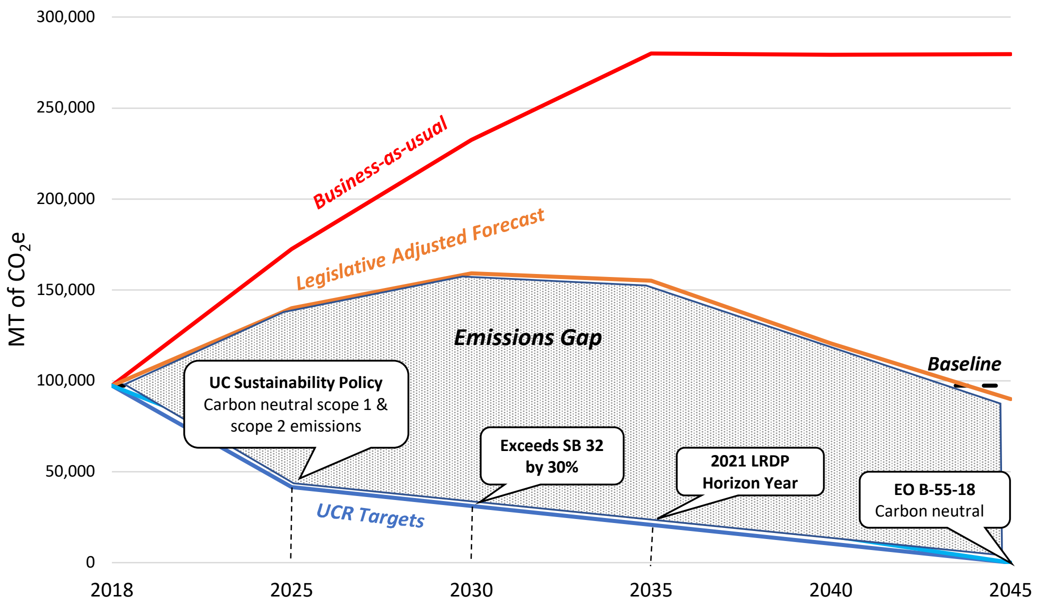
For Graphs:

Emission Pathway (Absolute Emissions)	**1990**	**2018**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Baseline	73,559	97,333	97,333	97,333	97,333	97,333	97,333	97,333	97,333
Business-as-usual	73,559	97,333	114,841	172,425	232,446	279,931	279,266	279,700	278,532
Legislative Adjusted Forecast	73,559	97,333	111,021	139,920	159,124	155,029	120,524	89,966	88,524
State Targets	73,559	97,333	73,559	58,847	44,135	29,424	14,712	0	0
UCR Emissions Targets	73,559	97,333	73,559	41,471	31,104	20,736	10,368	0	0

Notes:

1. UCR previously backcast emissions to estimate 1990 levels at 82,167 MT CO2e and are currently working towards meeting that level in 2020. It should be noted that the 1990 inventory has not been audited by a third party and the 1990 levels does not account for growth of the campus. From 1990 to 2018 the campus grew from 9,144 to 23,313 weighted campus users (approximately 155%). 1990 levels have been scaled to incorproated only main campus (approximately 90% of all UCR operational emissions).
2. State emission targets include 40% below 1990 levels by 2030 per SB 32 and carbon neutrality by 204 per Executive Order B-55-18
3. Recommended UCR emission targets incorporate the UC Sustainability Practice Policy goal for carbon neutrality for scope 1 and scope 2 emissions by 2025 and to align with Executive Order B-55-18 to reach total carbon neutrality by 2045. This exceeds the UC Sustainability Practice Policy goal of carbon neutrality of scope 3 emissions by 2050.




MT of CO_2e
300,000
250,000
200,000
150,000
100,000
50,000
0
2018
2025
2030
2035
2040
2045
Business-as-usual
Legislative Adjusted Forecast
Emissions Gap
Baseline
UCR Targets
UC Sustainability Policy
Carbon neutral scope 1 & scope 2 emissions
Exceeds SB 32 by 30%
2021 LRDP Horizon Year
EO B-55-18
Carbon neutral

Appendix G2

GHG Emissions Inventory and Forecast Data Evaluation Memorandum

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March 15, 2021
Rincon Project No: 19-07846

Stephanie Tang, Campus Environmental Planner
University of California at Riverside
1223 University Avenue, Suite 240
Riverside, CA 92507

Submitted via email: stephanie.tang@ucr.edu

Subject: University of California at Riverside 2021 Long Range Development Plan Greenhouse Gas Emissions Inventory and Forecast Data Evaluation Memorandum (Final)

Dear Ms. Tang,

Rincon Consultants, Inc. (Rincon) has completed an evaluation of the greenhouse gas (GHG) emission inventory and forecast data for the University of California at Riverside (UCR) 2021 Long Range Development Plan (LRDP). The UCR 2018 activity data was disaggregated and provided by various UCR departments, including the UC Office of the President (UCOP), Campus Planning, Design & Construction, Transportation and Parking Services (TAPS), Office of Sustainability, and representative utility and service provider data was compiled and provided by the Energy Manager. The GHG inventory and forecast will be developed following standard reporting protocols from The Climate Registry (TCR), California Air Resources Board (CARB), International Council for Local Environmental Initiatives (ICLEI) Local Governments for Sustainability, and American College & University Presidents' Climate Commitment (ACUPCC) adapted from the GHG Protocol: A Corporate Accounting and Reporting Standard developed by the World Business Council for Sustainable Development and the World Resources Institute (WBCSD/WRI).1 These principles serve to guide the measurement and reporting of emissions and include steps to evaluate the relevance, completeness, consistency, transparency, and accuracy of the data used in the inventory and forecast. As part of the data completeness, accuracy, and transparency review, Rincon completed an evaluation to establish a transparent and replicable pathway of emissions reporting and reviewed the data through an internally vetted quality assurance/quality control (QA/QC) process. This memorandum includes an introduction of the Rincon GHG inventory and forecast data validation process; a description of the data evaluation approach; a discussion of GHG inventory data use and methodology; a discussion of GHG forecasts data use and methodology; and a conclusion summary regarding what will serve as the basis for the GHG inventory and forecasts.

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[1] World Business Council for Sustainable Development and the World Resources Institute (WBCSD/WRI). 2004. The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. Available: <https://www.wbcsd.org/Programs/Climate-and-Energy/Climate/Resources/A-corporate-reporting-and-accounting-standard-revised-edition>. Accessed April 24, 2020

Introduction

The California 2017 Climate Change Scoping Plan (2017 Scoping Plan), released by CARB in November 2017, outlines the strategy for achieving the State 2030 GHG emission reduction target.[2] Based on the 2017 Scoping Plan, there are nine main economic GHG emissions-generating sectors, including: agriculture, residential and commercial, electric power, high global warming potential (GWP), industrial, recycling and waste, transportation, natural working lands net sink,[3] and the cap-and-trade program.

About 18 percent of the UCR campus is designated as open space that includes approximately 154.8 acres of relatively intact natural habitat identified as Open Space Reserve and43.7 acres associated with the UCR Botanic Gardens. Additional open space, including the interconnected framework of Primary and Secondary open space that are not defined together as a designated land use are incorporated throughout the campus organization and exist within all of the 2021 LRDP defined land use categories.[4] Additionally, land-based research makes up approximately 38 percent (419.3 acres)[5] of UCR existing campus land use which predominantly includes agricultural field research. CARB considered agricultural sources to include off-road farm equipment, irrigation pumps, crop residue burning, emissions from flooded soils, livestock waste, crop residue decomposition, and fertilizer volatilization. The agricultural activities conducted at UCR do not align with the specified emission sources and, therefore, are not considered a significant contributing source to the UCR GHG emission profile. Furthermore, it is not typical under standard GHG reporting protocols for campuses to include agriculture and forestry emissions within the inventory.[11,16] As such, agriculture and forestry source emissions are excluded from the inventory and forecasts and is not discussed in this memorandum. However, the GHG emissions from existing agricultural uses are not anticipated to be affected by implementation of the LRDP. Emissions associated with energy use and on-road transportation for maintenance of these areas is discussed within the respective sections. These land uses devoted to open spaces or land-based research for agriculture would more appropriately be characterized as urban green space and farmland, respectively, within the California Natural and Working Lands Sector.[6] However, GHG sequestration generated from the open space and natural land uses will be excluded from the inventory and forecast due to limited availability of appropriate data.[7] The California Air Resources Board regulates the GHG emissions associated with industrial stationary combustion through the California cap-and-trade program and are excluded from inventory and forecasts for non-industrial facilities. Although UCR is not considered an industrial facility, UCR operates a Central Steam Plant responsible for approximately 95 percent of the natural gas combustion occurring on campus. However, the Central Steam Plant

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[2] Per Senate Bill (SB) 32, the State is required to reduce GHG emissions by 40 percent below the 1990 levels by 2030.

[3] Per the 2017 Scoping Plan, work is currently underway to estimate the range of potential sequestration benefits from natural and working land sectors.

[4] As defined in the 2021 LRDP, Primary Open Spaces include significant campus malls, major pedestrian corridors, streetscapes, quads, and plazas, while Secondary Open Spaces are focused on minor pedestrian linkages that foster greater movement throughout campus, as well as smaller, more intimate, courtyard spaces or plazas. They are not defined together as a designated land use but rather exist as a secondary overlay to land use organization.

[5] University of California, Riverside (UCR). (November 2011). 2005 Long Range Development Plan Amendment 2.

[6] CalEPA, California Natural Resources Agency, CDFA, CARB, and California Strategic Growth Council. 2019. January 2019 Draft: California 2030 Natural and Working Lands Climate Change Implementation Plan. Available: <https://ww2.arb.ca.gov/sites/default/files/2019-06/draft-nwl-ip-040419.pdf>. Accessed April 24, 2020.

[7] The reduction in GHG emissions from sequestration may be included in the future to the 2018 baseline inventory and forecast after a comprehensive study based on the natural and working land protocol has been completed.

generates less than 25,000 MT CO2e and, therefore, does not have a compliance obligation under the cap-and-trade regulation;

however, it is reported to CARB under an abbreviated report.[8] Stationary combustion emissions generated from the Central Steam Plant are regulated by the cap-and-trade program and are included in the 2018 inventory under Scope 1 emissions as discussed in detail below.[9]

Several GHG emission accounting protocols have been developed to provide different standardized frameworks that guide businesses, governments, organizations, and other entities in the preparation of emissions inventories depending on the source of emissions and operational control. Standard GHG protocols for organization-focused inventories, such as for UCR, commonly utilize a framework that categorizes emissions by scopes, which account for emissions based on the level of operational control that the organization (in this case, UCR) has over the respective emission sources. Scope 1 emissions are all direct anthropogenic GHG emissions generated from sources that are owned or directly controlled by the reporting organization. Scope 2 refers to GHG emissions that are indirectly generated due to the consumption of purchases or acquired electricity, steam, heating, or cooling. Scope 3 refers to all other indirect emissions not covered under Scope 2 that are associated with sources that are not directly owned or controlled by the reporting organization but are fundamental to the organization's operation. Consistent with standard GHG accounting and reporting protocols, UCR GHG emissions are distributed and discussed by Scope.

The *UC Policy on Sustainable Practices* stipulates that each UC campus must complete regular GHG emissions inventories that comply with the requirements of the *General Reporting Protocol* developed by TCR and *The Second Nature Carbon Commitment's Implementation Guide* developed by the ACUPCC that presents a framework specifically developed for higher education campuses. Based on the requirements of the TCR and ACUPCC GHG reporting protocols, an inventory must include all relevant direct and indirect emissions within the institution's defined reporting boundary and include all six internationally recognized GHGs regulated under the Kyoto Protocol.[10] At a minimum, GHG inventories for a campus must include the following emissions sources: stationary combustion, mobile combustion, process emissions, fugitive emissions, consumption of electricity, employee/student commuting, air travel, and solid waste.[11] These GHG emissions-generating sources will be assessed by scope as part of the UCR GHG Inventory and Forecast. As such, five of the nine economic sectors as defined by the 2017 Scoping Plan (electric power, residential/commercial, high GWP, transportation, and recycling/waste) are discussed in this memorandum. The evaluation in this memorandum includes a review of data received from UCR from the applicable sources by each scope as defined by the TCR and ACUPCC GHG protocols.

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[8] CARB. 2019. Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (MRR). Available: <https://ww3.arb.ca.gov/cc/reporting/ghg-rep/regulation/mrr-2018-unofficial-2019-4-3.pdf?_ga=2.206872275.1592600053.1594828852-1664137960.1580326972>. Accessed: April 20, 2020

[9] CARB. 2019. CARB Cap and Trade Program. Available: <https://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>. Accessed: April 24, 2020.

[10] The internationally recognized GHGs regulated under the Kyoto Protocol include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and Sulphur hexafluoride (SF_6).

[11] American College & University Presidents' Climate Commitment (ACUPCC). 2012. Implementation Guide Version 2.1. Available: <http://secondnature.org/wp-content/uploads/ACUPCCImplementationGuide_V2.1_.pdf>. Accessed: May 2020.

GHG Inventory and Forecast Data Evaluation Approach

UCR GHG Inventory (2018) Data Validation Process

The current LRDP in use at UCR was originally developed in 2005 with subsequent amendments and bases its assumptions on a projected enrollment of approximately 25,000 students. UCR is rapidly approaching that milestone with approximately 24,000 students enrolled as of Fall 2018, the time at which the baseline inventory will represent.[12] As a result, UCR is currently preparing a 2021 LRDP and LRDP EIR to submit to the Board of UC Regents for anticipated certification by Fall 2021 that will identify the physical development needed to accommodate an increase to approximately 35,000 students plus supporting faculty and staff through 2035. Concurrently, the goals outlined in both the UCOP *Sustainability Practices Policy* and State climate change regulations evolved significantly between 2010 and 2020, creating an opportunity for the 2021 LRDP to define the roadmap for how UCR will meet those new goals. The overarching goal of the 2021 LRDP in terms of GHG emissions is to identify and establish an appropriate GHG emissions baseline inventory representative of the 2021 LRDP that will allow for future GHG emissions forecasting and GHG emissions reduction plan (GHGRP) development.

Since 2013, UCR has tracked its emissions internally (as stipulated by the *UC Policy on Sustainable Practices*) and reported them through the Second Nature Carbon Commitment on-line reporting tool at least biennially through TCR. However, the data reported is for the entire UCR campus including the main campus as defined in the 2021 LRDP as well as satellite facilities under UCR operational control. Therefore, consistent with the scope of the LRDP, Rincon will utilize the source data used for only the main campus GHG emission tracking to develop an inventory that encompasses the 2021 LRDP area for the 2018 calendar year using calculation-based methods and following standard GHG reporting protocol methodologies as outlined below.

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[12] There were 20,581 undergraduate students during the 2019 – 2020 school year. (US News. 2020. Available: <https://www.usnews.com/best-colleges/university-of-california-riverside-1316)>. Accessed May 1, 2020

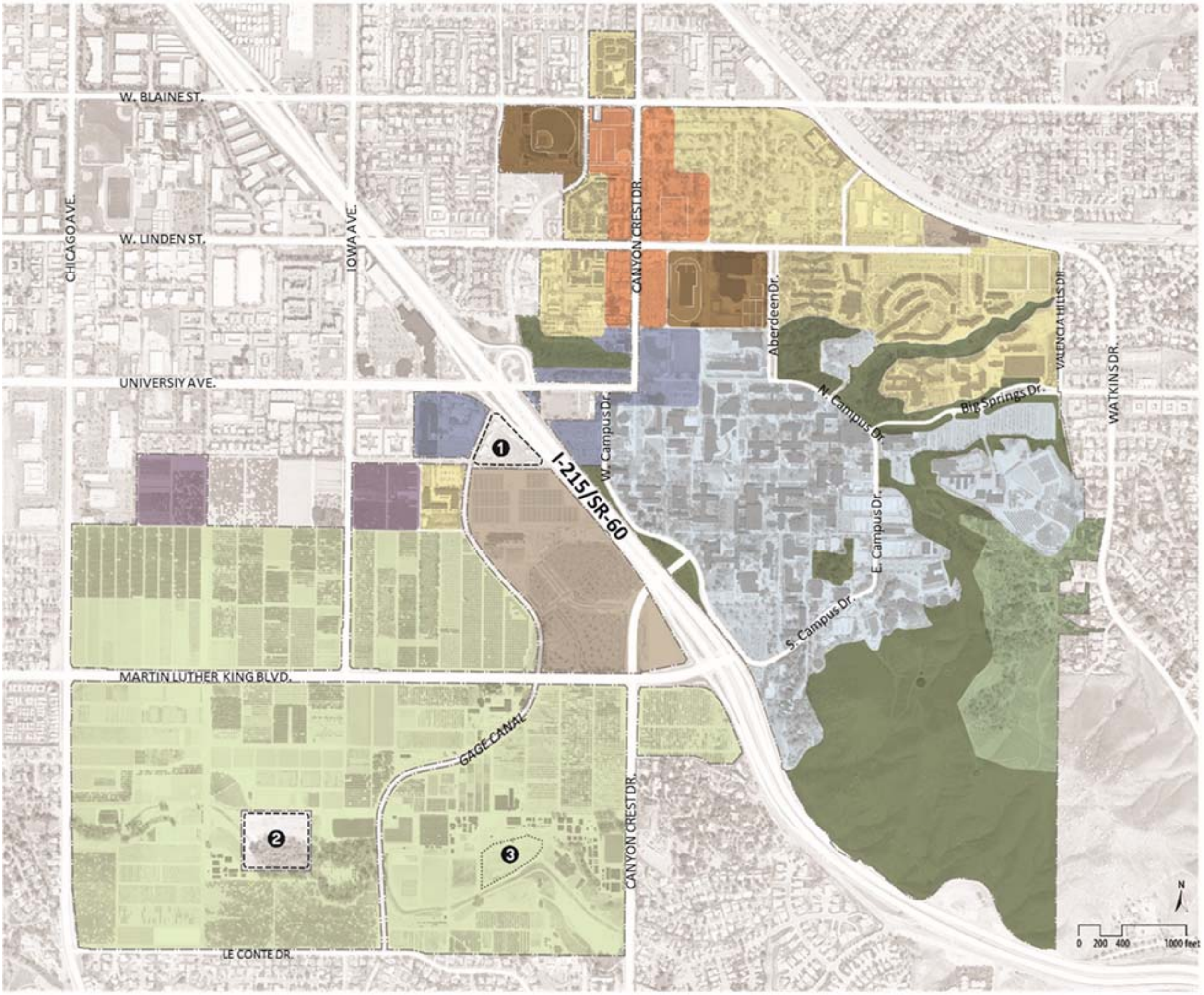
GHG Inventory (2018) Data Review

As part of the data evaluation, Rincon used the UCR Draft 2021 LRDP as well as communicated with UCR staff to understand characteristics that would influence the UCR GHG emissions inventory. The following discussion provides an overview of the data that was provided by UCR and reviewed by Rincon, including an explanation of the sources from which the data was acquired, what the data includes, and how the data will be used in development of the inventory. As part of the data evaluation, Rincon also reviewed the data for completeness and accuracy, and the data is presented within this memorandum to provide transparency and a replicable pathway for future UCR emissions reporting completed as part of the implementation monitoring of the GHGRP.

GHG Inventory (2018) Geographic and Operational Boundaries

To be consistent with standardized GHG reporting protocols such as those prepared by ICLEI, TCR, and ACUPCC, a clear delineation of the geographic and operational boundaries used to account for emissions in an inventory must be established. Therefore, the boundaries for the baseline inventory and forecasting has been limited to the geographic and operational boundary of the 2021 LRDP. Similar to the 2005 LRDP, the 2021 LRDP encompasses the approximate 1,108 contiguous acres constituting the UCR main campus, which is bisected by the I-215/SR 60 into two distinct areas commonly referred to as East Campus and West Campus. Figure 1 depicts the UCR main campus (i.e., the designated 2021 LRDP area) obtained from the UCR 2021 Draft LRDP. The baseline GHG inventory and future GHG emissions forecasts for the 2021 LRDP will include emissions from all facilities and sources within these boundaries for which UCR has operational control over.

Figure 1 2021 UCR LRDP Land Use Map



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

- ▬ ACADEMICS & RESEARCH
- ▬ AGRICULTURAL/CAMPUS RESEARCH
- ▬ LAND-BASED RESEARCH
- ▬ CAMPUS SUPPORT
- ▬ OPEN SPACE RESERVE
- ▬ UCR BOTANIC GARDENS
- ▬ RECREATION & ATHLETICS
- ▬ STUDENT NEIGHBORHOOD
- ▬ CANYON CREST GATEWAY
- ▬ UNIVERSITY AVENUE GATEWAY
- ⬚ NON-UCR LAND OF INTEREST

GHG Inventory (2018) Data and Methodology

Inventory Year

The State of California uses 1990 as a reference year to remain consistent with Assembly Bill (AB) 32 and Senate Bill (SB) 32, which codified the State GHG emissions targets by directing CARB to reduce Statewide emissions to 1990 levels by 2020. However, organizations throughout California typically elect to use years later than 1990 as baseline years because of the increased reliability of recordkeeping from those years and the large amount of growth that has occurred since 1990. Additionally, the UCR 2005 LRDP projected out to the 2015-2016 academic year. The 2005 LRDP Amendment extended the horizon year out to 2020-2021 academic year. The year 2018 was selected as the baseline year for the UCR Inventory, as it is the most recent and complete data set available and the most accurate. As such, data from 2018 has the level of detail necessary to validate the data and disaggregate the data for just the 2021 LRDP boundary. It is important to note that in 2016 Statewide GHG emissions fell below 1990 levels, generally achieving the target of AB 32.[13] The data from this inventory will be used to develop a forecast for year 2035, the 2021 LRDP horizon year. A forecast for 2030 and 2045, which is consistent with the State target years established in Senate Bill (SB) 32 and Executive Order (EO) B-55-18 will also be developed using this inventory data in a subsequent document.

Inventory Building Space and Demographic Data

The 2018 baseline inventory includes a total campus population of 28,661 which includes 23,922 students and 4,739 faculty and staff members.[14] Campus space in 2018 totaled approximately 4,803,500 assignable square feet (asf) or approximately 7,205,250 gross square footage (gsf).[15]

Scope 1 Emissions

Scope 1 emissions are defined as direct GHG emissions generated from sources within UCR operations that it owns and/or controls. This includes stationary combustion of fuels in any stationary equipment to produce electricity, steam, heat or power using equipment in a fixed location; mobile combustion of fuels in fleet transportation sources and emissions from off-road equipment such as those in construction, agriculture, and forestry; process emissions other than fuel combustion from physical or chemical processing; and fugitive emissions associated with the process, transmission, and storage of other substances (e.g., refrigerants) that do not pass through a stack, vent or exhaust point. Under Scope 1, UCR reports all campus emissions from natural gas and diesel stationary combustion at its facilities and buildings, mobile combustion emissions from the UCR mobile fleet, and vanpool, as well as usage of refrigerants in HVAC and ventilation systems. UCR does not have operational control of any physical or chemical processes other than fuel combustion; therefore, emissions associated with physical or chemical processes will not be included in the inventory. Scope 1 emissions reported by UCR annually

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[13] CARB. 2018. Climate pollutants fall below 1990 levels for first time. Available: <https://ww2.arb.ca.gov/news/climate-pollutants-fall-below-1990-levels-first-time>. Accessed April 24, 2020

[14] Campus population as Full-time equivalents (FTE) was approximately 23,313.3 in 2018 based on UCOP approximation provided by UCR Campus Planning Department.

[15] Per UCR direction, the standard space planning assumption of 1.5 is used to convert assignable square feet (asf) to gross square feet (gsf).

were calculated using natural gas utility data from service providers (stationary combustion), inventoried fuel usage (mobile combustion), and refrigerant usage (fugitive emissions) tracked by various UCR Departments. Rincon completed a review of the calculations and found them to be consistent with the methodologies and principals outlined in the General Reporting Protocol (GRP).[16] Emissions are estimated by collecting activity data such as therms of MMBtu of natural gas used in facilities and buildings; gallons of diesel used for portable generators, heaters, etc.; gallons of fuel used by the UCR vehicle fleet, and pounds (lbs) of refrigerants used in facilities and buildings. UCR disaggregated source data in order to provide activity data for solely the main campus included in the 2021 LRDP area. Table 1provides a summary of UCR Scope 1 activity data for the 2021 LRDP GHG inventory.

Table 1 Scope 1 Inventory Data Review

Sector/Emission Source	*Data Type Received*	*Activity*	*Units*
Stationary Combustion			
Natural Gas (Shell)	Annual utility Data	346,611	MMBtu
Diesel	Fuel use summary spreadsheet	8,003	Gallons
Mobile Combustion			
Vehicle Fleet	Fleet vehicle, fuel and mileage data	146,820	Gallons
Process & Fugitive Emissions			
Refrigerants used for Heating, Ventilation, and Air Conditioning (HVAC)	Refrigerants usage summary	433.25	lbs

All presented data was provided by UCR and is based on 2018 calendar year.

Stationary Fuel Combustion

Natural Gas Use in UCR Facilities and Buildings

As discussed during the GHG inventory and forecast data scoping meeting with UCR and Rincon on January 31, 2020, the Central Steam Plant makes up approximately 95 percent of campus natural gas usage. Natural gas is transported to the UCR main campus by Southern California Gas Company (SCG) and is procured through Shell. The UCR Energy Manager compiled monthly invoices for all accounts associated with the main campus and provided the natural gas data in the form of a single workbook that presented monthly natural gas consumption by utility provider. For purposes of the 2018 GHG inventory, utility data will be assessed by usage on a calendar year basis. GHG emissions associated with UCR natural gas consumption will be estimated using the recommended method outlined in TCR GRP v3.0 for *Calculating Emissions from Stationary Combustion Using Duel Use Data*. TCR GRPv3.0 methodology is based on default emission factors obtained from the most recently updated TCR default emission factor list (TCR 2019).[17]

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[16] TCR. 2019. General Reporting Protocol Version 3.0.

[17] TCR. 2019. 2019 Default Emission Factors. Available: <https://www.theclimateregistry.org/wp-content/uploads/2019/05/The-Climate-Registry-2019-Default-Emission-Factor-Document.pdf>. Accessed May 2020.

Diesel Use in UCR Facilities and Buildings

In addition to natural gas, UCR used diesel fuel to power portable generators and heaters during the 2018 data year. Annual diesel and propane usage data for the UCR main campus was provided to Rincon by the UCR Office of Sustainability in a fuel use summary spreadsheet based on a summary of invoices provided to UCR during the calendar data year. In past years, propane was used as well, however, no propane was used in 2018 and therefore no propane emissions will be included in the inventory. GHG emissions associated with UCR operational diesel consumption will be estimated using the recommended method outlined in TCR GRPv3.0 for *Calculating Emissions from Stationary Combustion Using Duel Use Data* based on default emission factors obtained the most recently updated TCR default emission factor list.[17]

Mobile Fuel Combustion

Fuel Use by UCR Fleet and Department Vehicles

UCR uses bi-fuel, compressed natural gas (CNG), gasoline, diesel, electric, flex fuel, and hybrid-powered fleet vehicles/equipment and fuel is purchased from a variety of suppliers. UCR provided Rincon with fuel use data and a detailed vehicle list for UCR-owned fleet for the 2018 calendar year. The provided fleet list and fleet fuel usage and associated GHG emission generation is tracked for the entire UCR campus by the Office of Sustainability. The UCR Sustainability Officer confirmed that while it is not possible to disaggregate the fleet fuel usage specific to just the LRDP boundary versus other satellite UCR facilities, the vast majority of all fleet vehicle fuel usage is associated with the main campus.[18] Therefore, the presented fleet vehicle fuel usage is conservatively assumed representative of the main campus fleet fuel usage. Since specific fuel volumes and fleet mix were provided, emissions will be calculated using TCR GRPv3.0 Method A: *Actual Fuel Use*, with vehicle specific emission factors obtained from the CARB EMission FACtors (EMFAC2017) model and equipment emission factors from USEPA *Emission Factors for Greenhouse Gas Inventories*.[19,20]

Process and Fugitive Emissions

Refrigerants Use in UCR Facilities and Buildings

UCR uses refrigerants in the Heating, Ventilation, and Air Conditioning (HVAC) equipment. Refrigerant data is provided in a “Usage Summary Report” document that totals usage by refrigerant type by the 2018 calendar year. Refrigerant data was disaggregated by the Sustainability Officer to provide just the refrigerant usage associated with the main campus. The Usage Summary Report includes the refrigerants that have been added to the main campus system, then subtracts any refrigerant that is removed with recovery equipment and stored during repair and maintenance. Therefore, the total refrigerant value is reported as the total amount added during the year, minus all refrigerant that is recovered and returned to the equipment after repair and maintenance. This is consistent with the TCR GRPv3.0 Method A: *Simplified Mass Balance*. Emissions will be calculated based on annual usage of refrigerant and emission factors/global warming potential (GWP) from USEPA *Emission Factors for Greenhouse Gas Inventories*.[19]

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[18] Confirmation was made verbally during the April 24, 2020 call with the UCR team during the review of provided data.

[19] USEPA. 2018. Emission Factors for Greenhouse Gas Inventories. Available: <https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf>. Accessed May 2020.

[20] CARB. 2018. EMFAC2017 Volume III – Technical Documentation. Available: <https://www.arb.ca.gov/emfac/>. Accessed May 2020.

Scope 2 Emissions

Scope 2 GHG emissions are those generated at power plants when generating electricity. Scope 2 emissions reported by UCR annually were calculated using utility data from electricity service providers. Electricity usage at UCR is complex as it is acquired from a variety of sources. Specifically, UCR electricity is provided by the Imperial Irrigation District (IID), Riverside Public Utility (RPU), Southern California Edison (SCE), and SunPower. However, UCR disaggregated utility data shows that main campus electricity is only provided by RPU. Additionally, UCR reports the amount of electricity generated from installed solar photovoltaic systems on main campus. Main campus solar power generation are from SunPower Lot 30, 32, and Solar Farm. Rincon completed a review of the calculations and found them to be consistent with methodologies and principals outlined in the GRP.[21] Table 2 provides a summary of the Scope 2 emission sources, the data received, activity usage, and reported units including electricity usage and solar power generation.

Table 2 Scope 2 Inventory Data Review

Sector/Emission Source	*Data Type Received*	*Activity*	*Units*
Electricity			
Electricity Usage - Riverside Public Utility (RPU)	Summary spreadsheet of usage summarized by utility provider (IID, RPU, and SCE) *	107,088,200	kWh
Solar Electricity Production – SunPower	Summary spreadsheet of production summarized by utility provider (SunEdison)	11,872,475	kWh

All presented data was provided by UCR and is based on 2018 calendar year.

Source: Data compiled by Rincon in May 2020.

Note: *Only the RPU data was primarily used as they are the primary electrical service provider for main campus.

Electricity Consumption

UCR Building and Facility Electricity Use

Based on UCR disaggregated utility data, RPU is the only electricity provider for main campus. To calculate GHG emissions associated with electricity generation by RPU, the sum-total of kilowatt hours (kWh) derived from a specific source is totaled and multiplied by the corresponding GHG emissions factors. GHG emissions associated with UCR electricity consumption will be estimated using TCR GRPv3.0 Method A *Known Electricity Use*, based on monthly electric bills or electric meter records providing the number of kilowatt-hours of electricity consumed. RPU is an importer of electricity. Therefore, the appropriate eGrid factors will be applied to the baseline-year inventory and adjusted based on the 2018 Power Content label.

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[21] TCR. 2019. General Reporting Protocol Version 3.0.

Electricity Generation

SunPower Solar PV installations are connected to UCR distribution circuits at the substation and directly feed into the campus. As such, no GHG emissions are associated with the on-site UCR solar generation of electricity. As such, this information related to electricity production by Sunpower will be reported solely for informational purposes and used during forecasting and future GHGRP implementation tracking.

Scope 3 Emissions

Scope 3 emissions are other emissions that are generated from the activities of the institution but occur from sources not fully controlled by the institution. Scope 3 emissions reported by UCR annually have included emissions generated from faculty air travel and mobile emissions generated from staff and student employees commute. UCR tracks faculty air travel through invoices and the miles of air travel incurred from origin to destination on a calendar basis. Staff and student employee commute emissions is based on the estimated VMT and associated fuel consumption by employee commuters from a commuter survey administered by UCR staff. Emissions were calculated based on the estimated gallons of gasoline consumed and emission factors attained from the CCAR Protocol.

In addition to faculty air travel and staff and student employee commuting, emissions associated with the RTA buses that travel to and from the main UCR Campus and waste generation will also be included in the baseline inventory. Because construction associated with the 2021 LRDP is a future program, it is not representative of past construction projects and therefore would not be appropriate to apply such emissions to previous years. Emissions associated with all on-site VMT will be calculated based on the modeled UCR VMT provided by Fehr & Peers (F&P). UCR provided faculty air travel miles by calendar year, commuter survey data by fiscal year, RTA ridership data by fiscal year, and waste generation by fiscal year. Due to the data sources and means of compiling the Scope 3 source data, disaggregation of UCR main campus data from total UCR campus data was not possible for faculty air travel, employee commute, and waste. However, UCR staff indicated that a majority of the listed Scope 3 activities would be associated with the main campus. Therefore, for the purposes of this inventory it is conservatively assumed that the activity data and associated emissions sources for the Scope 3 data is representative of main campus. Scope 3 data collection and emissions calculations will follow the methodologies outlined in the TCR GRPV3.0, ICLEI Local Government Operations Protocol, and the ACUPCC *Second Nature Carbon Commitment's Implementation Guide*. Table 3 provides a summary of the Scope 3 emission sources to be included in the 2018 inventory.

Table 3 Scope 3 Inventory Data Review

Sector/Emission Source	*Data Type Received*	*Activity*	*Units*
BusinessTravel[1]			
Faculty/Staff Air Travel	Spreadsheet summarizing faculty airline travel	8,273,344	Passenger Miles
On-Site Transportation			
Non-transit Vehicle Transportation[1]	F&P Vehicle Miles Traveled spreadsheet[4]	259,244	Daily VMT
Employee Commute Subset[2,3]	Results from employee commuter survey	(38,852,897)	VMT
Transit Vehicle Transportation (RTA)[1]	RTA UPASS –ridership data spreadsheet	554,396	# of rides
Waste Generation[2]			
Waste sent to landfill, recycling center, and composting facility[5]	Waste summary spreadsheet	4,246.5; 66% 1,008.7; 96%	MSW tons generated; MSW diversion rate C&D tons generated; C&D diversion rate

1. Data is presented on a calendar year basis based on format of data provided.
2. Data is presented on a fiscal year basis based on format of data provided.
3. Employee/staff commuter data is a subset of overall UCR on-site transportation but is presented and discussed separately for the purpose of future GHG reduction measure development focused on UCR employee commuters.
4. Daily VMT provided by F&P is adjusted according to the Origin-Destination (O-D) Method as described in the following section.
5. Fiscal year 2017/2018 and 2018/2019 was averaged to provide an estimate of waste in 2018 calendar year. Provided waste data included Municipal Solid Waste (MSW) and Construction & Demolition (C&D).

All presented data was provided by UCR or F&P and is reflective of the 2018 calendar year. Data provided on a fiscal year basis may be further processed to be representative of a calendar year.

Source: Data compiled by Rincon in May 2020.

Business Travel

UCR Faculty/Staff Air Travel

UCR requires various faculty air travel trips to be made throughout the calendar year, which are summarized in a spreadsheet that provides invoice information, details on flight origin and destination, date the flights were taken, airline, and miles traveled. The total mileage traveled during the data year will be used to calculate the total emissions, based on the Federal Aviation Administration (FAA) aviation energy intensity factors per passenger mile and emission factors obtained from average USEPA *Emission Factors for Greenhouse Gas Inventories*. [19,22]

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[22] Federal Aviation Administration (FAA) Office of Environment and Energy. 2005. Aviation & Emissions: A Primer. Available: <www.faa.gov/regulations_policies/policy_guidance/envir_policy/ media/AEPRIMER.pdf>. Accessed May 2020.

On-site Transportation

Non-Transit Vehicle Transportation

All Non-Transit UCR Vehicle Travel

Beyond the UCR fleet, transportation emissions on-site are generated by students, on-campus residents, faculty/staff employees, and campus visitors through on-road transportation. On-road transportation-related to UCR community vehicle miles traveled (VMT) data for calendar year 2018 and 2035 will be calculated by F&P based on outputs of the current version of the Riverside County Traffic Analysis (RivTAM) travel demand model, a regional version consistent with the SCAG model.[23] Traffic will be interpolated based on the modeled years. The transportation analysis for the LRDP will focus on East and West Campus using campus population data provided by UCR for the 2018/2019 academic year. The VMT data used for the inventory will be based on the RivTAM activity-based model and the Origin-Destination (O-D) method, the preferred method of ICLEI and TCR. The O-D methodology is consistent with the Regional Targets Advisory Committee (RTAC) pursuant to Senate Bill 375. The O-D method includes all trips occurring within UCR LRDP boundaries and half of any trips that either originate or terminate within the UCR LRDP boundaries and excludes VMT from through trips (i.e. not originating or terminating within UCR LRDP boundaries). Like the Trip Based SCAG model, RivTAM utilizes socio-economic data (i.e. population, employment, households, workers, school enrollment, etc.), transportation analysis zones (TAZ), the highway and transit network to calculate VMT for UCR. VMT data is based on the assumption that UCR student population and faculty/staff population was 23,922 and 4,739, respectively, in the 2018/2019 academic year and will be approximately 35,000 and 7,545, respectively, in the LRDP horizon year of 2035/2036 academic year.

Emissions due to passenger vehicle operation will be calculated using the recommended ICELI CP *Method TR.1.A*. Equations *TR.1.B.2* and *TR.1.B.3* will be used to convert provided VMT data into emissions data and regional emission factors from the most recent CARB EMFAC2017 model will be used. EMFAC2017 VMT-based emission rates are based on the vehicle class, model years, speed, and fuel type.[20] A fleet-wide emission factor will be calculated using the mix of vehicle class specific to UCR determined via the Trip Base RivTAM model. Emissions from freight and service trucks (i.e. medium- and heavy-duty trucks) will be calculated using ICELI CP *Method TR.2.C*, which is similar to assignment of passenger emissions except that emission factors for heavy-duty vehicles may be obtained from the EPA State Inventory Tool as recommended by the ICELI protocol.

UCR Employee Commute Subset

Emissions from UCR employee commuting (e.g., faculty, staff, and student employees) are a subset of the overall UCR on-road transportation and transit emissions associated with UCR on-site traffic as described in detail above. As such, trips associated with employee commuting have already been captured through on-road transportation VMT and transit ridership reported in Table 3. However, for future measures development emissions generated specifically from UCR employee commuting will be quantified based on commuter survey results and therefore, are presented separately in Table 3.

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[23] Fehr & Peers. 2020. Draft UC Riverside 2021 Long Range Development Plan Transportation Impact Study. Prepared August 2020.

To gather data related to employee and staff commute, Rincon was provided with the results of a survey completed in support of the South Coast Air Quality Management District (SCAQMD) Employee Commute Reduction Program (ECRP). The survey is sent out to staff annually during the month of April and the results are compiled by the Director of Transportation and Parking Services (TAPS). Likewise, the commute data for students was also determined through the results of a SCAQMD student survey and represents staff and student employee commuting for the fiscal year of 2018/2019. The survey results are summarized in an excel spreadsheet provided to Rincon by UCR, which includes the number of employees, staff, and student employees, the total vehicle miles traveled, and the estimated gallons of fuel consumed for the fiscal year of 2018/2019. For the purposes of this inventory it is assumed that the fiscal year survey data is representative of the 2018 calendar year. Emissions will be quantified based on the estimated VMT traveled as reported in the commuter survey data and an estimated fleet vehicle mix for passenger vehicles based on the EMFAC2017 model for the region in year 2018.[20] Emissions factors derived from the EMFAC2017 model will be used to estimate GHG emissions from personal vehicle commutes. [24]

Transit Vehicle Transportation

UCR Staff/Student Transit Travel

The Riverside Transit Agency (RTA) is the public transit agency that serves the UCR main campus via six bus routes. UCR provided ridership data for the RTA bus routes that are subsidized through the UPASS bus subsidy program on an annual basis since Fall 2006. Ridership data for the 2018 calendar year is compiled in Table 3. Emissions from community use of the transit system including public buses (i.e. RTA), will be estimated using Method TR.4 and using fuel use or mileage data available from the National Transit Database. ICELI recommends that for Methods TR.4, the attribution method (TR.4D) should be used such that emissions associated with these transit services are based solely on what occurs within the geographic boundary of the UCR main campus (i.e., miles traveled within the UCR 2021 LRDP boundary). It should be noted that the attribution methodology is limited in that there is not an absolute way to link the use of the transit system within UCR campus limits to the people of (i.e. the transit emissions will be calculated the same regardless of whether all of the UCR community uses the transit system or no one does). Therefore, data provided by UCR regarding ridership through the UPASS program will be used to further refine the attribution of RTA emissions to the UCR community.

Waste Generation

UCR Faculty/Staff Waste Generation

Waste generation at UCR is based on UCR main campus activities (e.g., dining hall waste, construction, and demolition), staff, on-campus residents, and campus visitors. Because the campus does not operate a landfill, GHG emissions attributed to solid waste from UCR are associated with the emissions generated during waste transport from UCR main campus to a landfill and the methane emissions generated as waste decomposes at a landfill. UCR provided 2018/2019 fiscal year data including tonnage generated and diverted, type of waste generated from the Zero Waste Working Group as well as the location of waste

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[24] California Air Resources Board (CARB). 2018. EMFAC2017 Volume III – Technical Documentation. Available: <https://www.arb.ca.gov/emfac/>. (Accessed May 2020.)

pickup on campus and the hauler information from UCR staff. Because the data was provided by fiscal year, 2018 calendar year data will be estimated using a weighted average of data from the 2017/2018 fiscal year and 2018/2019 fiscal year. Additional waste disposal and landfill information will be obtained based on the disposal facilities, hauler information and information available through CalRecyle. Details for calculations regarding the total emissions and land fill gas capture rates for each waste destination facility were obtained from the EPA Landfill Methane Outreach Program and GHGRP FLIGHT database. The recommended ICLEI Methods SW.4, SW.5, SW.6, and SW.7 to calculate emissions associated with methane emissions from waste sent to landfills, landfilling process emissions, collection and transport emissions and waste sent to combustion facilities, respectively, will be used. Because UCR does not have operation control over a landfill, waste-in-place emissions are excluded from the inventory.

GHG Forecasts (2030, 2035, 2045) Data and Methodology

Forecast Years

The GHG baseline inventory provides accurate reference points for emissions levels in past years for the UCR main campus as defined above. Because annual emissions of the UCR main campus as defined in the LRDP will change over time due to increased student demand and enrollment, increased employment, and operational changes to accommodate the enrollment increase, an emissions forecast which accounts for these changes is needed to estimate the level of GHG reductions required to achieve future State targets. Forecasting future GHG emissions also allows for a comparison between the forecasted GHG emissions and the reduction goal. The gap between these two points is what will ultimately allow for accurate climate action planning via development of GHG emissions reduction measures that assist UCR in achieving its GHG reduction goals.

The future GHG emissions forecast will model the maximum projected build out for the Land Use Designations as defined by the 2021 LRDP which includes the area associated with the interim projects between 2018 and 2020, while also accounting for planned GHG reductions from State-level policies and UC sustainability policies. To be consistent with the CEQA and CEQA Guidelines requirements for a GHG reduction strategy and to align with State targets required by SB 32 and EO B-55-18 as well as account for the LRDP horizon year of 2035, the GHG forecast will be provided for calendar years 2030, 2035, and 2045. The 2030 forecast, specifically, will account for the construction and operational emissions associated with the interim projects between 2018 and 2020.

UCR 2021 LRDP Building Space and Population Projections

GHG forecasted emissions will be based on campus energy-use trends, the anticipated impact of LRDP developments, the anticipated impact of existing energy efficiency and GHG reduction programs, and campus growth assumptions consistent with the LRDP. Table 4 and
Table 5 provide a summary of the LRDP building and population growth assumptions used in the GHG emissions forecasting obtained from UCR. Per the 2021 LRDP, growth modeling is based on the LRDP building growth current student population, historic student growth trends for UC Riverside, delivery time required to build new facilities, and infrastructure needs. Projected size of program space type is presented in assignable square feet (asf),

or the area within the interior walls of a room that can be assigned to a program.[25] However, emissions generated from energy consumption and building construction are dependent on total building space and materials necessary to construct a building, not just the area within interior walls of a building. Therefore, for the purposes of forecasting operation and construction, assignable square feet (asf) will be converted to gross square footage (gsf) using the standard space planning assumption ratio of 1.5 per UCR direction.

The forecast will include a Business-As-Usual (BAU) scenario, where forecasted emissions are estimated assuming no change in current consumption trends absent of any new regulations that would reduce emissions. An adjusted scenario that takes into account foreseeable regulatory changes affecting GHG emissions at the federal, State, and local level that include SB 100 (Renewables Portfolio Standard), Title 24 Building Energy Efficiency Standards, SB X7-7, SB 1425, Low Carbon Fuel Standard (LCFS), Pavley Clean Car Standards, Advanced Clean Cars Program, and other applicable regulations will also be developed. A further Adjusted scenario including the prescribed *UC Policy on Sustainable Practices* in addition to applicable State and local regulations will also be developed to show the potential emission reductions associated with implementation of the UC Policies.

Table 4 UCR 2021 LRDP Building Space Program Projections

Land Use	***Baseline (Academic year 2018/2019)***	***2021 LRDP (Academic year 2035/2036)***	***Net 2021 LRDP Increase from Baseline***
Academics & Research			
Classroom and Services	113,282	290,252	176,970
Teaching Lab and Service	102,729	165,800	63,071
Open Lab and Service	116,743	129,500	12,757
Research Lab and Service	887,529	1,115,300	178,090
Academic Support			
Offices and Services	996,834	1,583,415	586,581
Library & Collaborative Learning Space	337,551	514,789	177,238
Assembly and Exhibit	54,988	117,000	62,012
Other Department Space	69,602	140,000	70,398
Student Life			
Residential	1,525,647	3,643,620	2,117,973
Residential Dining	55,802	94,527	38,725
Student Health	14,117	24,500	10,383
Student Union	97,122	187,422	90,300
Other Campus Space			
Corporation Yard	248,279	248,279	0

Values are expressed in assignable square feet (asf).

Source: Draft 2021 LRDP Program Model, September 18, 2019

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[25] Assignable square feet (asf) is defined as the area measured within the interior walls of a room that can be assigned to a program and does not include circulation, mechanical, restrooms, or building service spaces.

Table 5 UCR 2021 LRDP Campus Population Projections

Land Use	*Baseline (2018/2019)*	*2021 LRDP (2035/2036)*	*Net 2021 LRDP Increase from Baseline*
Students			
Undergraduates	20,581	28,000	7,419
Graduates	3,341	7,000	3,659
Faculty and Staff			
Ladder Rank Faculty	841	1,285	444
Other Instructional Faculty	332	486	154
Non-Teaching Academic Appointment	529	774	245
Non-Academic Staff	3,037	5,000	1,963
Student Workers			
Non-Academic Student Staff	2,068	3,026	958
Graduate Student Appointments	1,928	2,821	893

Source: Draft 2021 LRDP Program Model

UCR 2021 LRDP Emissions

Operation-related GHG emissions from building electricity and fuel use; utility electricity generation/transmission; vehicle fuel use by UCR fleet vehicles/employee and student commute; refrigerant process/storage; waste generation, as well as construction-related GHG emission from building demolition/construction materials and construction vehicle/equipment fuel use will be forecasted using various models and plan-specific data and reports provided by UCR. Modeling will be based on LRDP-specific information when available (e.g., land use types, traffic modeling, building size). The California Emissions Estimator Model (CalEEMod) Version 2016.3.2 developed by the State of California to provide a uniform platform for quantification of GHG emissions associated with the construction and operation from land use projects will be used to forecast construction/demolition emissions anticipated from the LRDP and future operational emissions.

Scope 1 Emissions

Stationary Fuel Combustion

Stationary source fuel use emissions other than natural gas usage in buildings is associated with portable generators and heaters. Forecasted stationary source emissions will be based on LRDP anticipated building growth in gross square feet (gsf). No new UC buildings or major renovations approved after June 2019, except in special circumstances, will use on-site fossil fuel combustion, such as natural gas, for space and water heating.

Mobile Fuel Combustion

Mobile emissions generated from the UCR fleet will be forecasted based on the 2021 LRDP-anticipated growth of student employees and staff population and emission factors from EMFAC2017 model.

Fuel Process and Storage

Refrigerant process and storage at UCR is associated with the usage in chillers, heaters, ventilation and HVAC systems. Therefore, forecasted refrigerants usage will be forecasted based on anticipated LRDP building growth in gross square feet (gsf).

Scope 2 Emissions

Electricity Consumption

Emissions from energy use include electricity and natural gas use. UCR also generates electricity via solar photovoltaic systems. Forecasted building energy use will be estimated using CalEEMod and UCR specific energy data and energy use intensity factors (EUIs). Energy data and EUI calculations for existing buildings on the main campus provided by UCR Energy and Sustainability staff will be used to project future EUIs and solar photovoltaic capacity of main campus buildings. EUI vary by building type; therefore, existing buildings and associated EUIs will be categorized by building types within each LRDP land use designation. Square-footage projections outlined in the 2021 LRDP provided by the LRDP team will be combined with existing square footage and EUI trends by building type to forecast total energy usage of campus buildings, including reduction from planned building demolitions. EUIs for future buildings will be adjusted to account for Title 24 efficiency standards and UCOP green building policy impacts (20 percent beyond Title 24). Additionally, to account for the continuing effects of the RPS, the energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) included in CalEEMod modeling will be reduced based on the percentage of renewables reported by RPU.

Scope 3 Emissions

Business Travel

Emissions generated from business travel associated with faculty and staff air travel will be forecasted based on 2021 LRDP anticipated growth of faculty population and adjusted to account for the anticipated improvement in aviation fuel efficiency improvements. Based on a study by the Federal Aviation Administration (FAA), aircraft fuel efficiency has improved by approximately one percent per year and is anticipated to continue.

On-site Transportation

Mobile source emissions from on-site transportation, excluding the UCR fleet that is included separately under Scope 1 emissions, will be based on forecasted VMT based on the travel demand model RivTAM and on-site traffic counts provided by F&P. Mobile emissions generated from employee commute and public transit (RTA) will be forecasted based on the 2021 LRDP-anticipated growth of student employees and staff population and emission factors from the EMFAC 2017 model based on the forecasted calendar year.

Construction

Construction/demolition emissions related to construction equipment fuel and electricity use will be based on building square footage to be demolished provided by UCR, default model input based on the LRDP building type and projected gross square footage, and anticipated date range of demolition or construction provided by UCR. To develop a reasonable average emission factor for demolition and construction by building type, CalEEMod will be used to model demolition and new construction of buildings of different scales (e.g., number of levels, square footage by building) and across different years. Although UCR has indicated that Tier IV construction equipment is used on campus during construction projects, only State legislation will be considered in the adjusted forecast scenario. As such, UCR specific construction equipment policies will not be incorporated into the construction emissions modeling, thereby providing a conservative estimate related to construction emissions. However, such policies will be considered during the GHGRS measure development and quantification where emission reductions from such polices will be quantified to demonstrate the impact of UCR actions and policies on GHG emission reduction strategies.

Waste Generation

Solid waste emissions generated on-campus will be forecasted based on LRDP anticipated growth of students and staff population.

Interim Projects Emissions

Scope 1, 2, and 3 Emissions

There are several interim projects that have occurred/are occurring on the UCR main campus within the boundary of the 2021 LRDP post the 2018 calendar year and, therefore, would not be accounted for within the 2018 baseline GHG inventory. As these projects are under UCR operational control and are within the 2021 LRDP area though not formally included in the 2021 LRDP, the operational and construction emissions associated with these interim projects will be added to the GHG emissions forecasting to provide an all-encompassing and, thus, conservative forecast for the UCR main campus. The 2030 forecast, specifically, will account for the construction and operational emissions associated with the interim projects between 2018 and 2020.

Construction and operational GHG emissions associated with the interim projects have already been quantified in separate standalone UCR project-level CEQA documents using CalEEMod, and the respective results have been provided to Rincon by UCR for use in the GHG emissions 2030 forecast. The interim projects emissions for the 2030 forecast will be calculated and provided in a similar scope emissions category manner as explained above for the UCR 2021 LRDP emissions inventory.

Subsequent to the completion of the Greenhouse Gas Emissions Inventory and Forecast Data Evaluation Memorandum sent to UCR on May 15, 2020, two projects, the Class Lab & Teaching Facility and School of Business were removed from the interim projects category, as it has been confirmed that these two projects are already incorporated into the 2021 LRDP program model.[26]

Therefore, Rincon ultimately received a list of eleven interim projects that were constructed post-2018 and are not included in the 2021 LRDP, but that will be included in the 2030 forecast.[27] The interim projects include: North District Development (NDD) Phase 1, North District Development (NDD) Phases 2-5, Dundee Glasgow, The Barn, Plant Growth Environments Facility (PGEF), Student Success Center (SSC), Parking Structure 1 (PS1), Pierce Hall Renovation, Batchelor Hall Renovation, Student Health & Counseling Center, and School of Medicine Building 2.

Conclusion

The data provided by UCR and summarized in this Data Evaluation Memorandum serve as the basis for the baseline GHG Inventory (2018) and future emissions forecasts (2030, 2035, and 2045) that will support the 2021 UCR LRDP Greenhouse Gas Reduction Strategy (GHGRS). Table 6 summarizes the status of receipt of data for preparation of the GHG inventory and forecasts.

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[26] Email communication with Stephanie Tang, UCR Campus Planner, on June 26, 2020.

[27] The list of interim projects including associated CEQA documentation of construction and demolition emissions was provided to Rincon on April 21, 2020 and clarified on June 24, 2020.

Table 6 UCR 2021 LRDP GHG Inventory and Forecast Data Receipt Summary Table

	Status for 2018 Inventory	*Status for 2030 Forecast*	*Status for 2035 Forecast*	*Status for 2045 Forecast*
Scope 1 Emissions				
Stationary Fuel (Natural Gas) Combustion Operational Data[1]	Received from UCR on April 23, 2020	Will be calculated based on forecasted campus development in 2021 LRDP		
Other (Diesel) Stationary Fuel Combustion Data[2]	Received from UCR on April 21, 2020	Will be calculated based on forecasted campus development in 2021 LRDP		
Mobile Fuel Combustion Operational Data	Received from UCR on February 26, 2020	Will be calculated based on forecasted campus development in 2021 LRDP		
Process and Fugitive Emissions Operational Data[3]	Received from UCR on April 8, 2020	Will be calculated based on forecasted campus development in 2021 LRDP		
Scope 2 Emissions				
Electricity Consumption Operational Data[1]	Received from UCR on April 23, 2020	Will be calculated based on forecasted campus development in 2021 LRDP		
Electricity Generation Operational Data[1]	Received from UCR on April 23, 2020	Will be calculated based on forecasted campus development in 2021 LRDP		
Scope 3 Emissions				
Business Air Travel Data	Received from UCR on February 27, 2020	Will be calculated based on forecasted campus demographic growth in 2021 LRDP		
On-site Transportation				
All Non-transit Vehicle Travel	Received from F&P on May 13, 2020	Received from F&P by May 29, 2020	Received from F&P by May 29, 2020	Received from F&P by May 29, 2020
Transit Vehicle Travel	Received from UCR on April 21, 2020	Will be calculated based on forecasted campus demographic growth in 2021 LRDP		
Staff/Student Commute Subset	Received from UCR on April 21, 2020	Will be calculated based on forecasted campus demographic growth in 2021 LRDP		
Waste Generation	Received from UCR on February 7, 2020	Will be calculated based on forecasted campus demographic growth in 2021 LRDP		
Forecast Data				
Demographics	Received from UCR on February 3, 2020			
Campus Development	Received from UCR on February 3, 2020			
Development Projects[3] **(construction/demolition)**	Received from UCR on March 26, 2020			
Building Energy[4]	Received from UCR on April 21, 2020			
Interim Projects	N/A	Received from UCR on April 8, 2020	N/A	N/A

Source: Data compiled by Rincon in May 2020.

1. Campus-wide UCR utility data was originally received December 18, 2019; Rincon requested the data to be disaggregated based on the LRDP boundary during the January 31st, 2020 Scoping Meeting. Utility data disaggregated by LRDP boundary from total UCR utility use was received on April 23, 2020.
2. Refrigerant emissions data was originally received February 7, 2020. For use in the 2021 LRDP inventory Rincon requested that the refrigerant inventory be disaggregated based on the LRDP boundary during the March 24, 2020 Methodology Overview Meeting. Disaggregated refrigerant data specific to the LRDP boundary was received April 8, 2020.
3. During the January 31, 2020 Scoping Meeting, Rincon requested kmz maps indicating the baseline buildings included in the 2021 LRDP as well as the future land use changes based on building development. The original kmz maps were provided February 26, 2020. Rincon requested spreadsheets to be provided with the kmz maps that included building square footage necessary for forecasting; this was provided on March 26, 2020.
4. Building energy analysis data requested for future building operations was originally provided on March 6, 2020. For use in the 2021 LRDP inventory Rincon requested the building use intensity factors be provided in a excel format and sorted based on the 2021 LRDP land use designations to allow for forecasting. The complete disaggregated building energy information was provided on April 21, 2020.

Based on Rincon's review of the provided data, it appears that the data is generally complete and appropriate for use in preparation of the baseline GHG inventory and future emissions forecasts as detailed above. Upon review and approval of this Data Evaluation Memorandum by UCR, Rincon will finalize the baseline GHG inventory and subsequently proceed with the future emissions forecasts and target setting, all of which will also be provided to UCR for review and approval. Please let us know if you have any questions or concerns with the data and methodology proposed for use in preparing the UCR GHG inventory and forecasts.

Sincerely,
Rincon Consultants, Inc.

Erik Feldman, MS, LEED-AP
GHGRS Principal

Kelsey Bennett, MPA, LEED-AP
GHGRS Project Manager

Erica Linard, PhD
GHGRS Technical Lead

Appendix H

Hazardous Chemical Inventory Site Maps

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University of California Riverside

Hazardous Chemical Inventory Site Maps

This report is a comprehensive hazardous chemical inventory for the University of California Riverside and contains a site map for every facility that stores hazardous materials.

April 28, 2020

University of California Riverside

Hazardous Material Storage/Use Area Symbols

🟧 **Hazardous Material Storage Areas**

IA **IMMEDIATE (ACUTE) HEALTH HAZARD**

An adverse effect resulting from a short-term exposure to a chemical. Includes highly toxic, toxic, irritant, sensitizers, corrosive chemicals. Examples: cyanide, hydrochloric acid, sodium hydroxide, chlorine gas.

DC **CULVERT DELAYED (CHRONIC) HEALTH**

An adverse health effect resulting from long-term exposure to a substance. The effects could be a skin rash, bronchitis, cancer or any other medical condition. Examples include carcinogens such as benzene, formaldehyde, and methylene chloride.

FH **FIRE HAZARD**

Includes flammable liquids and solids, combustible liquids, pyrophorics and oxidizers. Examples include solvents like acetone and alcohol, solvent-based paints, gasoline, naphtha solvent, acetylene gas cylinders, propane gas.

SR **SUDDEN RELEASE OF PRESSURE**

This category includes explosives, blasting agents and compressed gases. Examples: nitrogen, oxygen, acetylene, helium, carbon dioxide, etc.

R **REACTIVE**

This category includes unstable air reactive, water reactive or shock materials. Examples: organic peroxides, fine metal dusts like magnesium, aluminum, phosphorous, cyanides, sulfides and picric acid.

☢ **RADIOACTIVES**

Includes mixed waste and radioactive sources used in labs and industrial settings. Examples include Scintillation materials, nuclear medicine waste and R & D materials and waste.

SITE MAP SYMBOLS

✺ **CAMPUS ENTRANCE**

★ **EMERGENCY ASSEMBLY AREAS**

● **FIRE HYDRANT**

S **SEWER DRAIN**

⊗ **STORM DRAIN**

300 **STORAGE TANK AND CAPACITY**

MAIN UTILITY SHUT OFFS VALVES*

W **WATER**

E **ELECTRICAL**

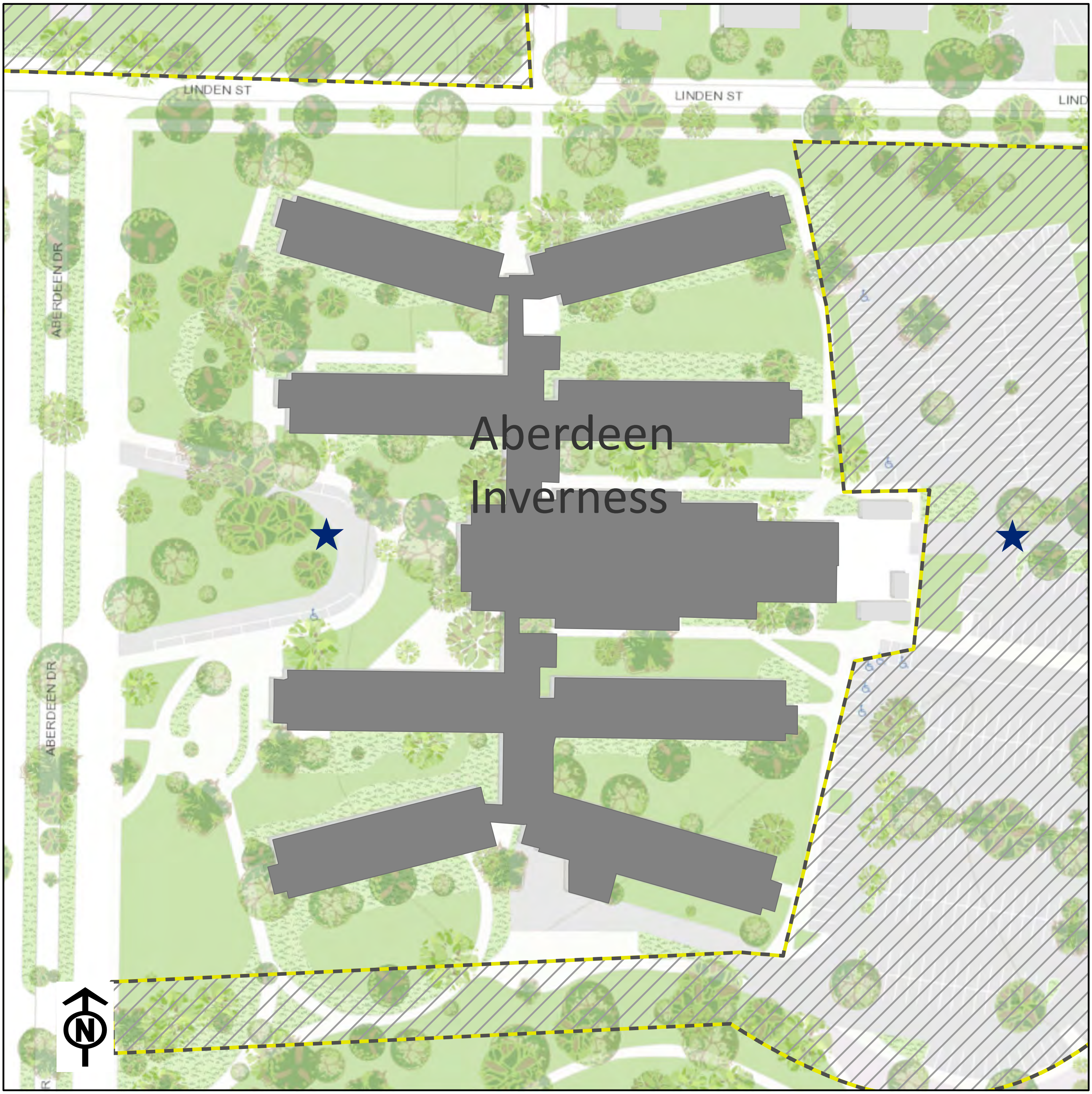
G **GAS**

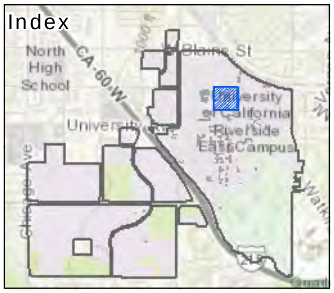
***PLEASE CONTACT UCR POLICE DEPARTMENT OF UCR FACILITIES FOR ADDITIONAL INFORMATION ON SHUT OFF VALVE**

Facility Name	Index Number
Aberdeen-Inveness	P5343
Ag Op Buildings	P5518, P5490, P5349, P5582
Arts	P5411
Batchelor Hall	P5501
Biological Sciences	P5186
Botanic Gardens Shed 1	Z1133
Bourns Hall	P5261
Boyce Hall	P5341
Boyden Lab	P5482
Chapman Hall	P5215
Chemical Sciences	P5414
College Bldg North	P5517
Corporation Yard Buildings	P5364, P5487, Z1135
EH&S Expansion	P5388
Entomology	P5417
Entomology Museum	P5256
Fawcett Lab	P5503
Genomics	P5196
Geology	P5335
Glen Mor H	P5952
Health Service Bldg	P5495
HUB	P5404
HUB 2	P5199
Insecticide Compounding & Storage	P5304
Life Sciences	P5316
Lothian Hall	P5502
Materials Science & Engineering	P5195
Multidisciplinary Research Bldg 1 & MRB Café	P5818, P5828
Physics	P5504
Pierce Hall & Pierce Hall Annex	P5508
Plant Transformation Facility	P5190
Psychology	P5373
Satellite Chiller Plant	P5367
Science Lab 1	P5416
SOM Rearch	P5406
SPI & Colbalt 60	P5305, P5326
Spieth Hall	P5323
SRC North	P5511
SRC Pool Building	P5696
The Barn	P5358
Turf Fertil	Z1098
University Laboratory Bldg	P5263
Verley Barn - Tank Storage	Z1104
Webber Hall	P5342

Aberdeen-Inveness

Index No:
P5343





Map not to scale

★ Emergency Assembly Areas

● Campus Entrance

■ High Priority Structures

☐ Campus Boundary

UCR
Hazardous Chemical Inventory
Aberdeen-Inveness
Area Map

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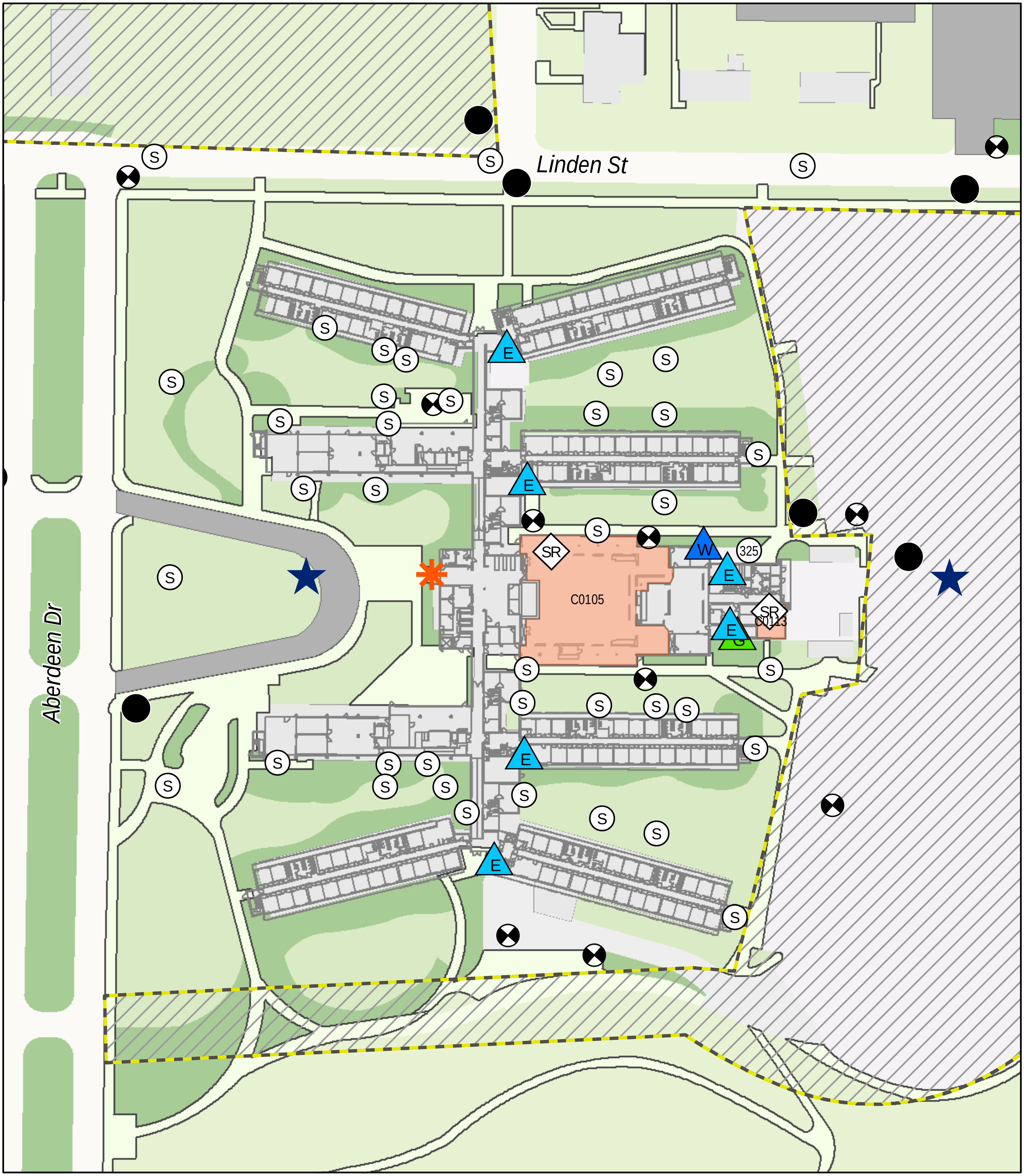
Aberdeen-Inverness

Index No:
P5343



Aberdeen-Inverness

Floor 1

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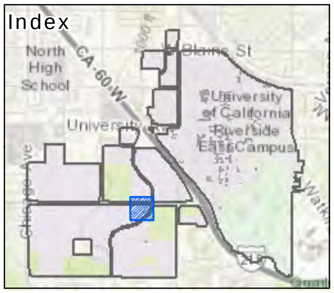
Ag Op Buildings

Index No:
P5518, P5490, P5349, P5582



★ Emergency Assembly Areas

● Campus Entrance

■ High Priority Structures

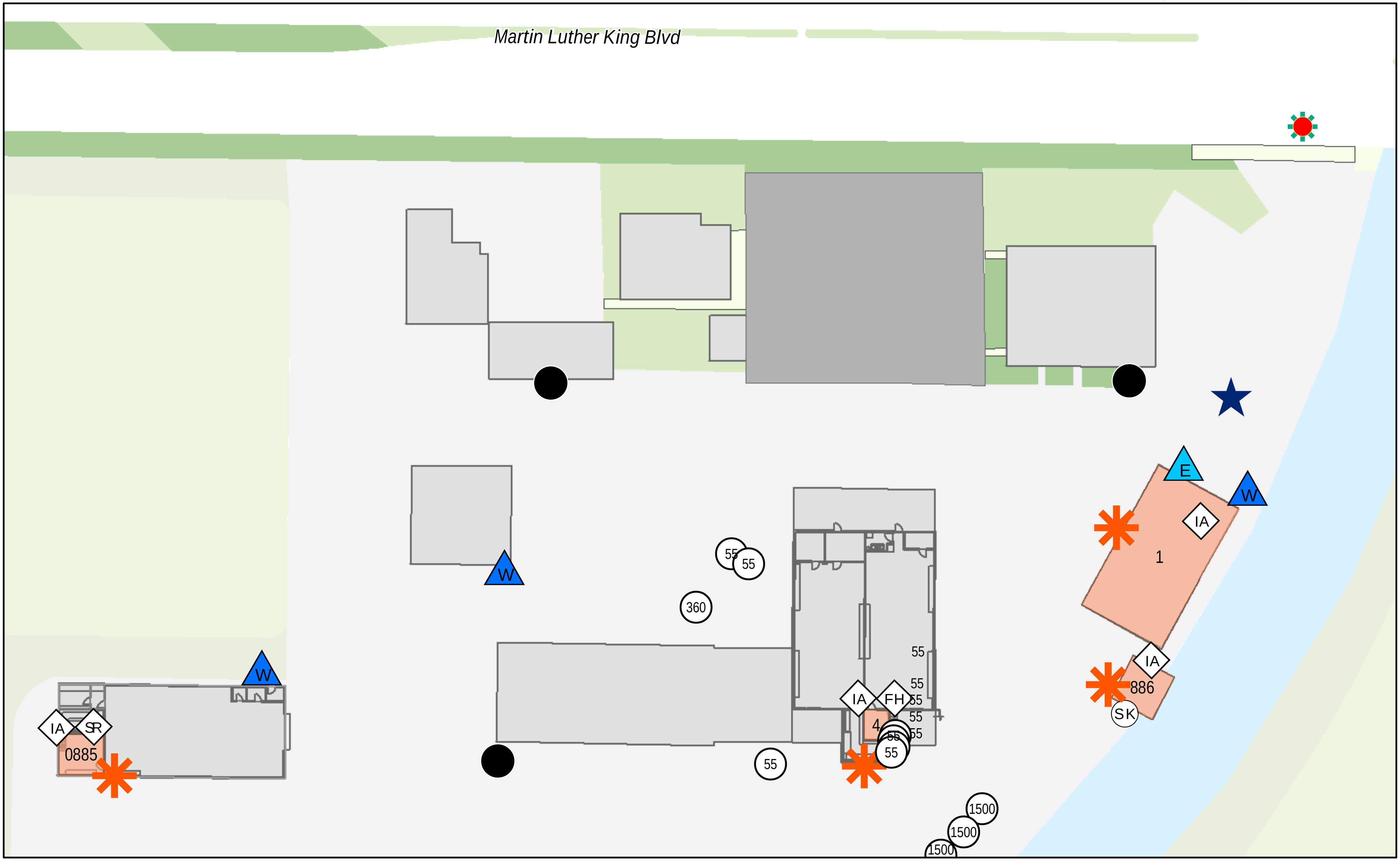
☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
Ag Op Buildings
Area Map

Ag Ops Buildings

Index No:
P5518, P5490, P5349, P5582



Ag Ops Buildings

Floor 1

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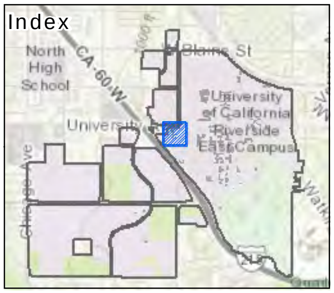
Arts

Index No: P5411



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★ Emergency Assembly Areas

● Campus Entrance

▇ High Priority Structures

☐ Campus Boundary

UCR
Hazardous Chemical Inventory
Arts
Area Map

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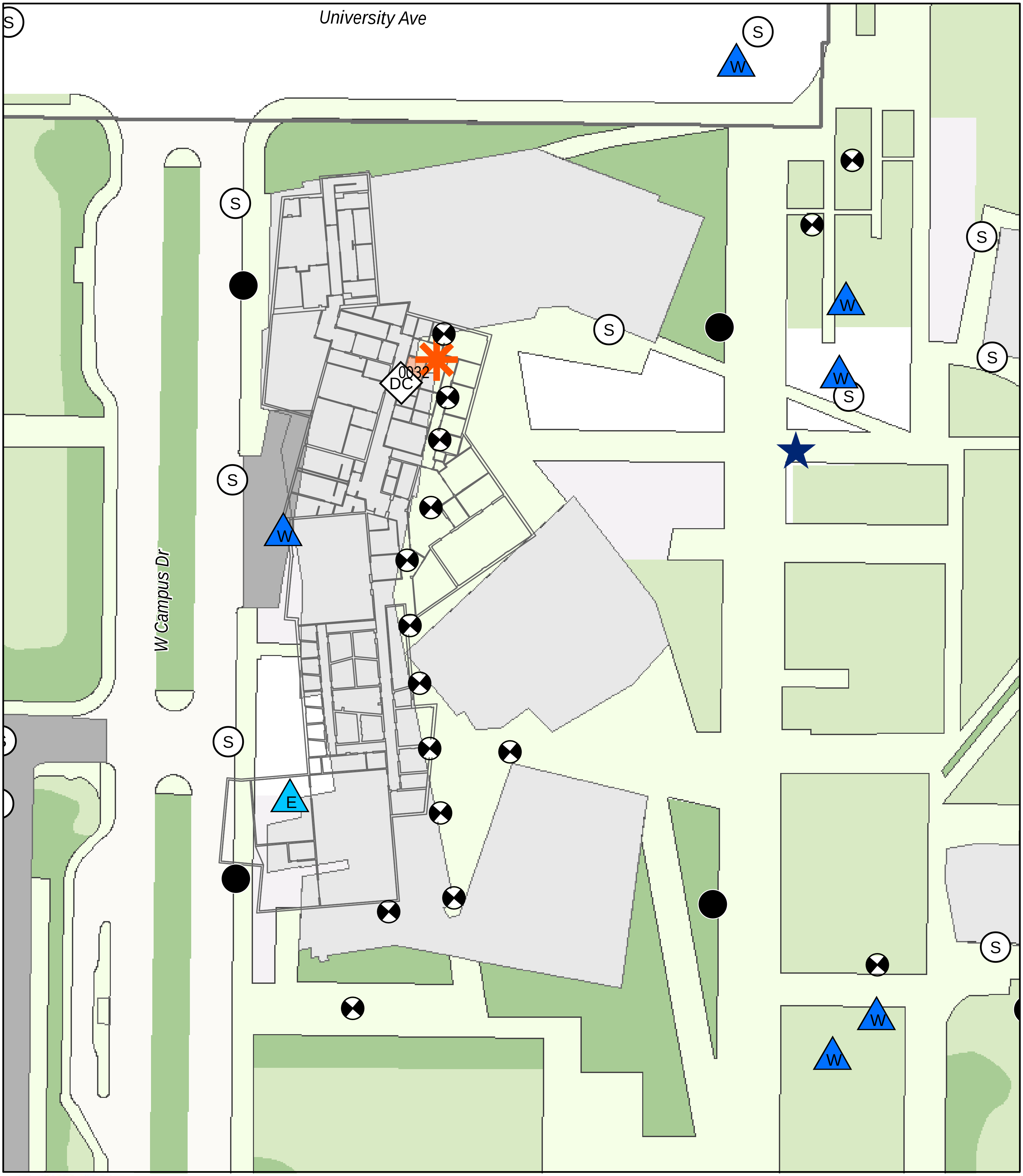
Arts

Index No:
P5411



Arts
Floor L-1

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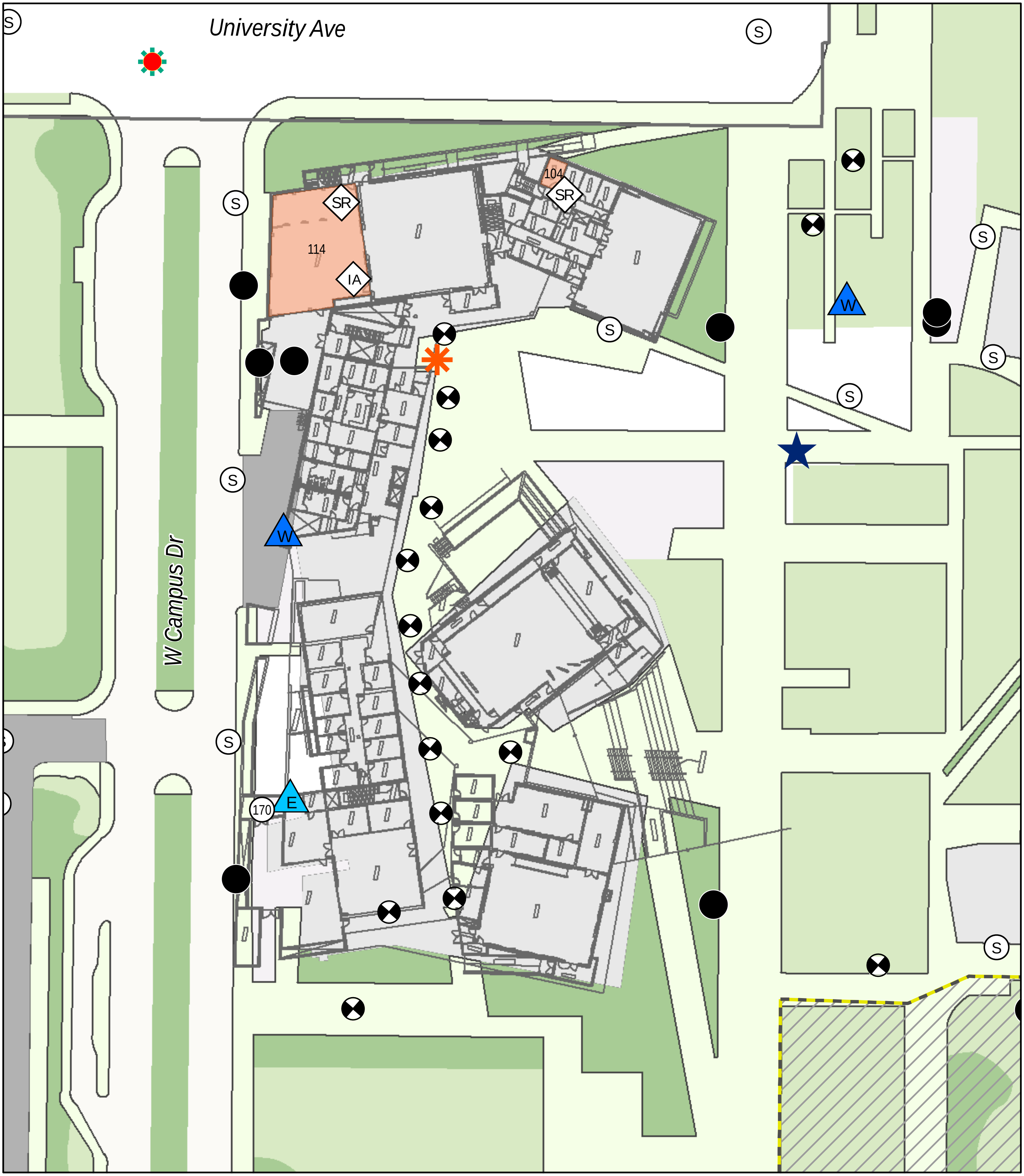
Arts

Index No:
P5411



Arts

Floor 1

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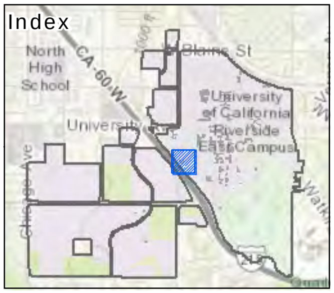
The Barn Group

Index No:
P5358, P5908



★ Emergency Assembly Areas

● Campus Entrance

▬ High Priority Structures

☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
The Barn Group
Area Map

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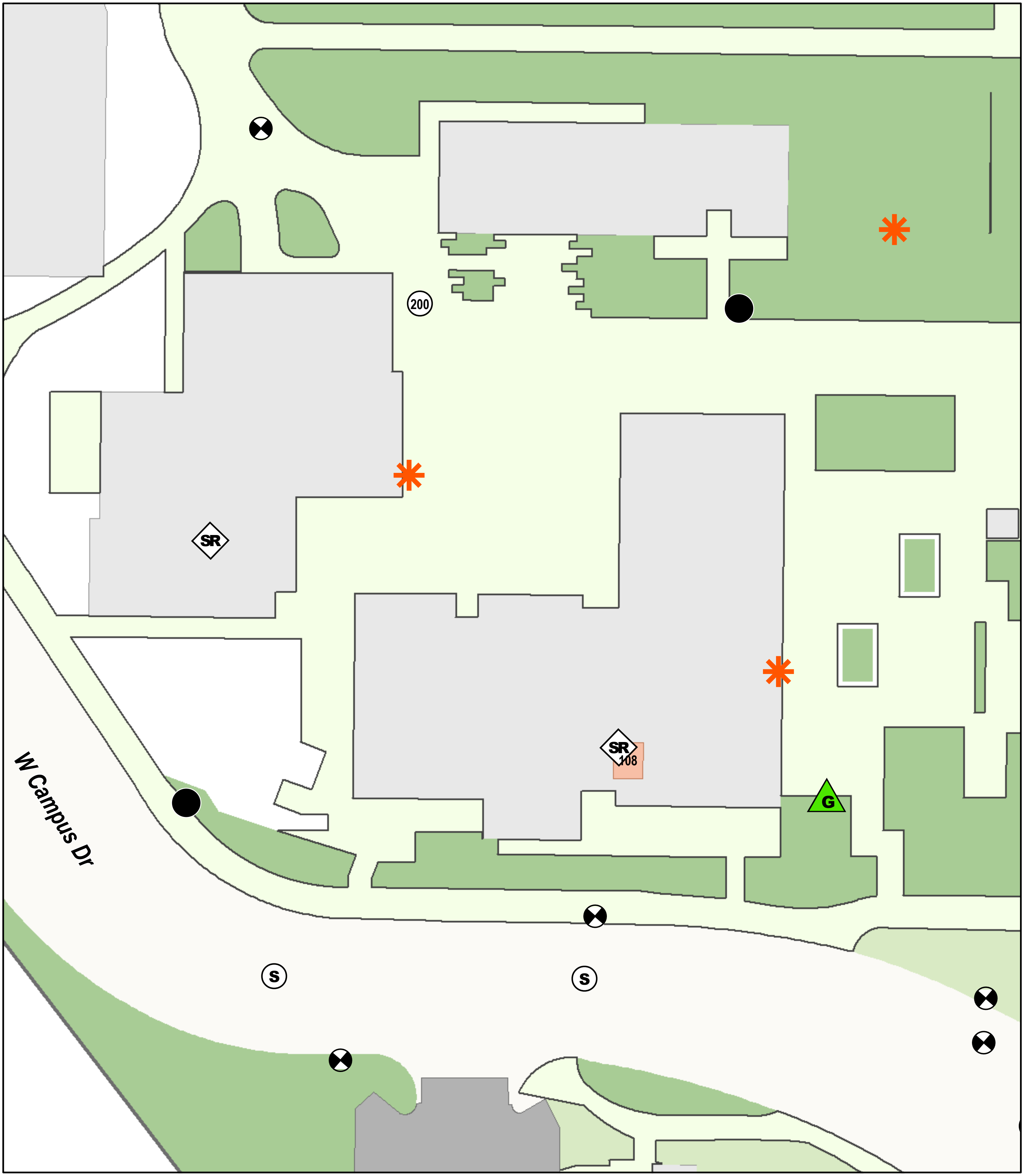
The Barn Group

Index No:
P5358, P5908



The Barn Group
Floor 1

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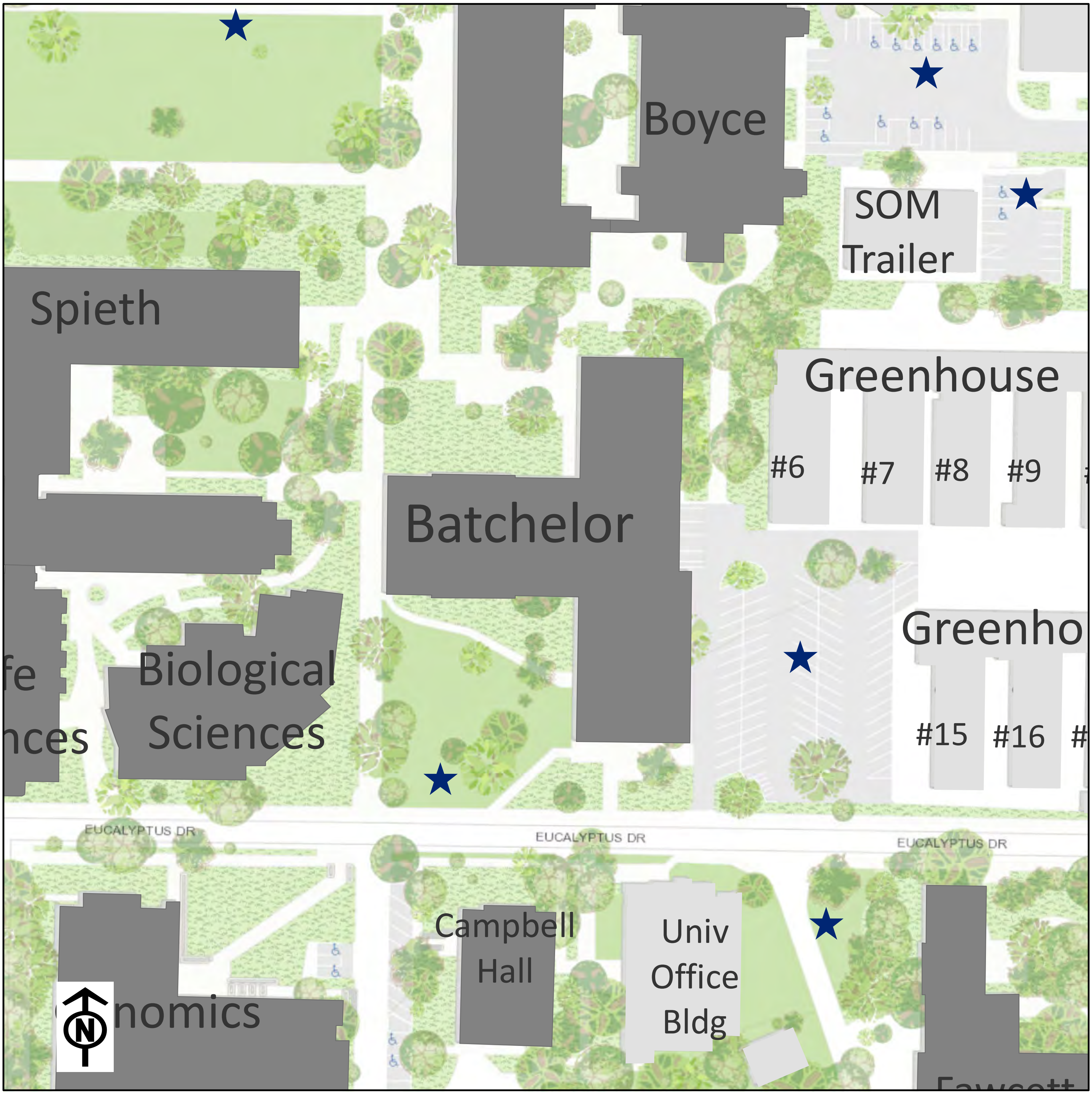
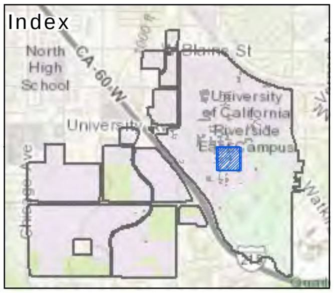
Batchelor Hall

Index No: P5501





★ Emergency Assembly Areas

● Campus Entrance

■ High Priority Structures

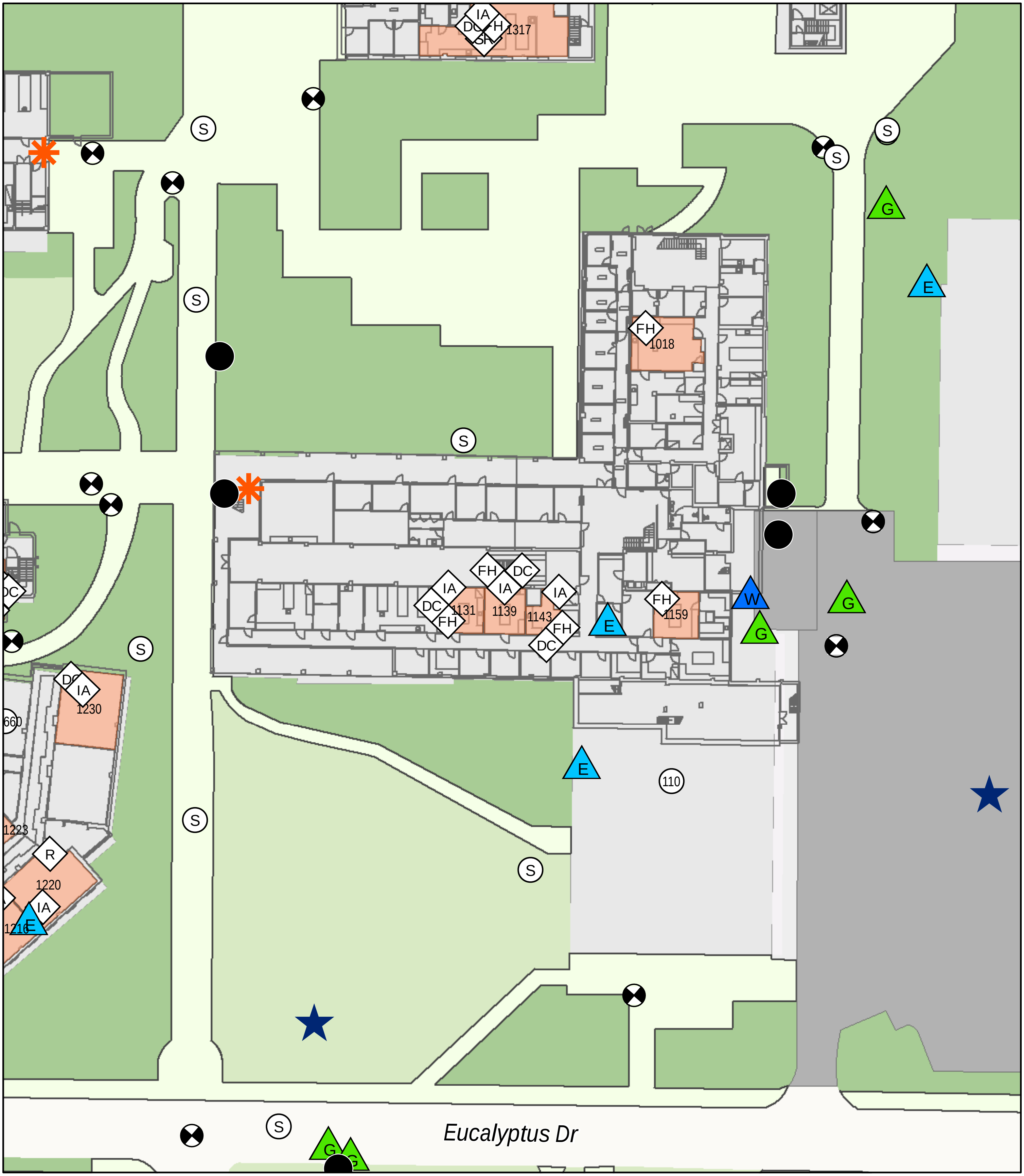
☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
Batchelor Hall
Area Map

Batchelor Hall

Index No:
P5501



Batchelor Hall
Floor 1

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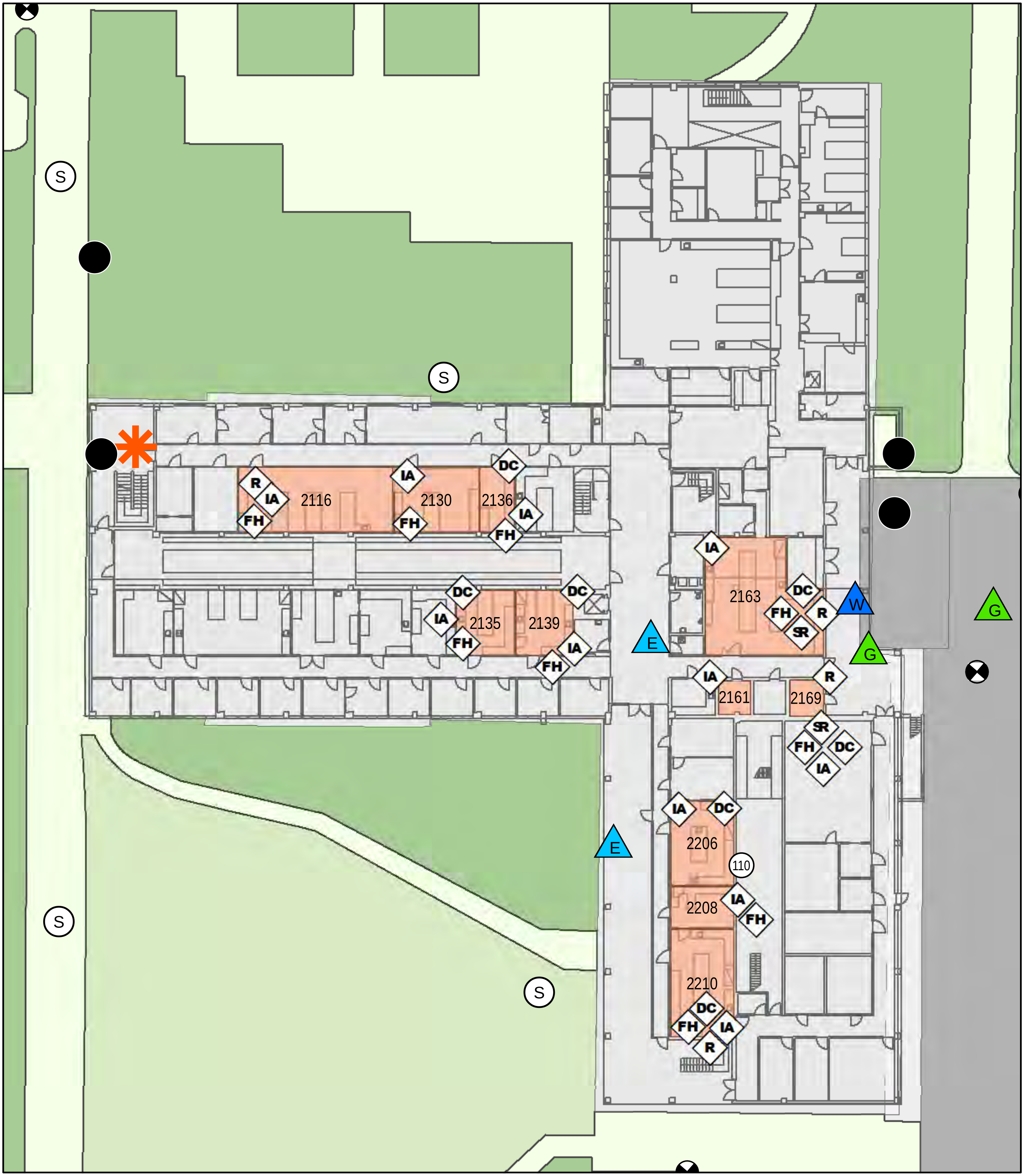
Batchelor Hall

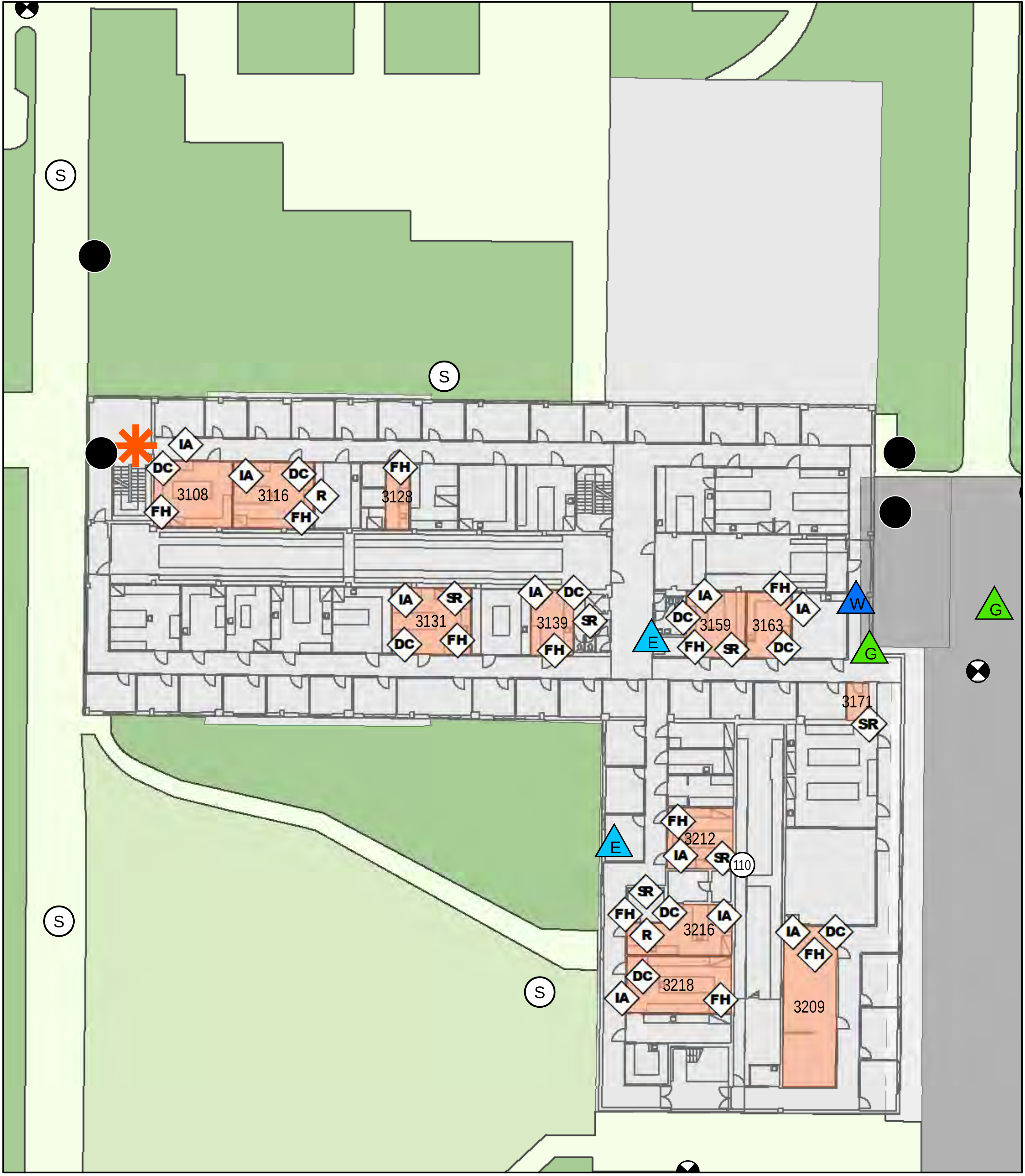


Batchelor Hall

Floor 2

Batchelor Hall

Index No: P5501



Batchelor Hall

Floor 3

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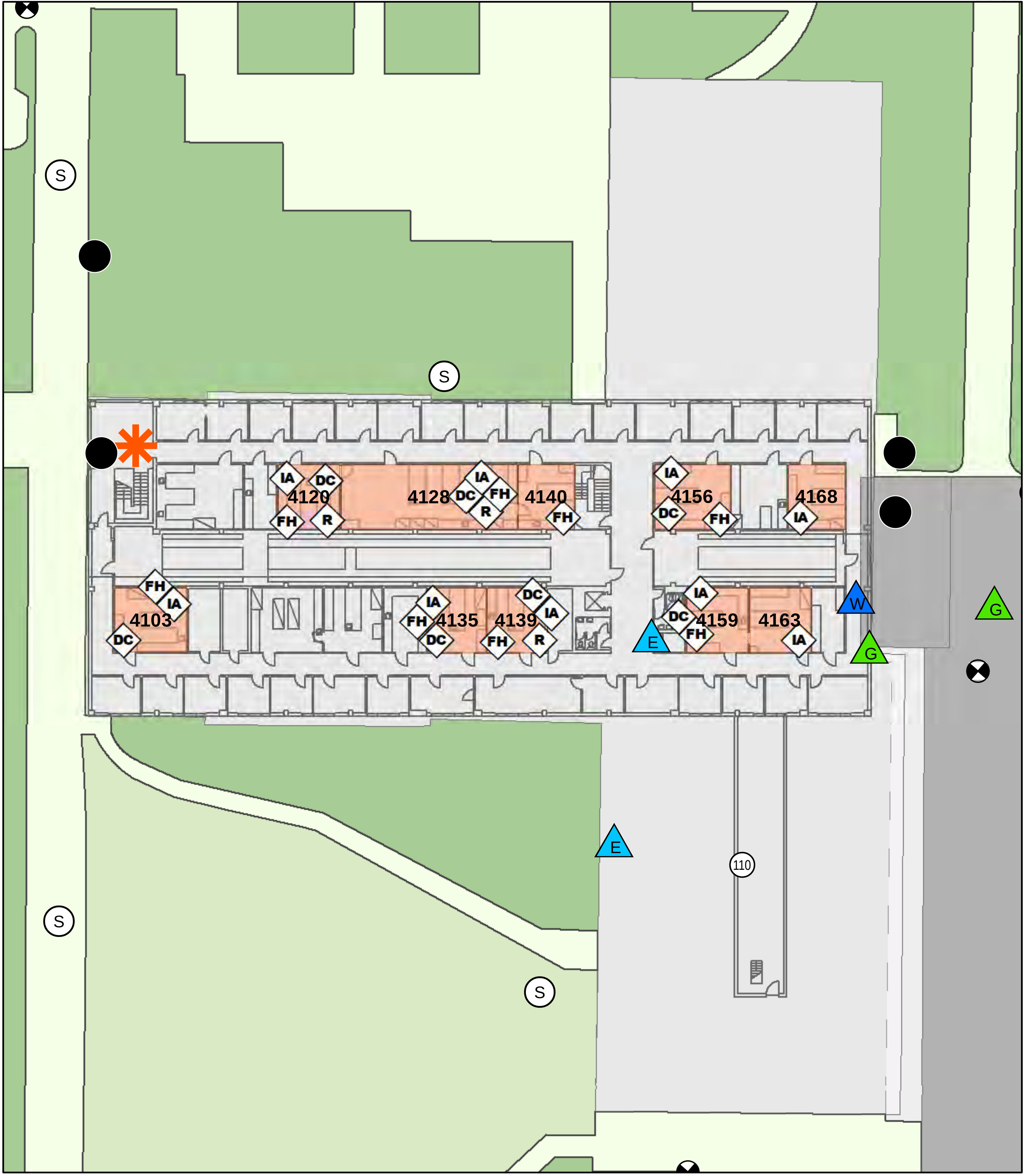
Batchelor Hall

Index No: P5501



Batchelor Hall
Floor 4

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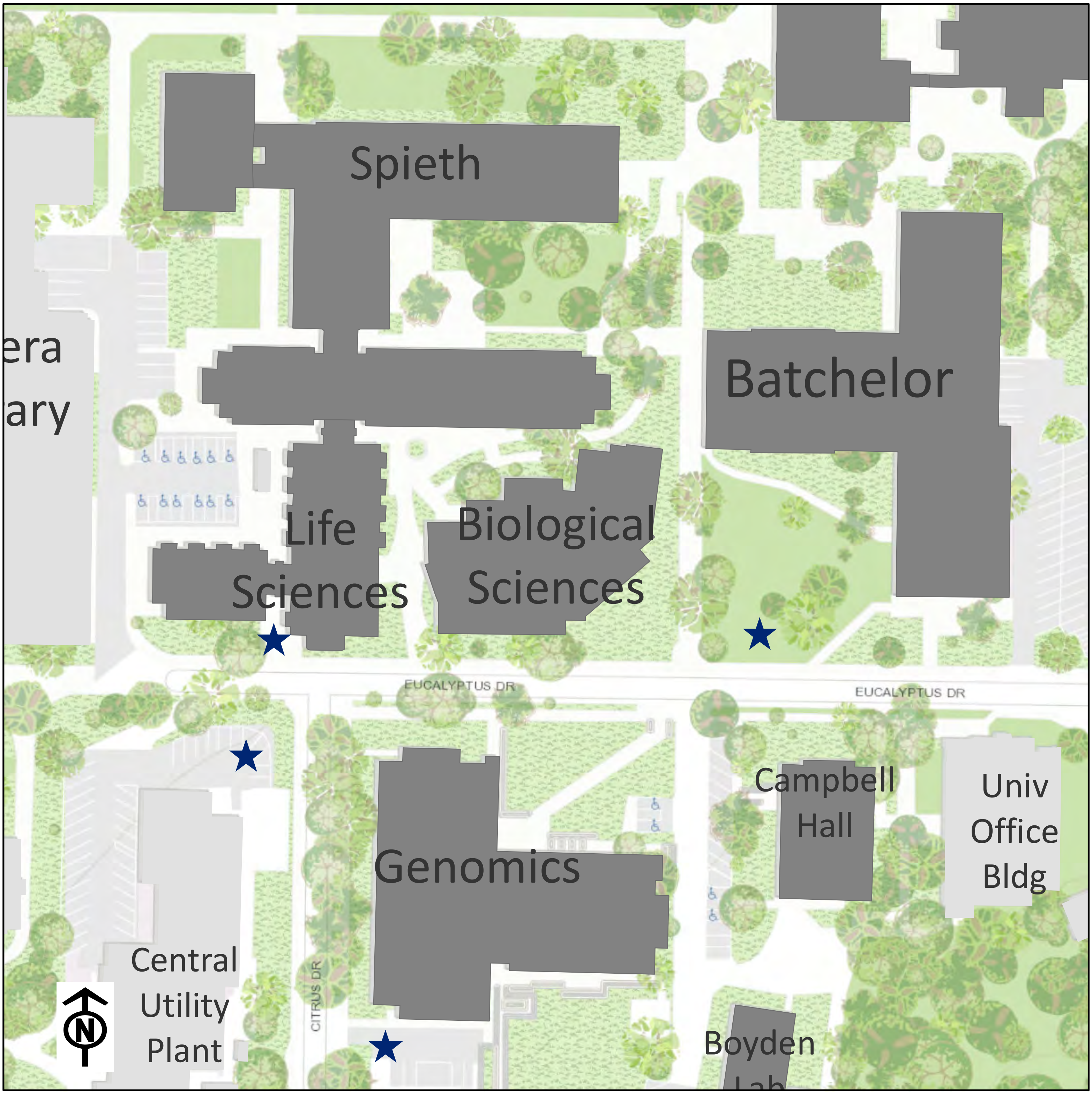
Biological Sciences

Index No:
P5186



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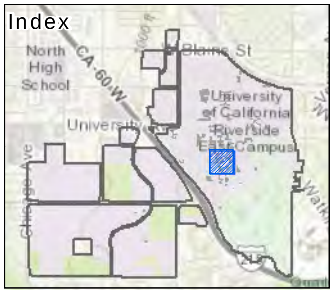

Map not to scale

★ Emergency Assembly Areas

● Campus Entrance

▨ High Priority Structures

☐ Campus Boundary

UCR
Hazardous Chemical Inventory
Biological Sciences
Area Map

Biological Sciences

Index No:
P5186

Water and Gas valves found in street south of Life Sceinces

Biological Sciences
Floor 1

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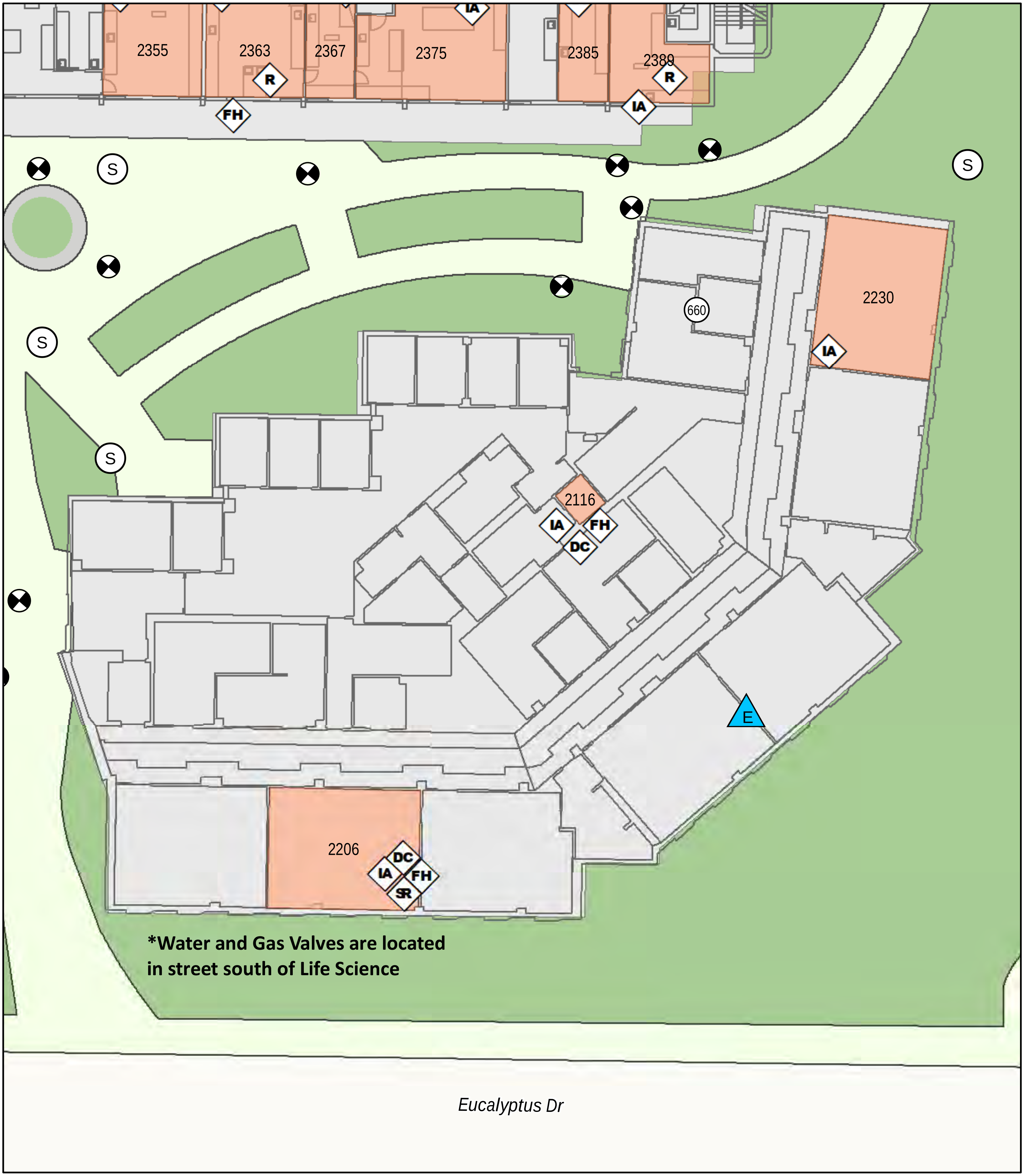
Index No: P5186

Biological Sciences



*Water and Gas Valves are located in street south of Life Science

Biological Sciences

Floor 2

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Biological Sciences

Index No: P5186

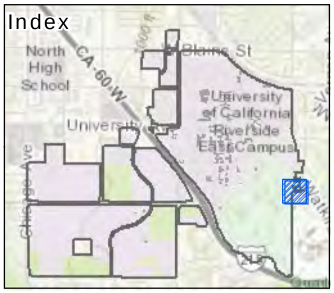
UCR

Biological Sciences

Floor 3

Botanic Gardens Shed 1

Index No: Z1133



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★	Emergency Assembly Areas
●	Campus Entrance
■	High Priority Structures
□	Campus Boundary

UCR
Hazardous Chemical Inventory
Botanic Gardens Shed 1
Area Map

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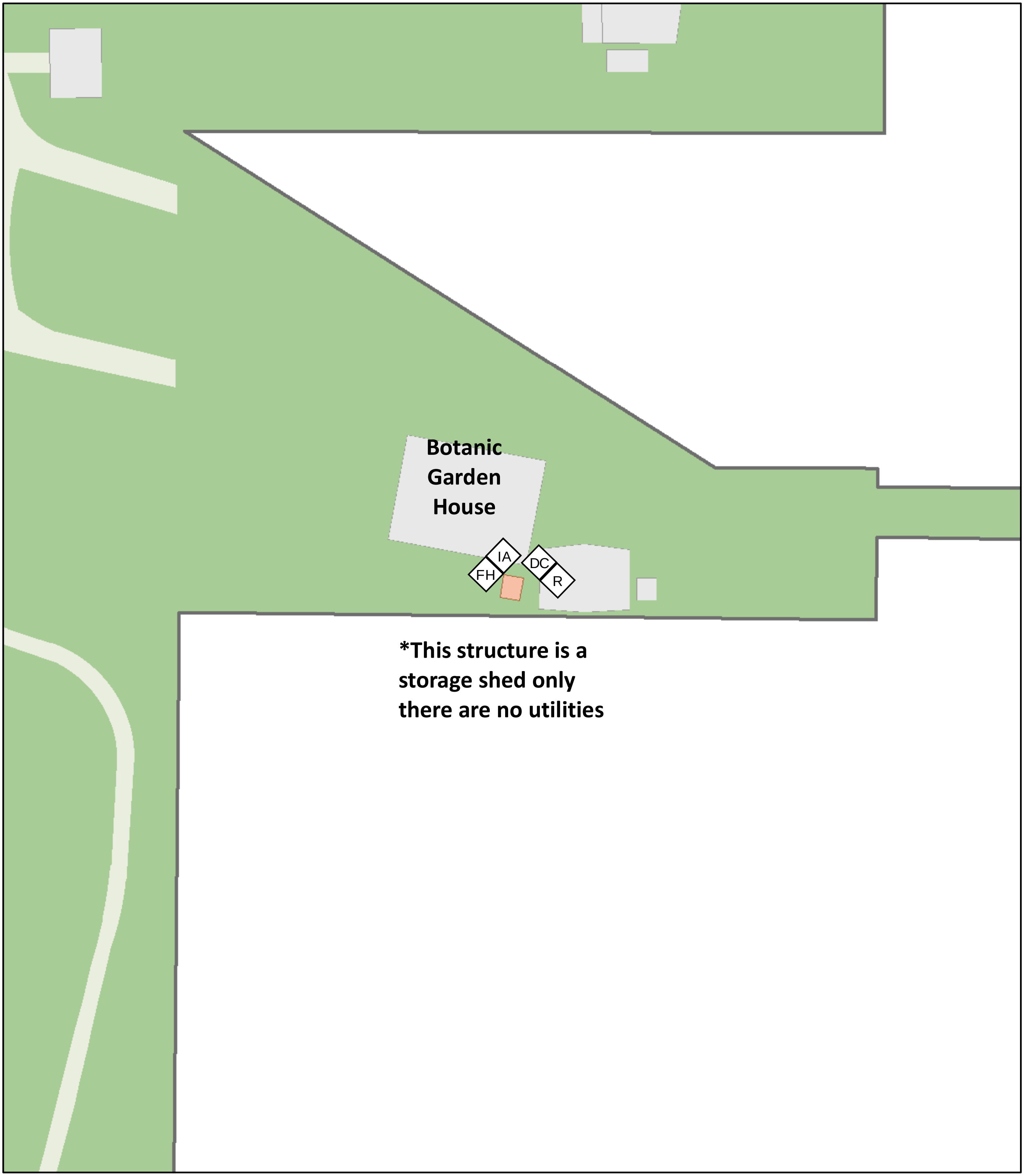
Botanic Gardens Shed 1

Index No:
Z1133



Botanic Gardens Shed 1

Floor 1

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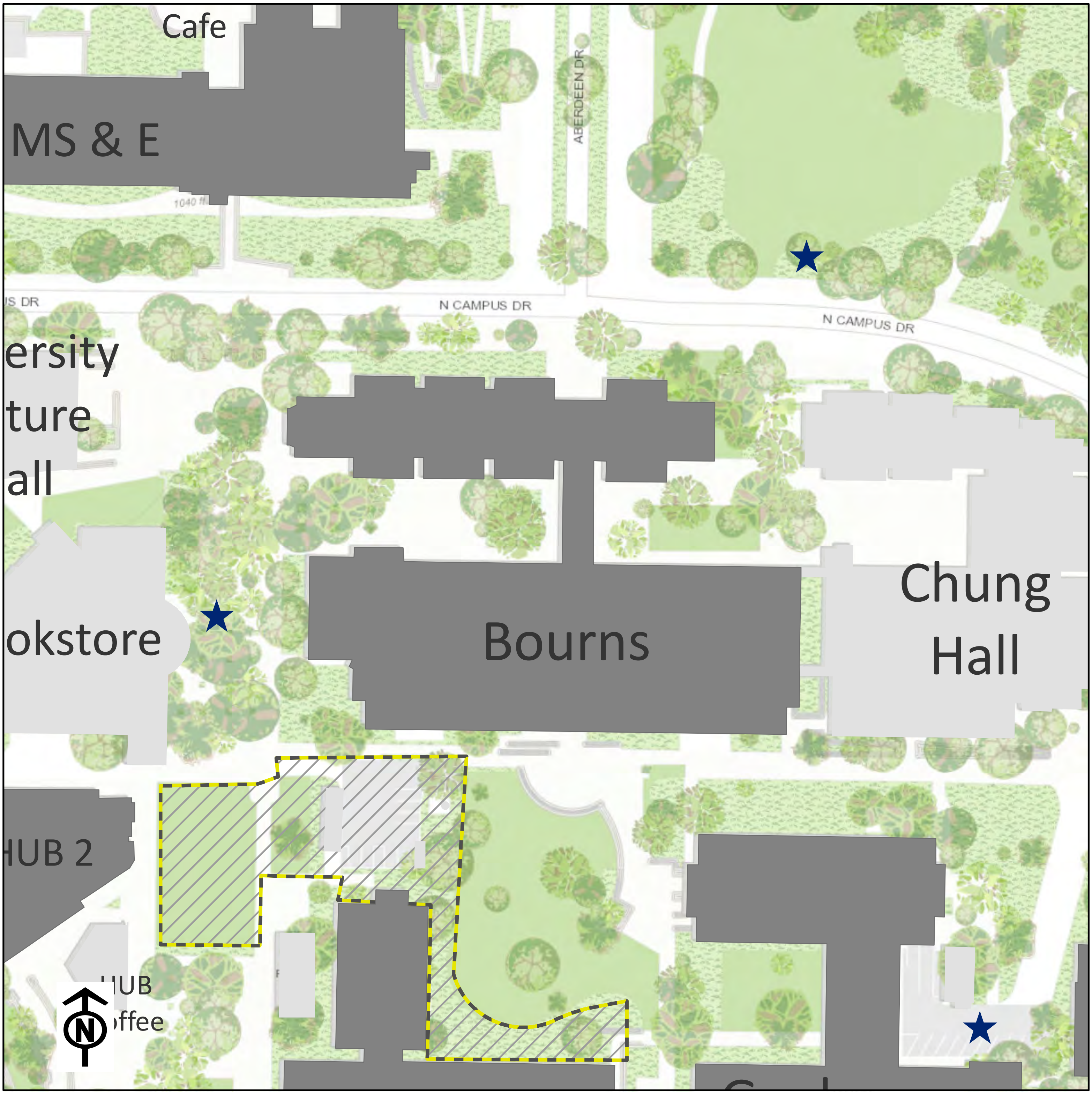
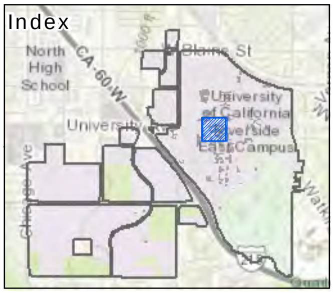
Bourns Hall

Index No:
P5261





★ Emergency Assembly Areas

● Campus Entrance

■ High Priority Structures

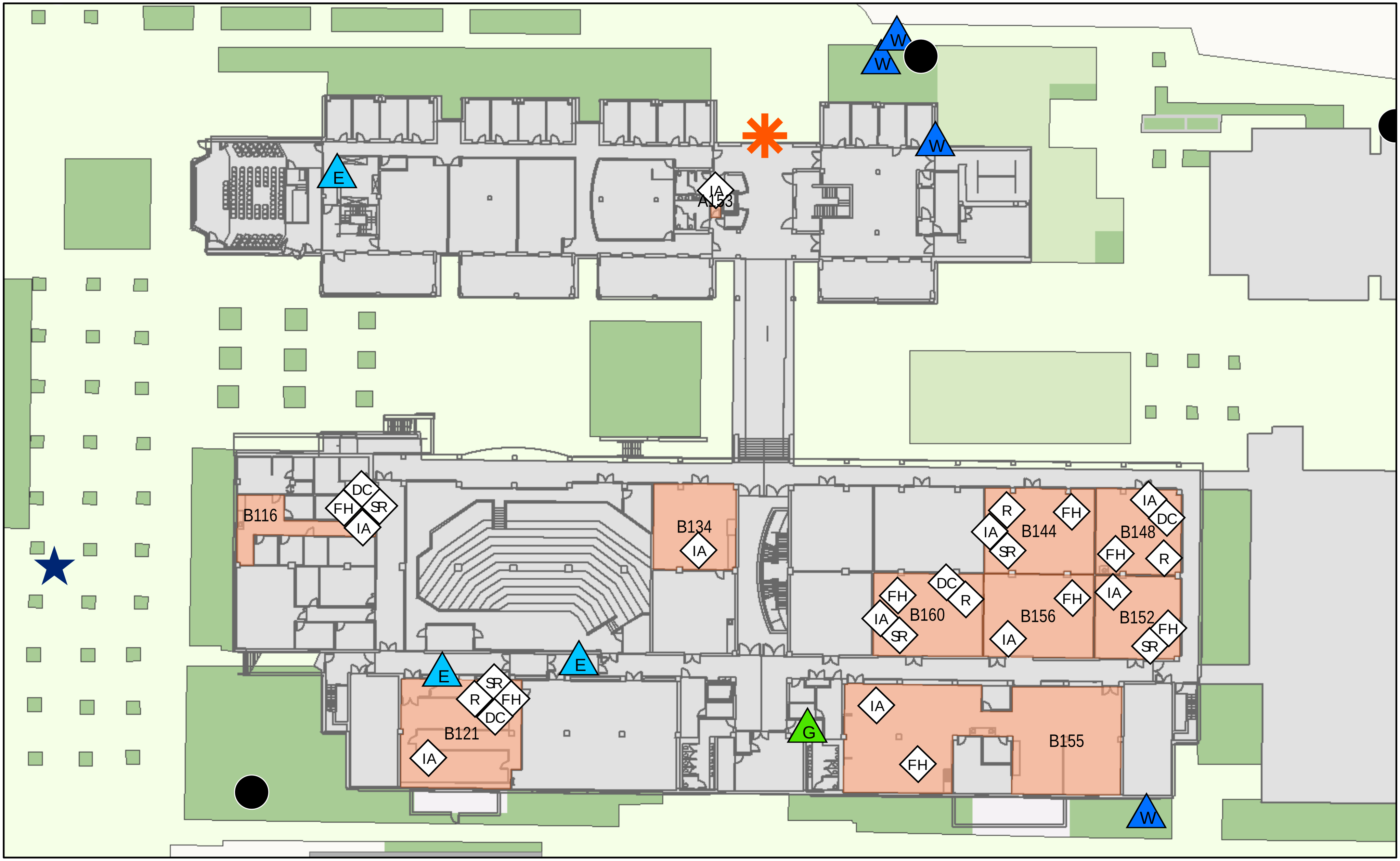
☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
Bourns Hall
Area Map

Bourns Hall

Index No: P5261



Bourns Hall

Floor 1

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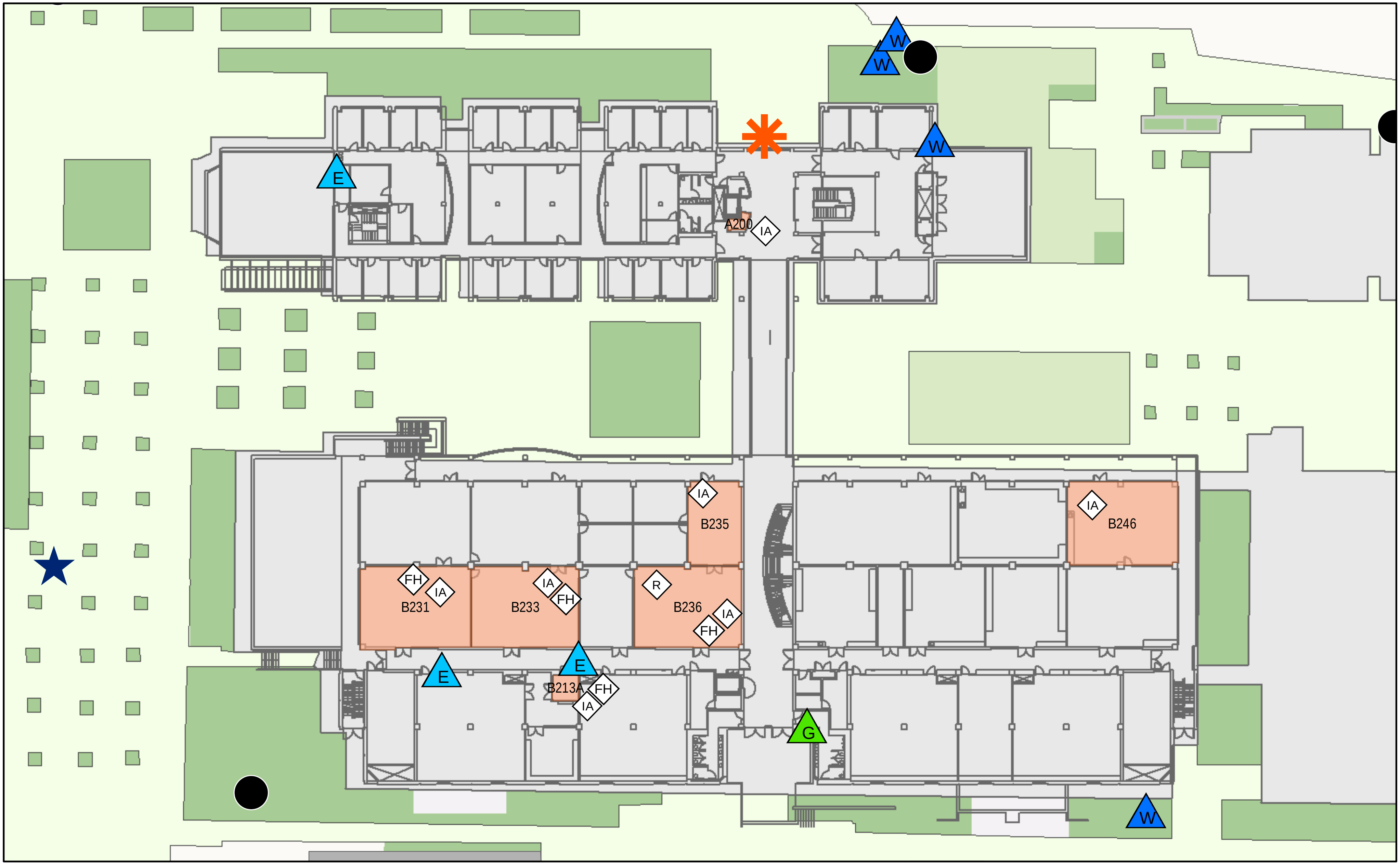
Index No:
P5261

Bourns Hall



UCR

Bourns Hall

Floor 2

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Bourns Hall

Index No:
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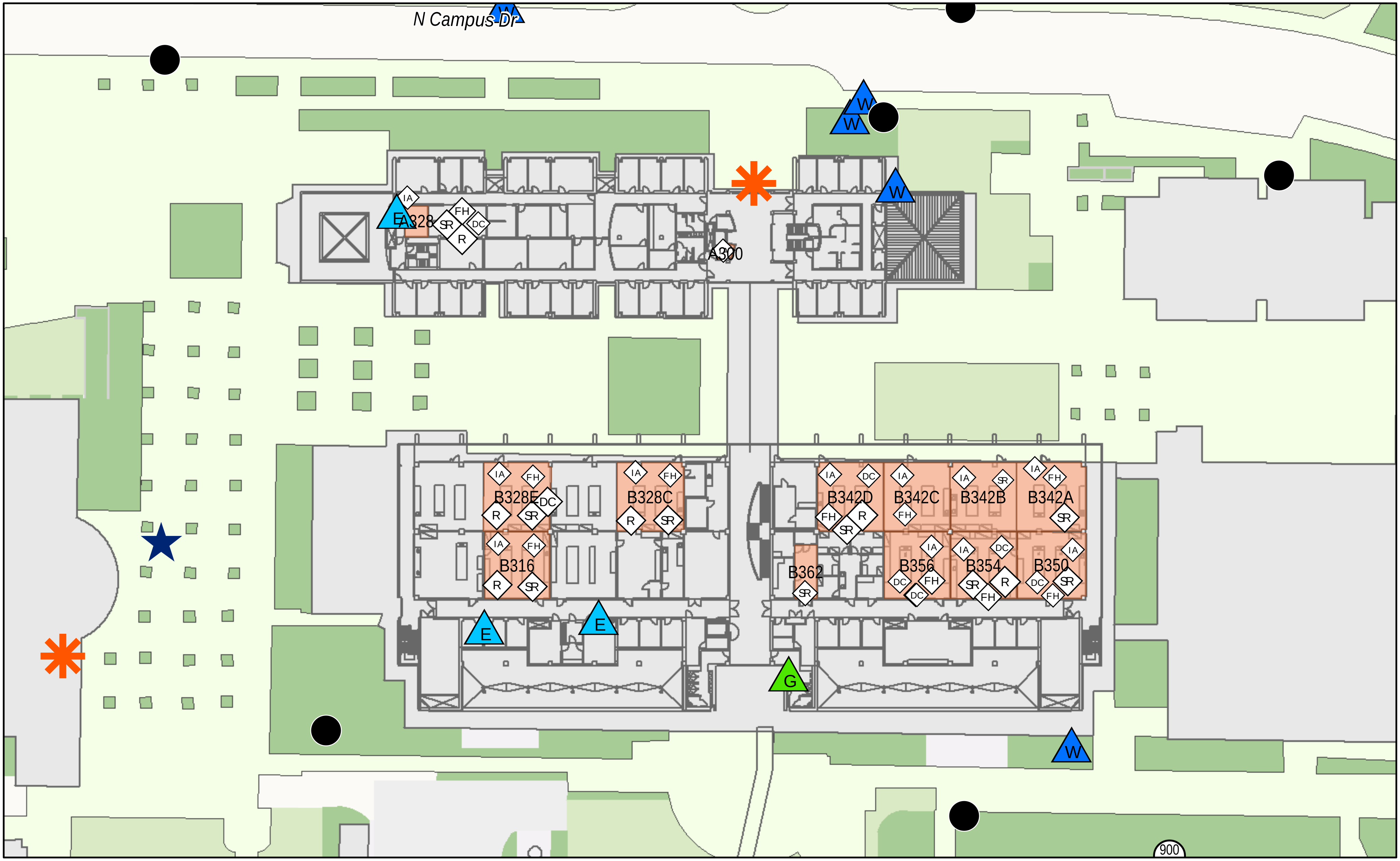

UCR

Bourns Hall

Floor 3

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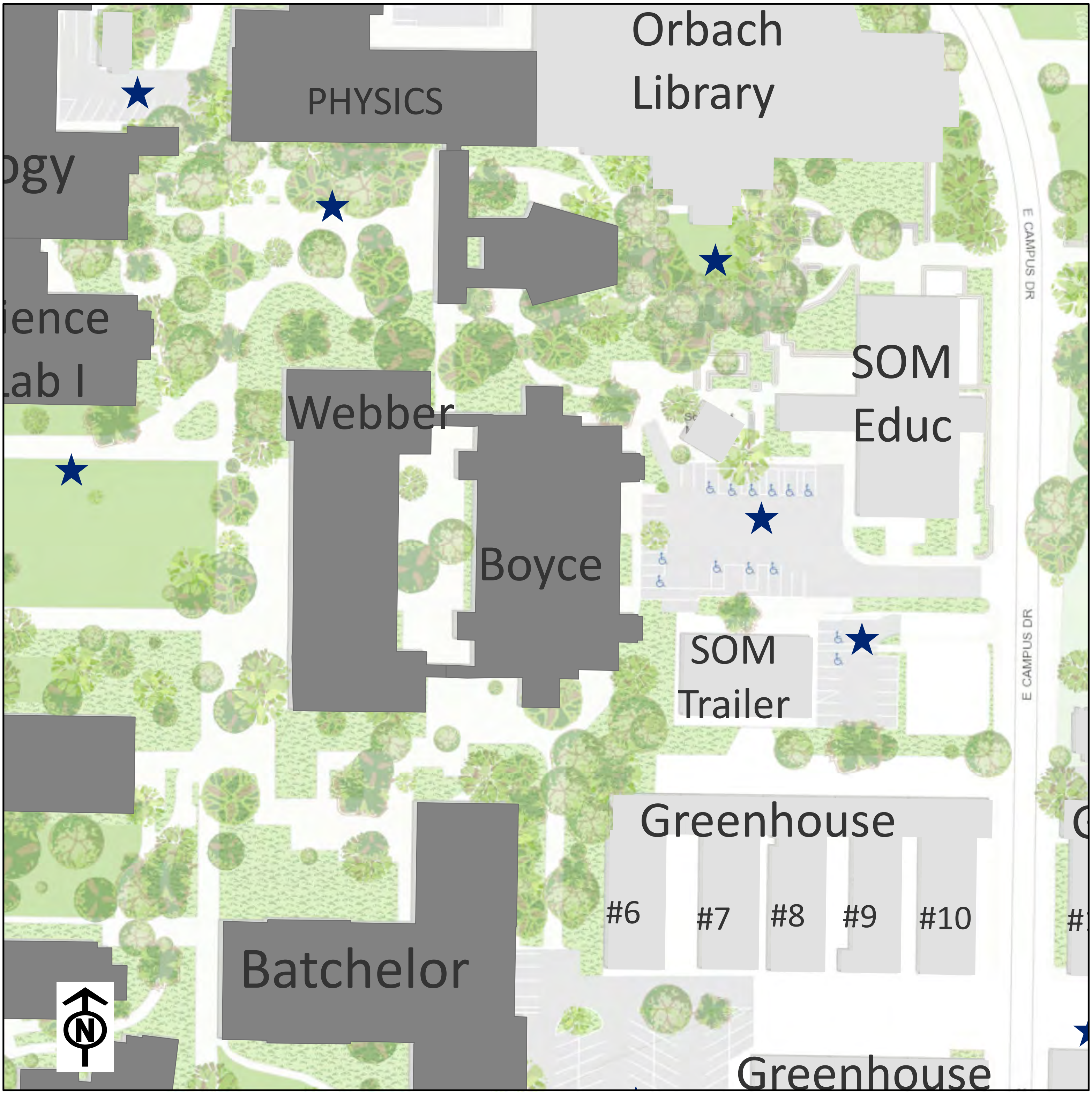
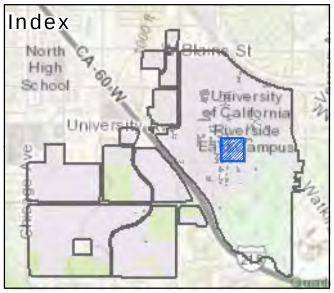
Boyce Hall

Index No: P5341





★ Emergency Assembly Areas

● Campus Entrance

▇ High Priority Structures

☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
Boyce Hall
Area Map

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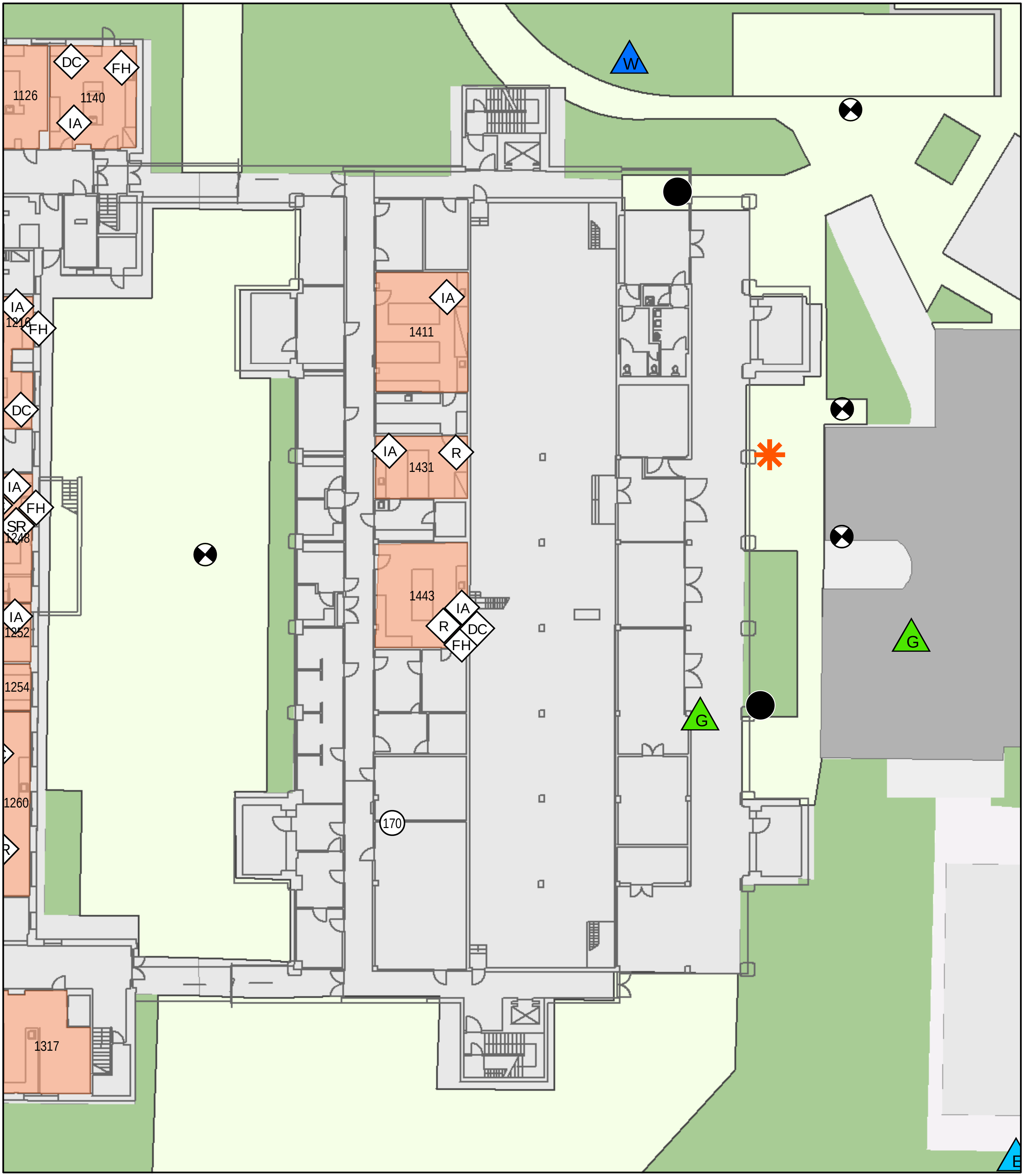
Boyce Hall

Index No: P5341



Boyce Hall

Floor 1

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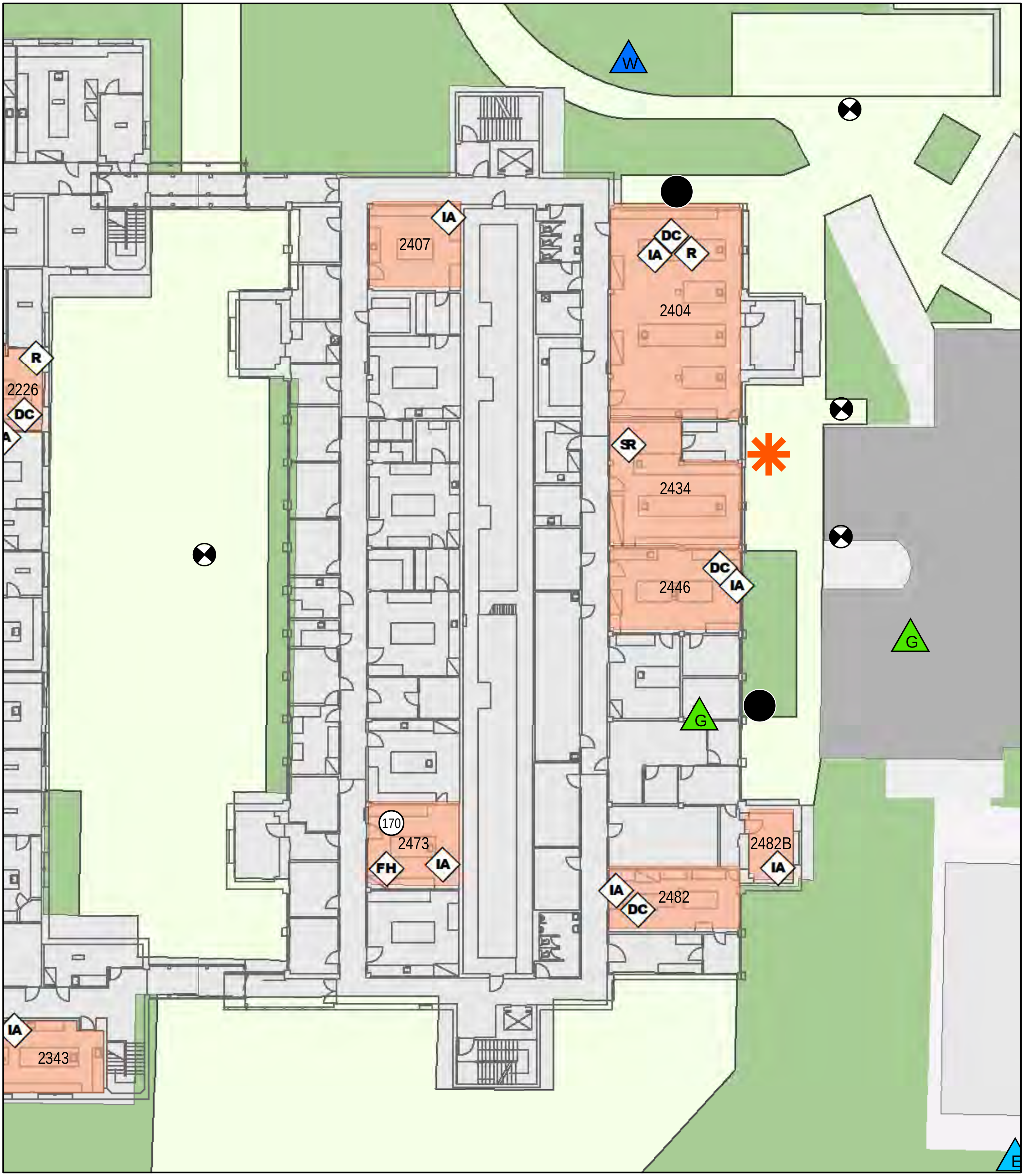
P5341

Boyce Hall



Boyce Hall

Floor 2

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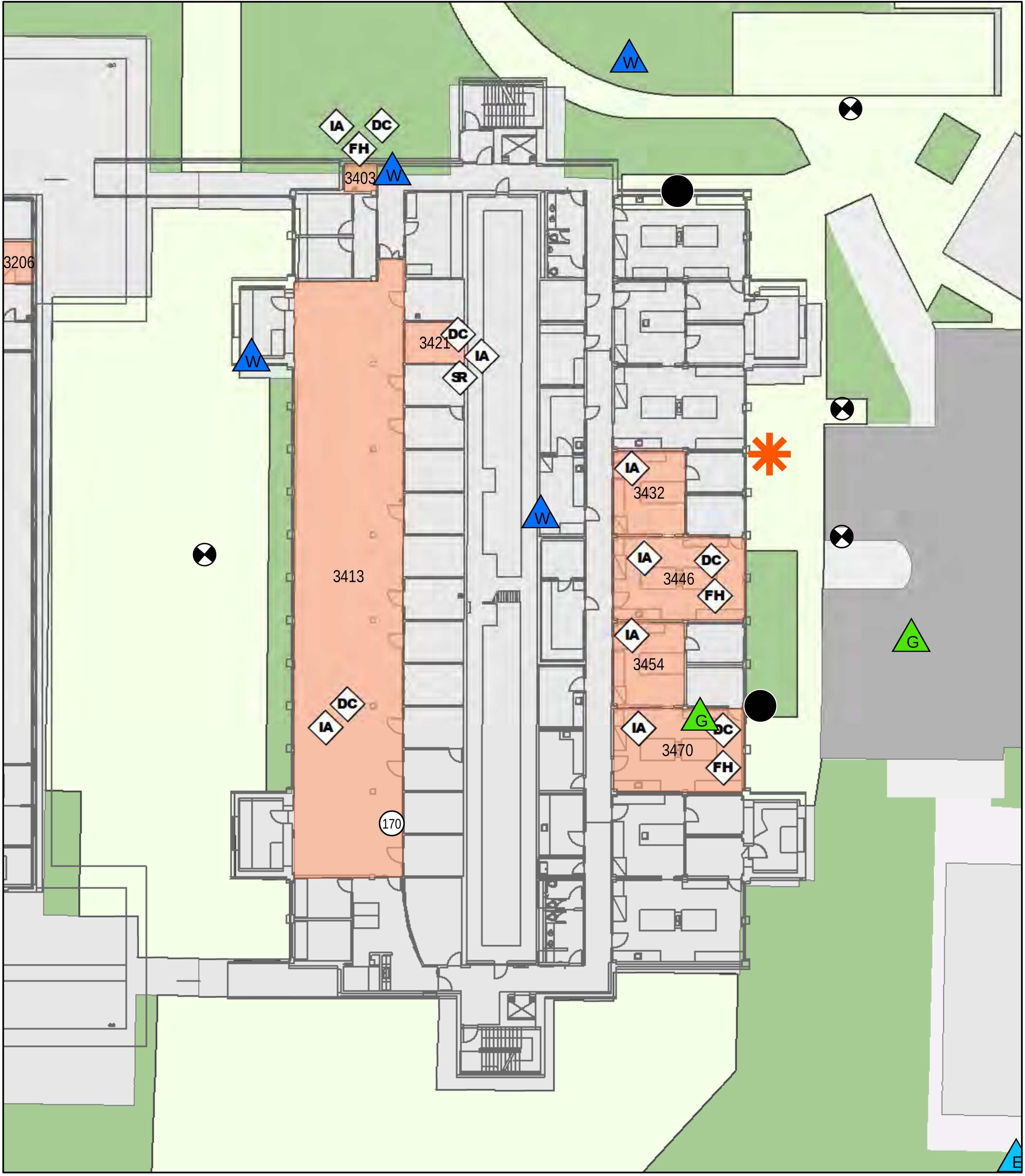
Index No:
P5341

Boyce Hall



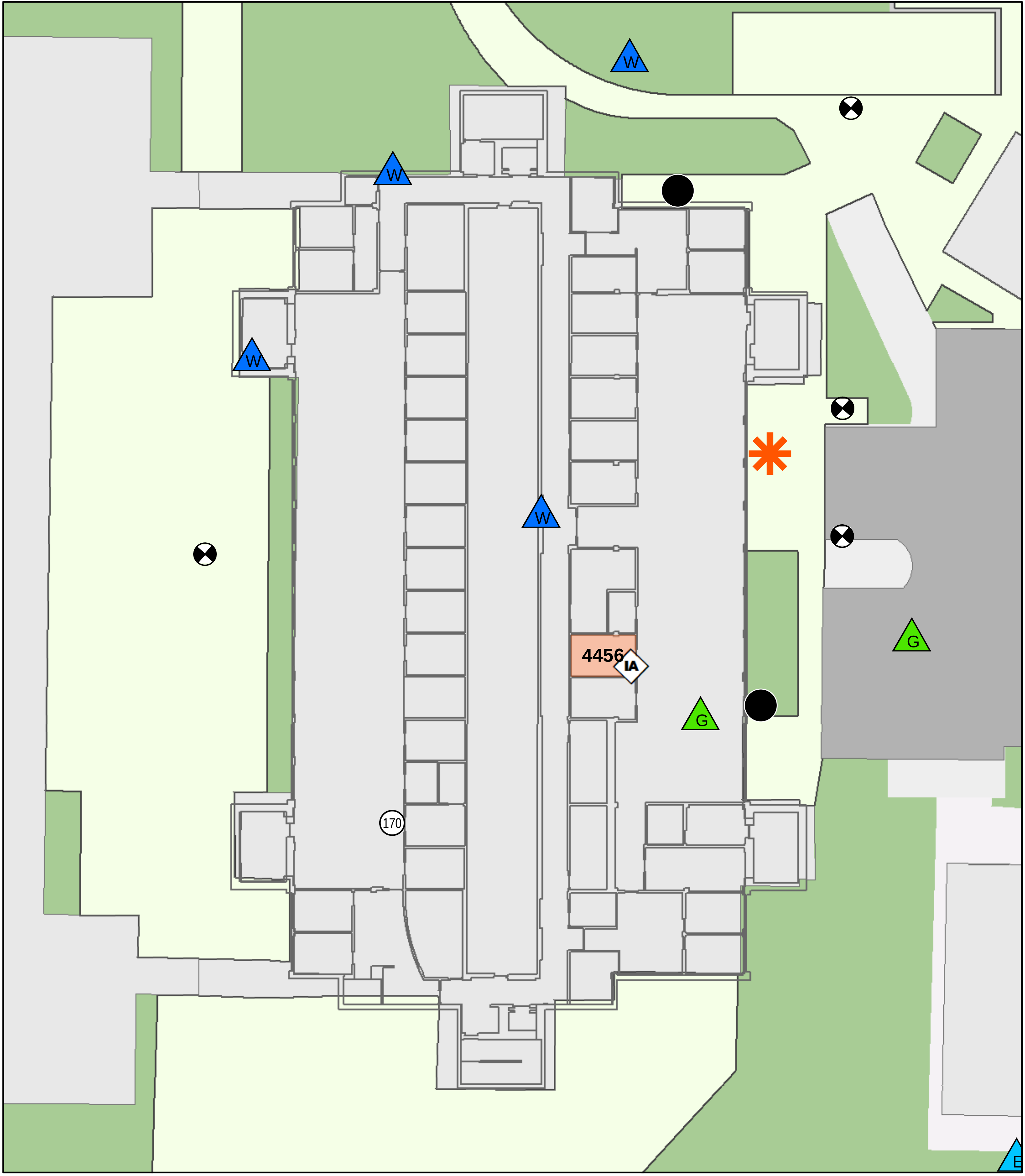
Boyce Hall

Floor 3

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F3.mxd 3/11/2020

Boyce Hall

Index No:
P5341



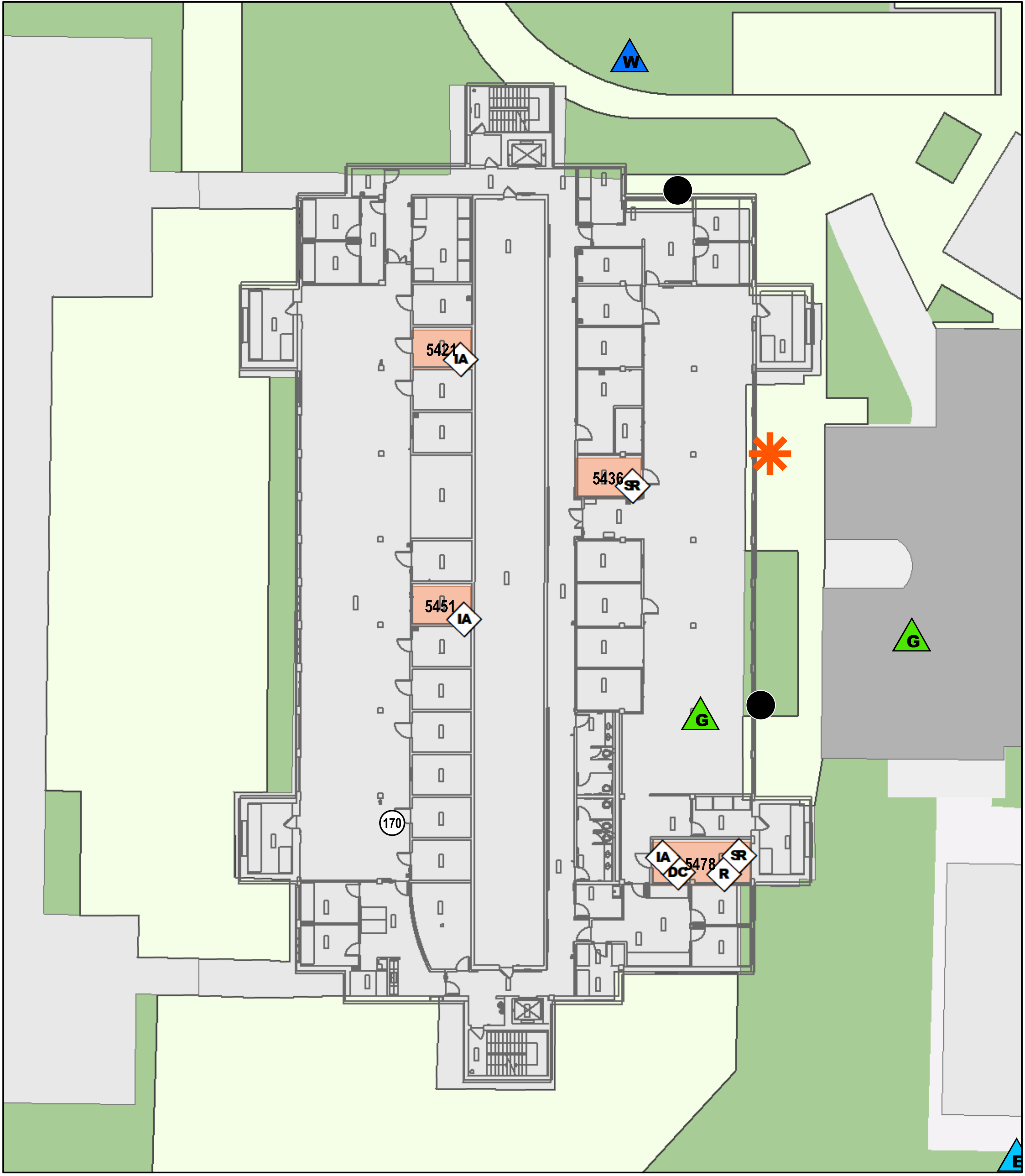
Boyce Hall

Floor 4

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F4.mxd 3/11/2020

Boyce Hall

Index No: P5341



UCR

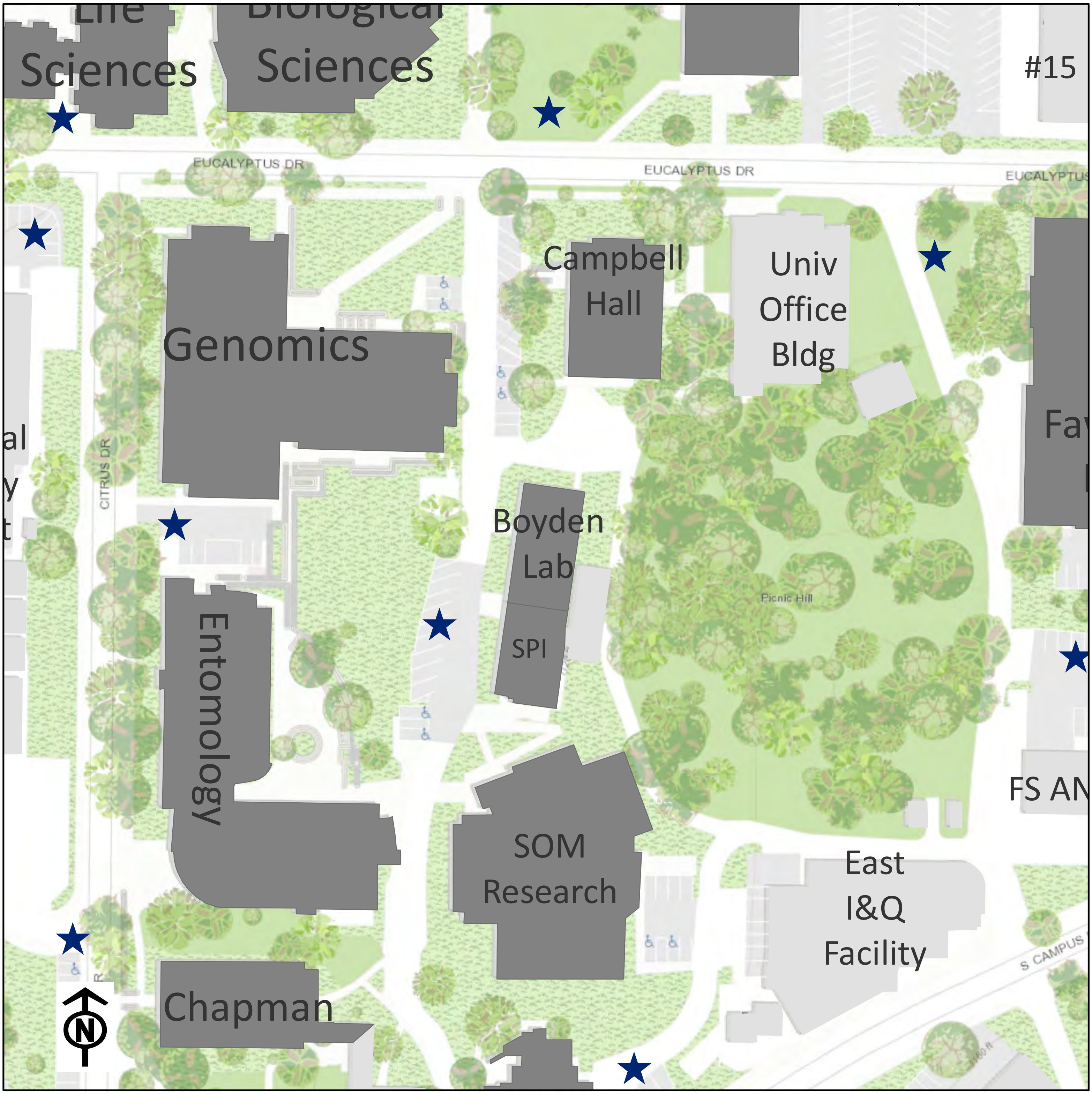
N

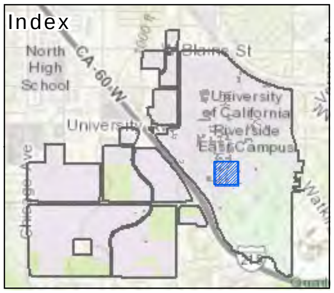
V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F5.mxd 3/11/2020

Boyce Hall
Floor 5

Boyden Lab

Index No:
P5482





★ Emergency Assembly Areas

● Campus Entrance

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Map not to scale

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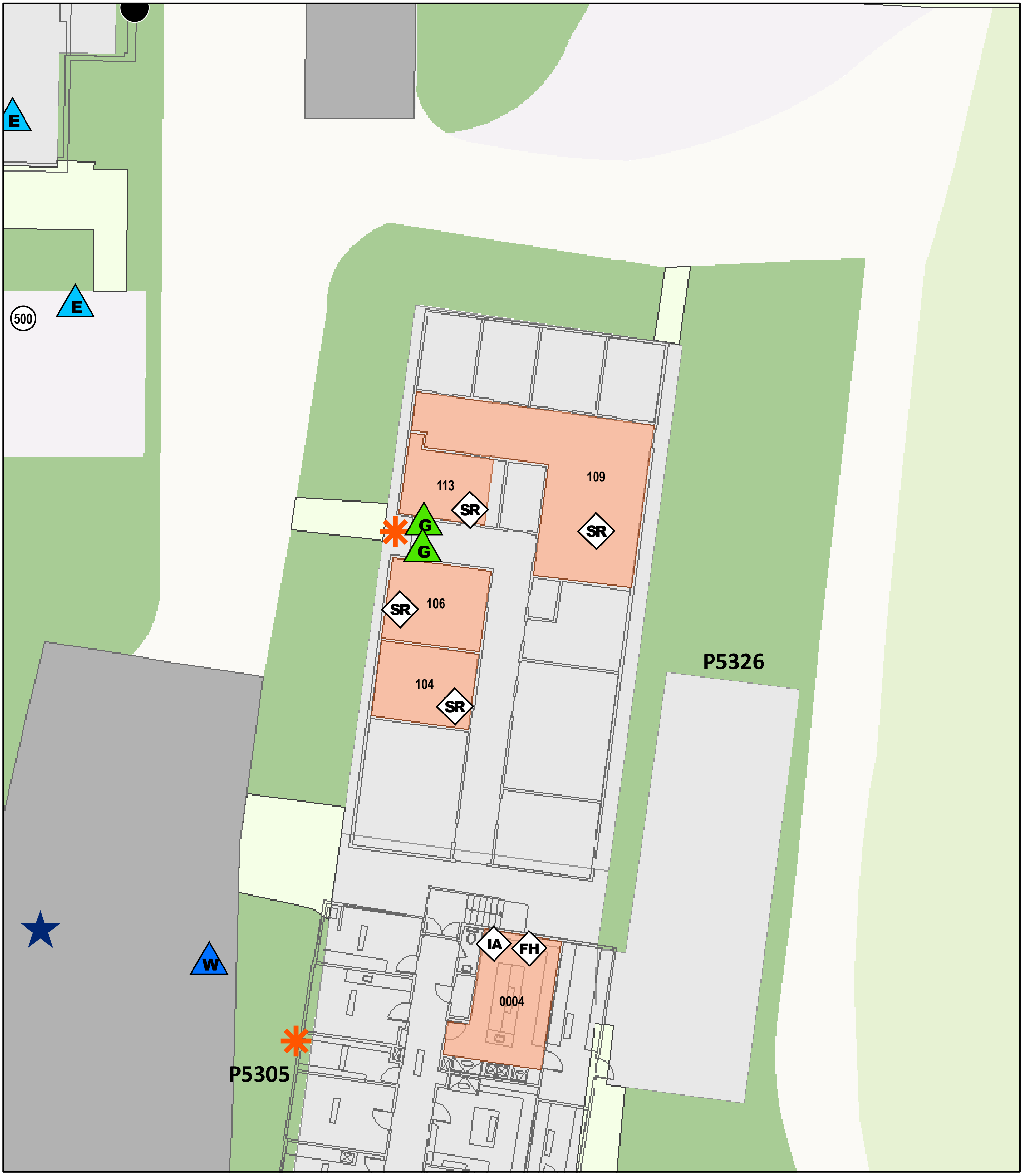
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Boyden Lab

Index No:
P5482



UCR

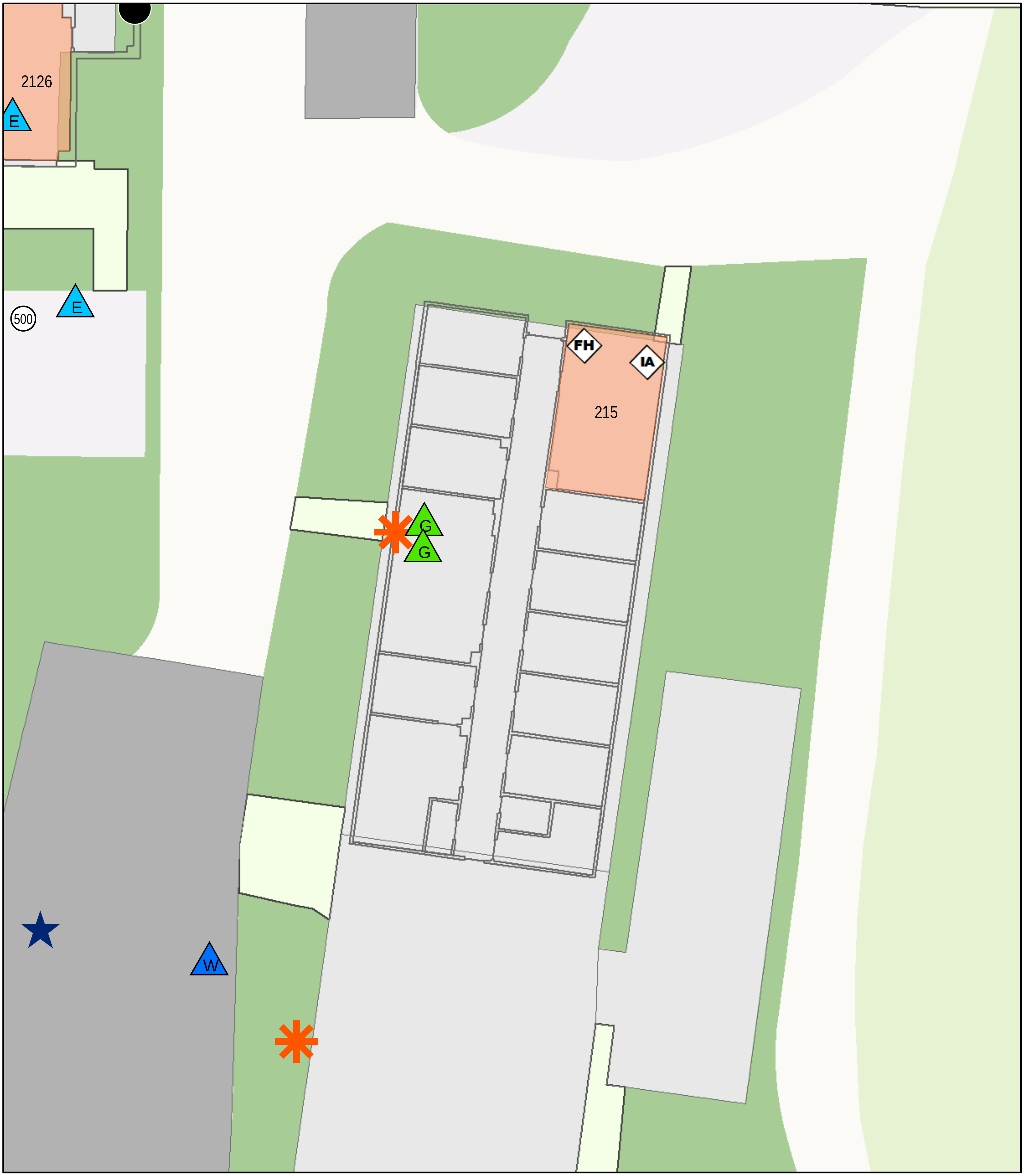
Boyden Lab

Floor 1

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F1_v2.mxd 3/20/2020

Index No:
P5482

Boyden Lab



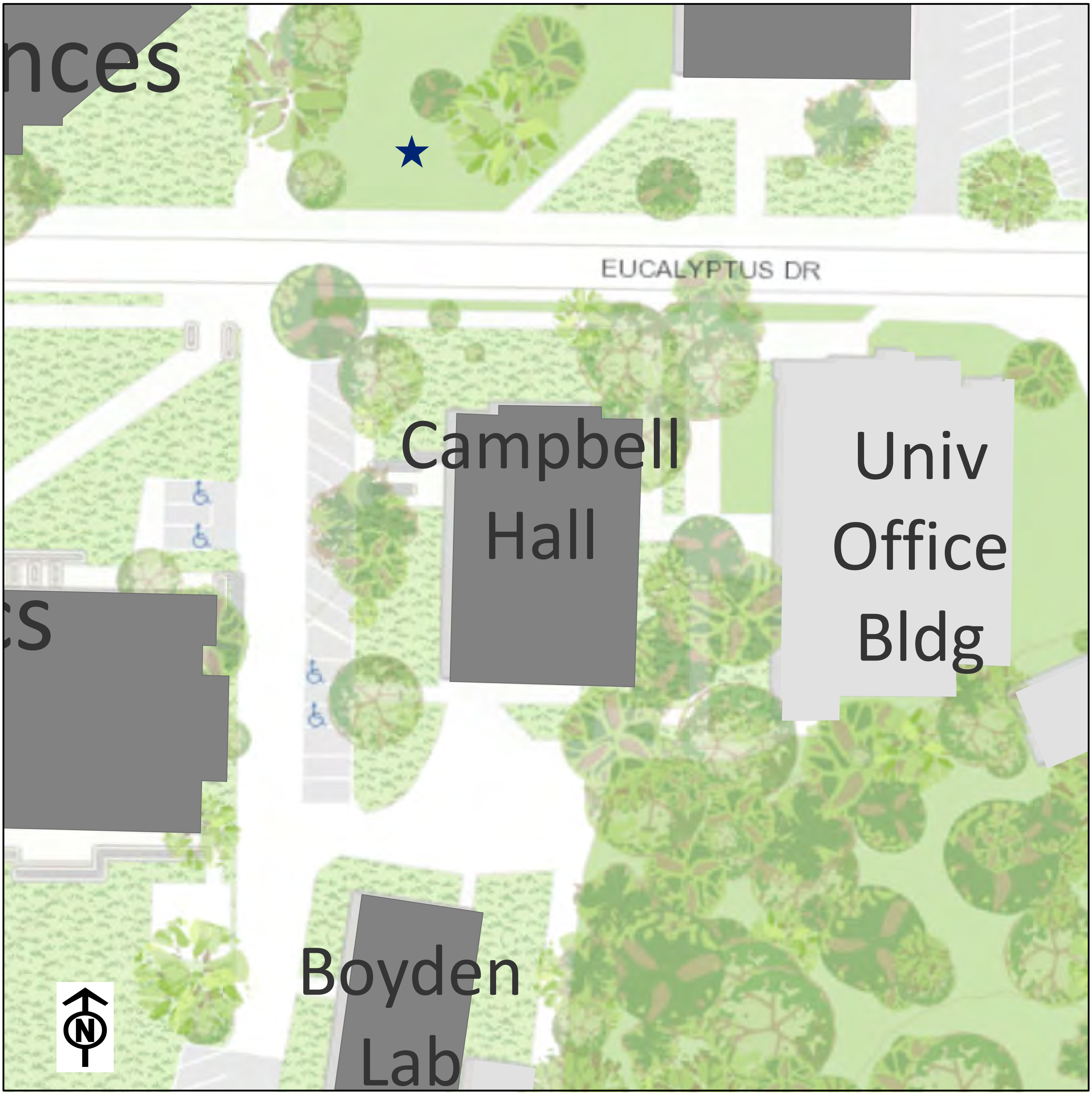
Boyden Lab

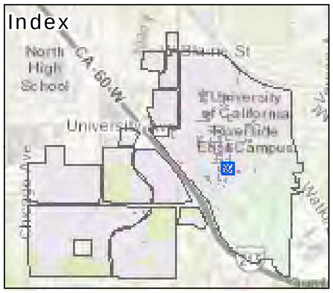
Floor 2

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F2.mxd 3/11/2020

Campbell Hall

Index No:
P5263





Map not to scale

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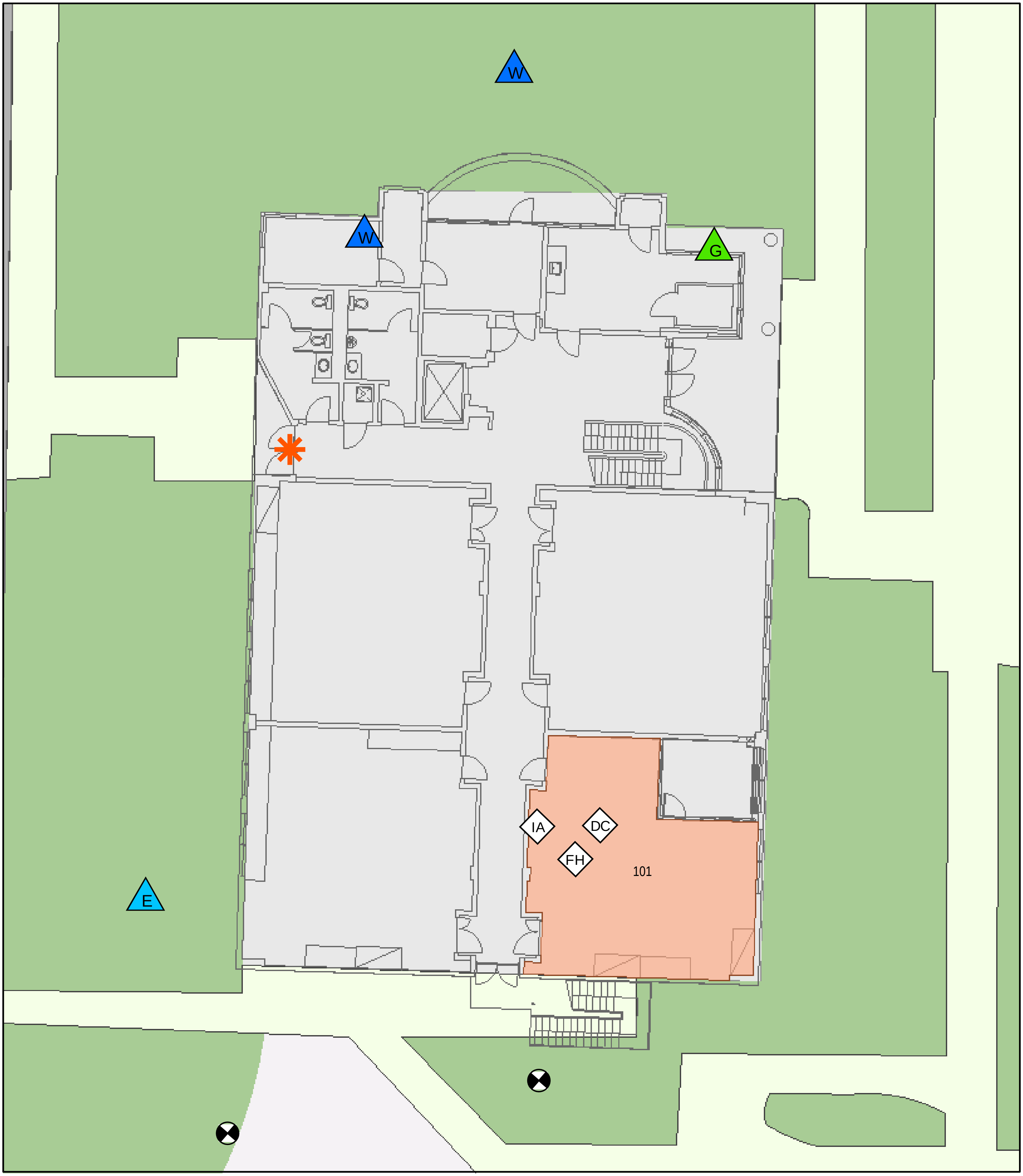
V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/20/2020

Cambell Hall

Index No:
P5263



N

Cambell Hall
Floor 1

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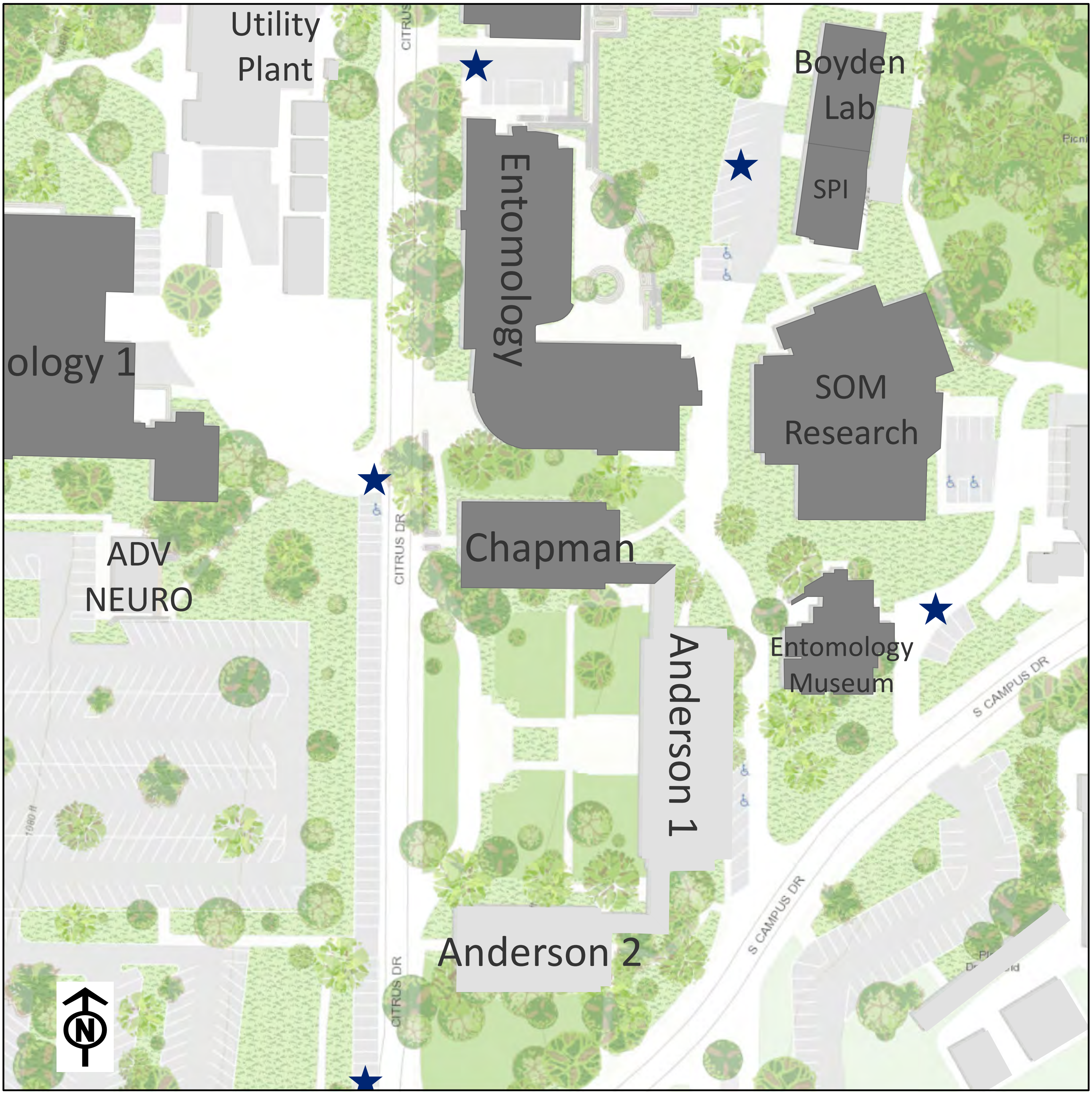
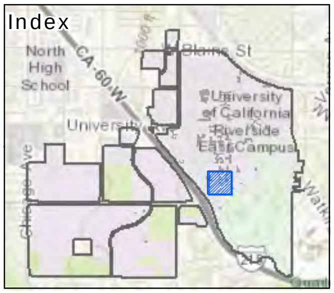
Chapman Hall

Index No:
P5215





★ Emergency Assembly Areas

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Map not to scale

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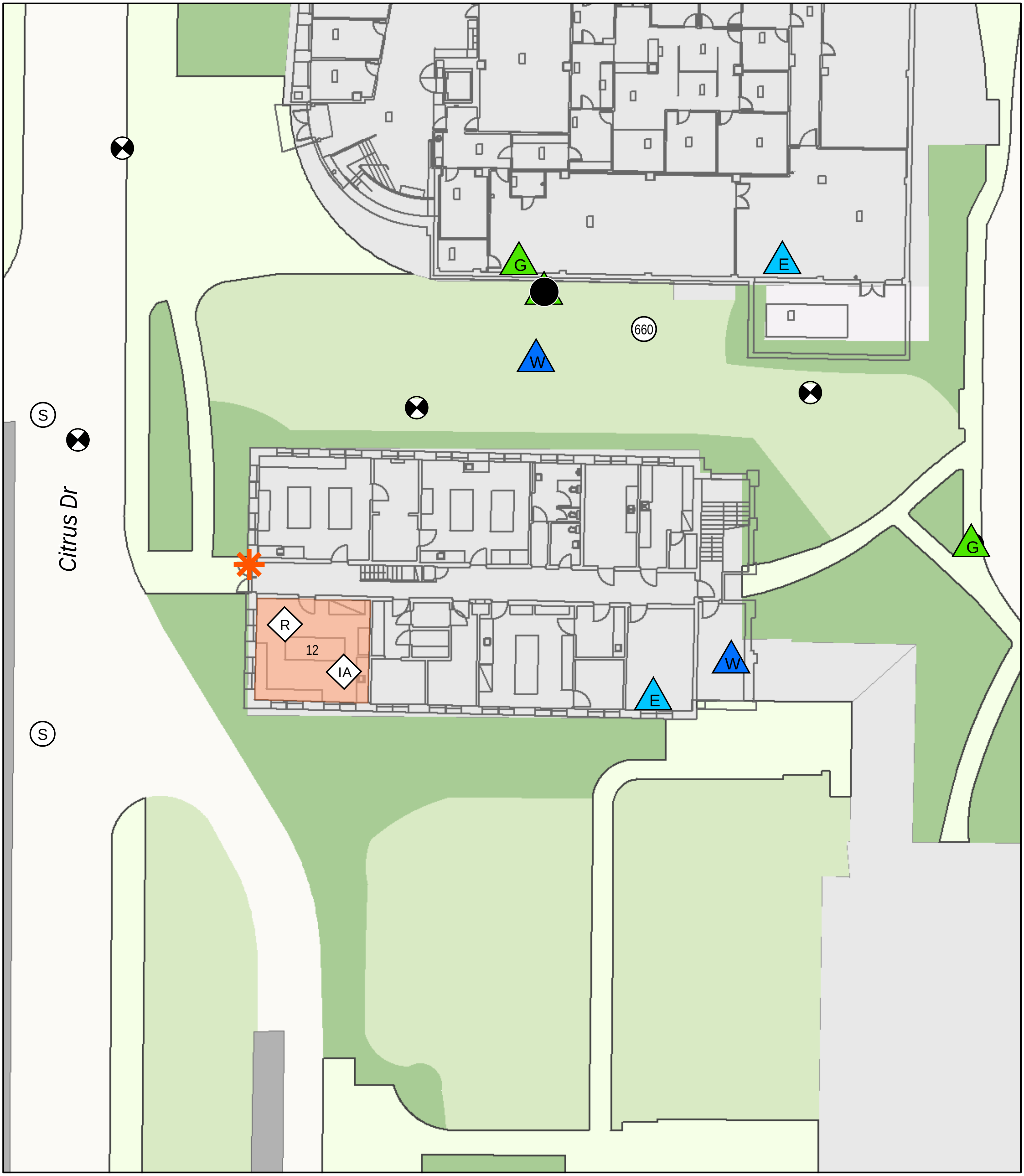
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Chapman Hall

Index No:
P5215



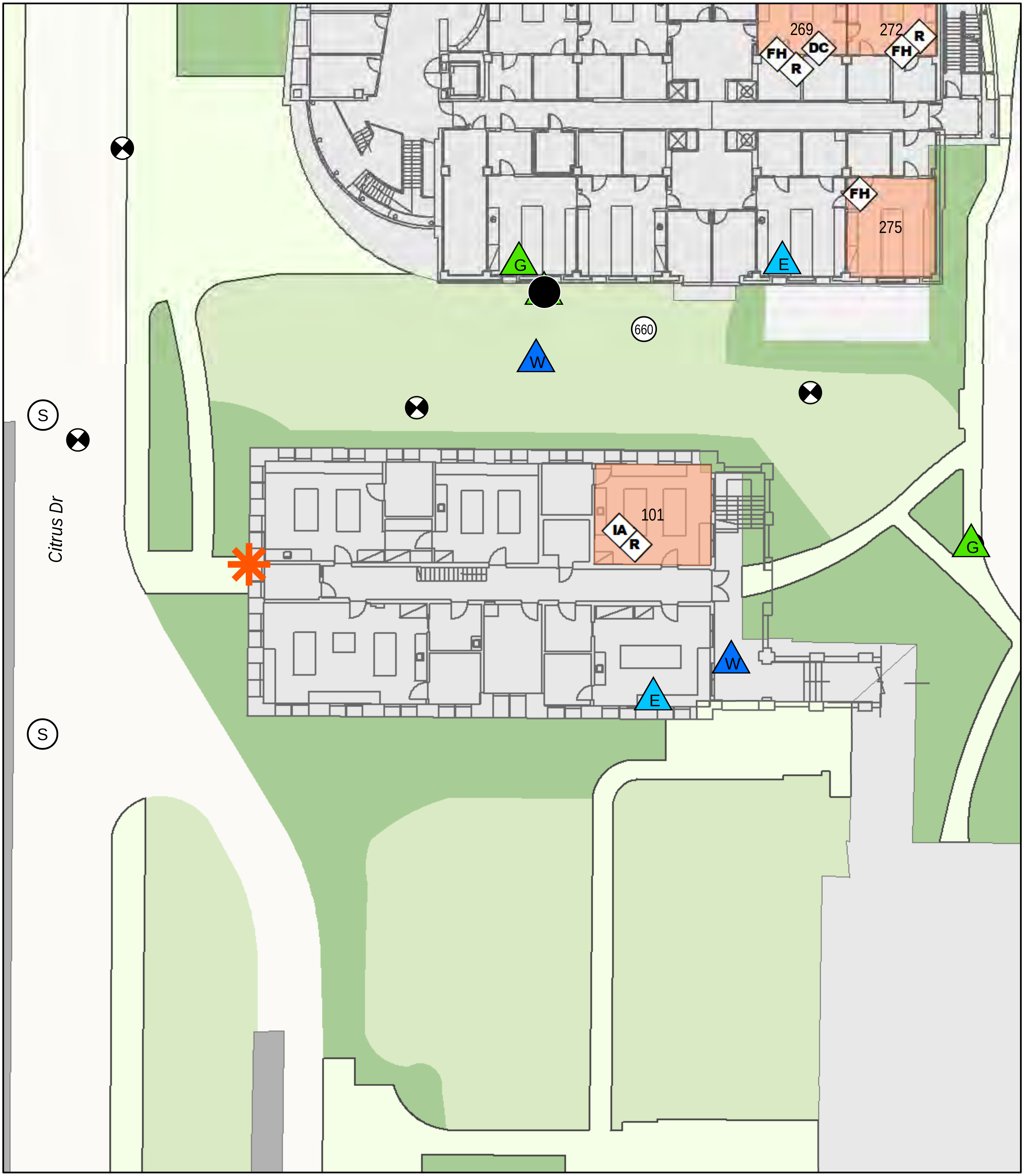
N

Chapman Hall
Floor 1

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F1.mxd 3/10/2020

Index No:
P5125

Chapman Hall

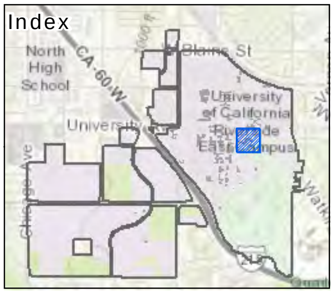


Chapman Hall

Floor 2

Chemical Sciences

Index No:
P5414



Map not to scale

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P5414

Chemical Sciences

Chemical Sciences

Floor 2

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Chemical Sciences

Chemical Sciences

Floor 3

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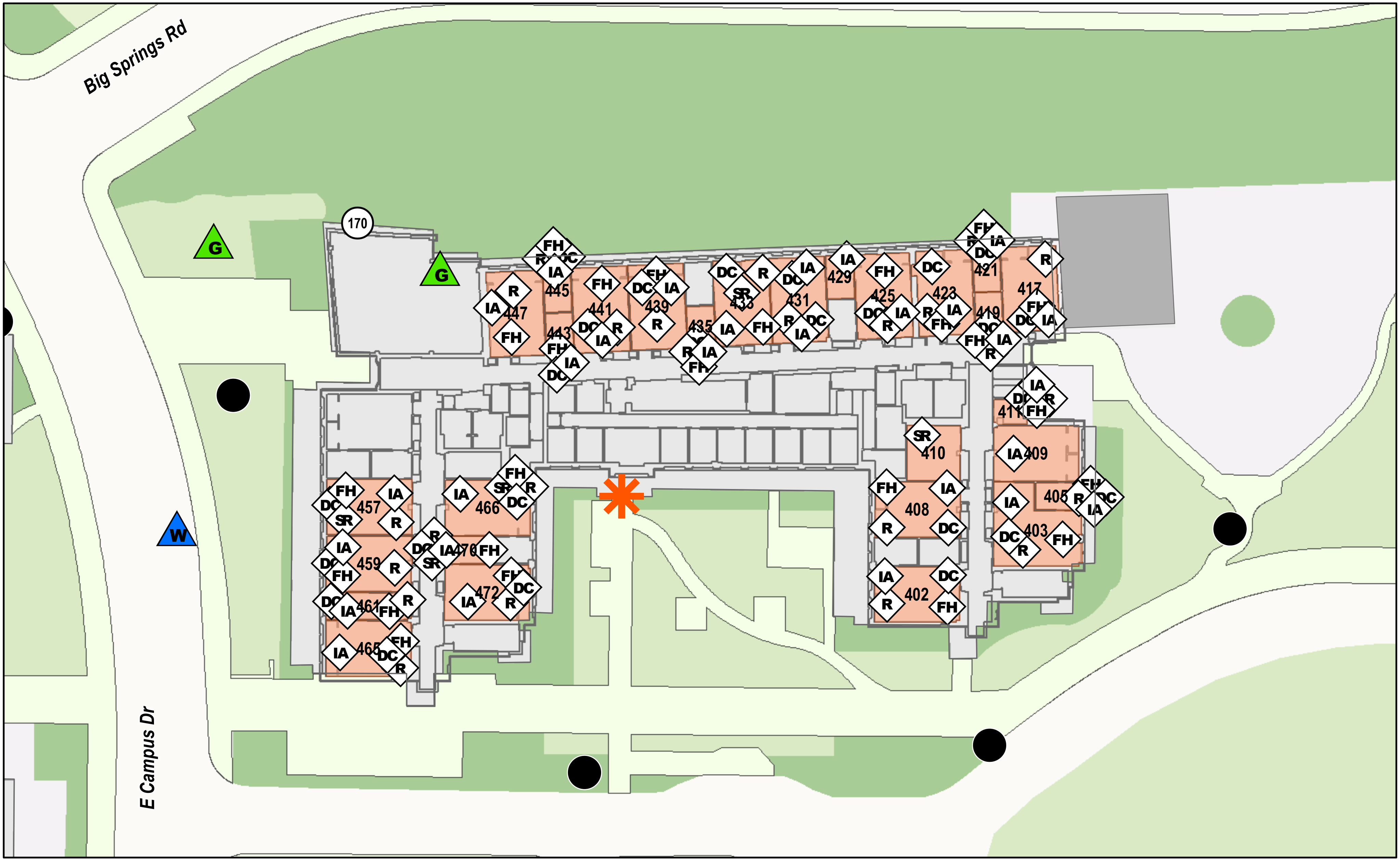
Chemical Sciences

Index No:
P5414



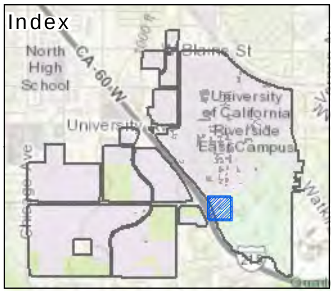
N

Chemical Sciences
Floor 4

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_LS_F4.mxd 3/9/2020

College Bldg North

Index No:
P5517



Map not to scale

★ Emergency Assembly Areas

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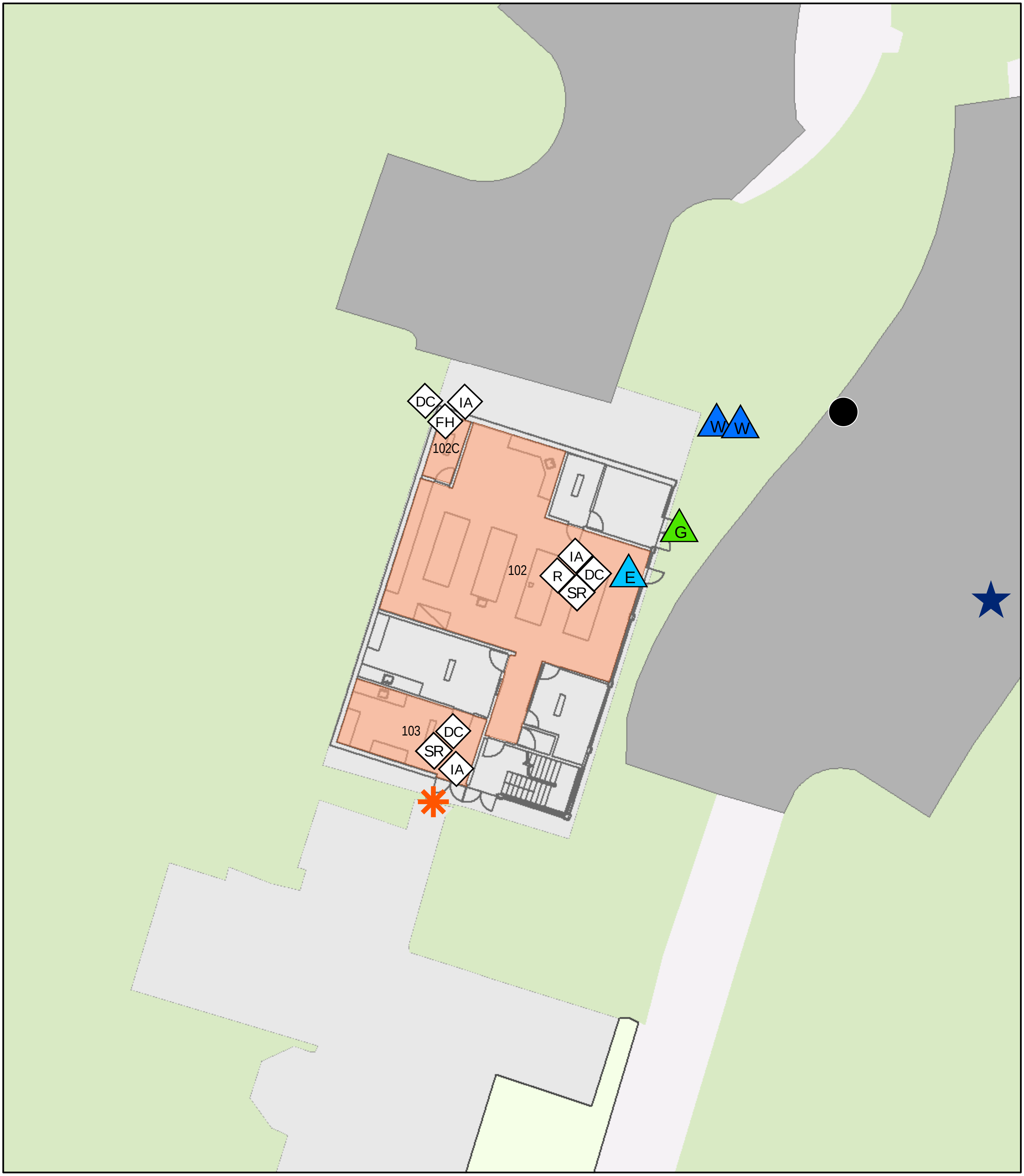
College Bldg North
Area Map

College Bldg North

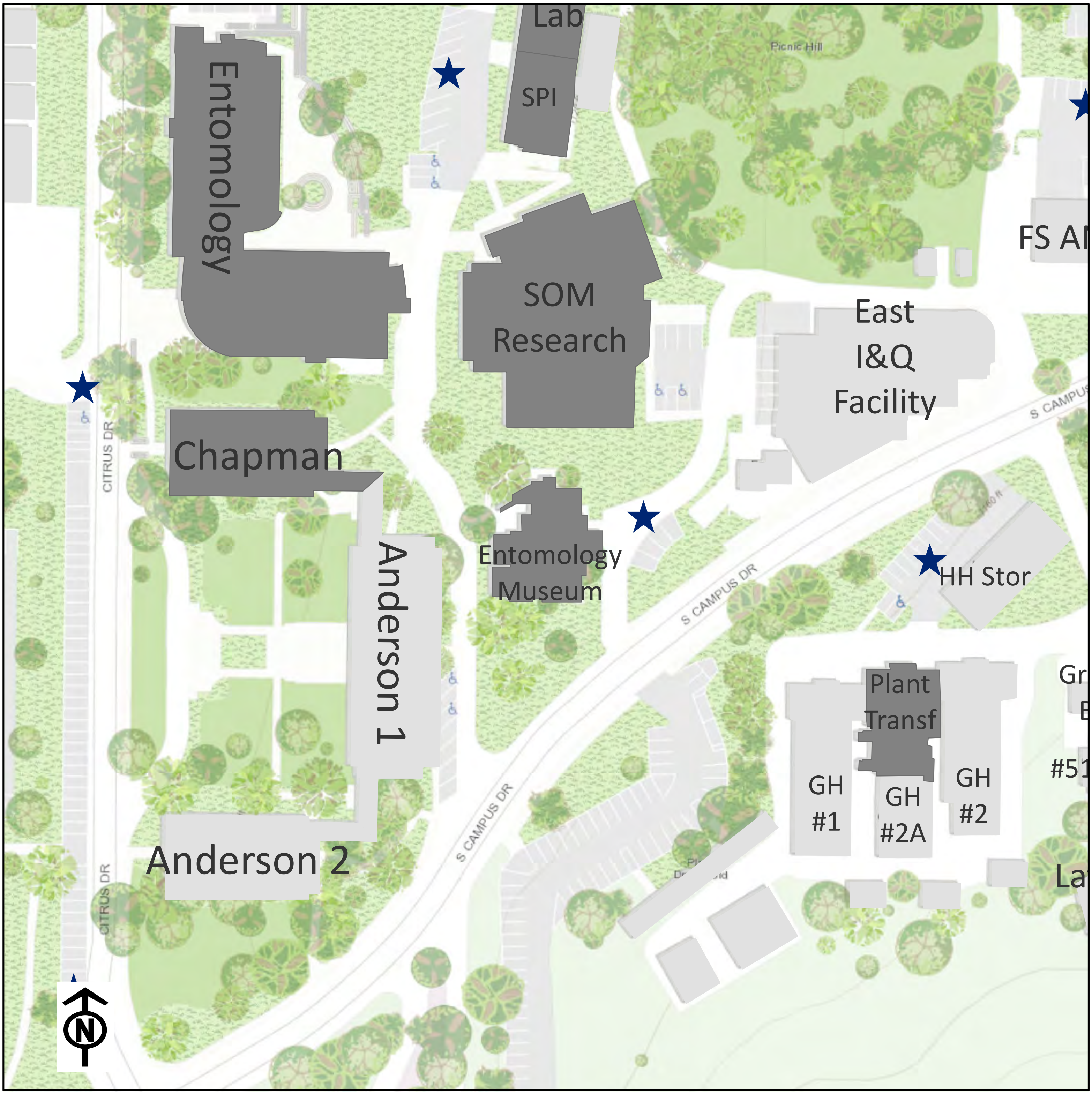


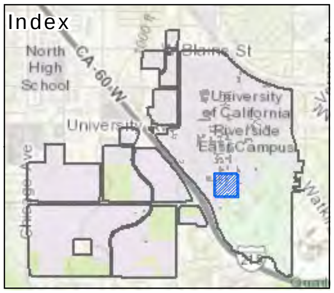
College Bldg North

Floor 1

Entomology Museum

**Index No:
P5256**





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Map not to scale

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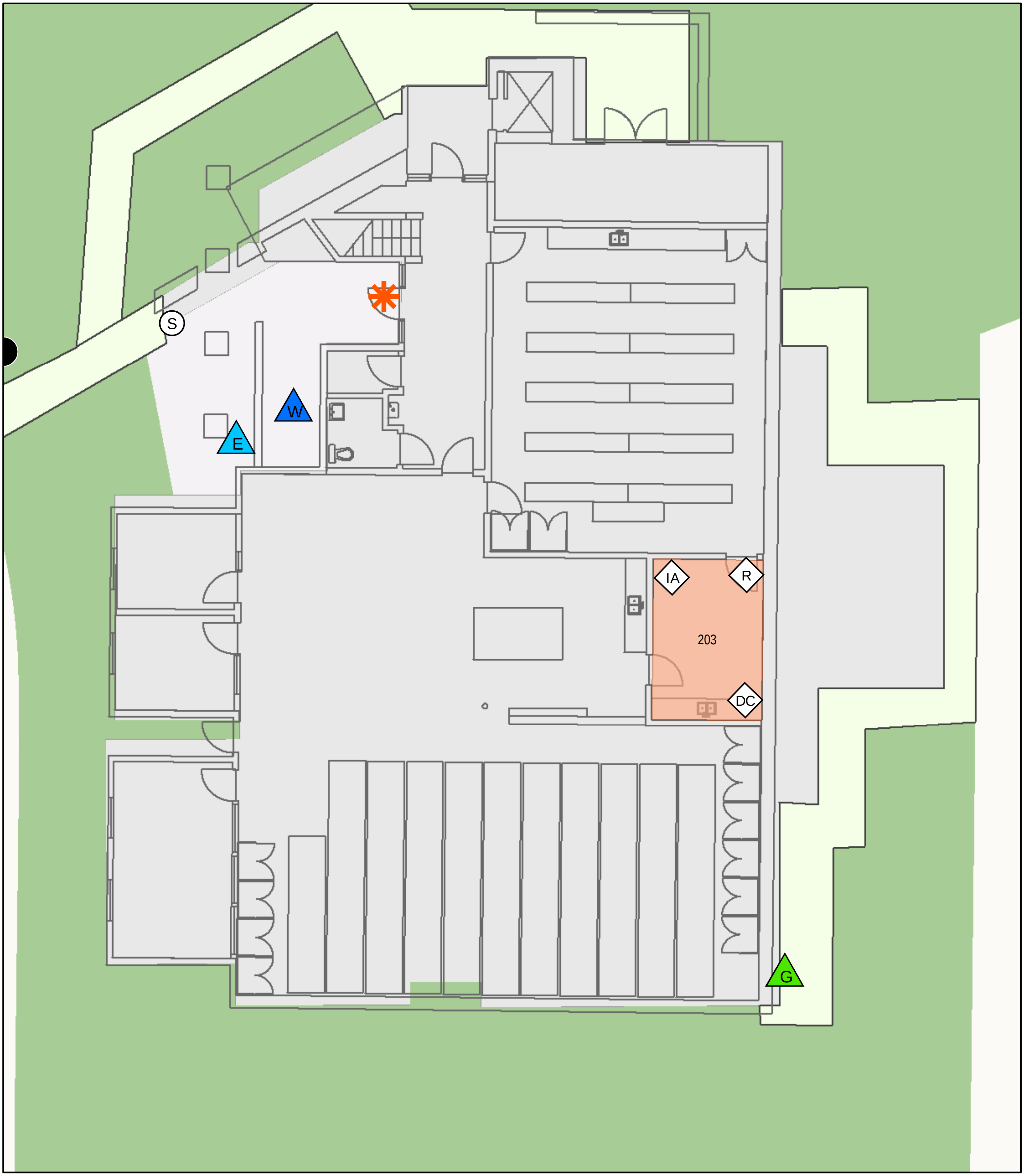
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Entomology Museum

Index No: P5256



N

Entomology Museum

Floor 1

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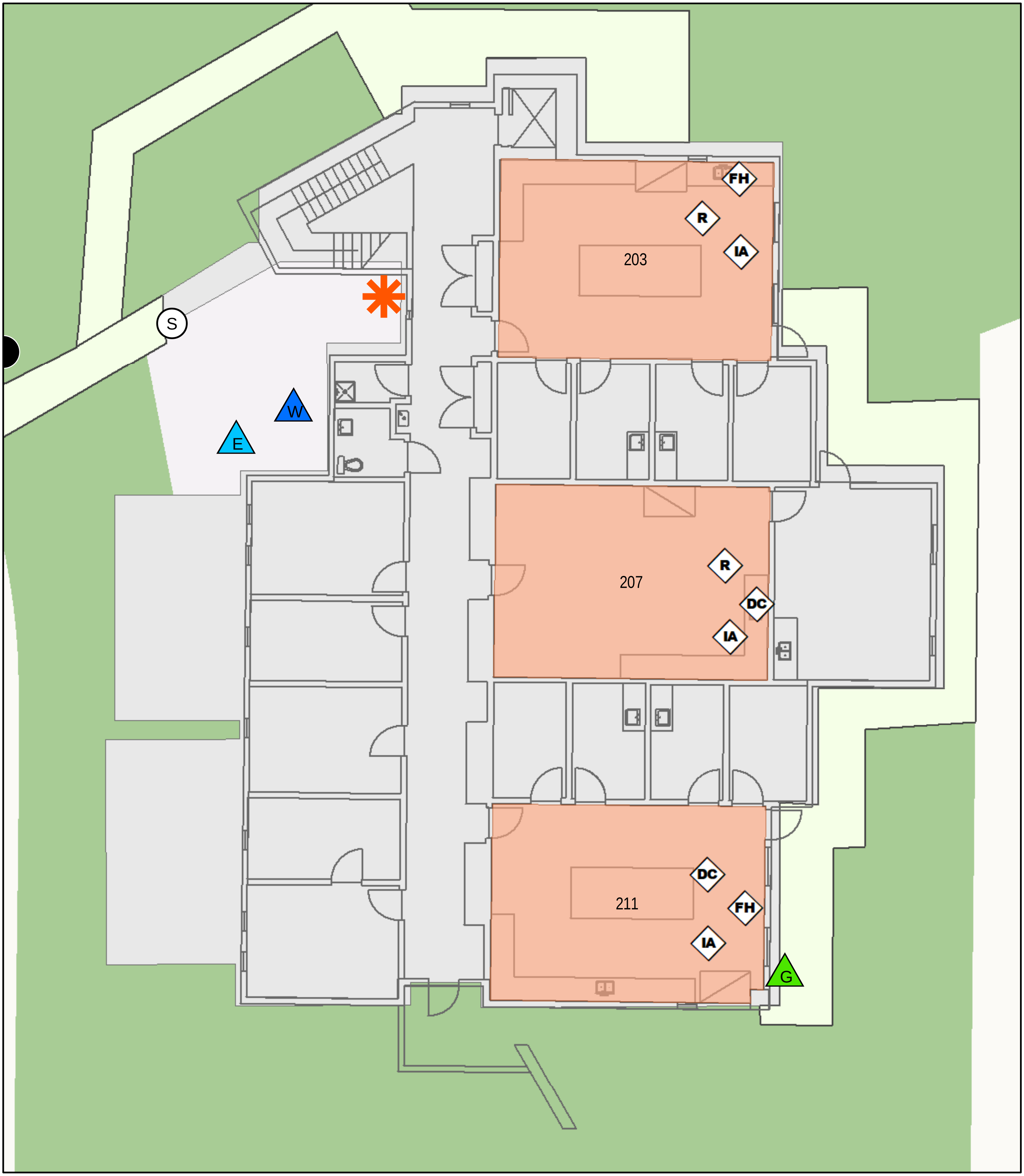
P5256

Entomology Museum



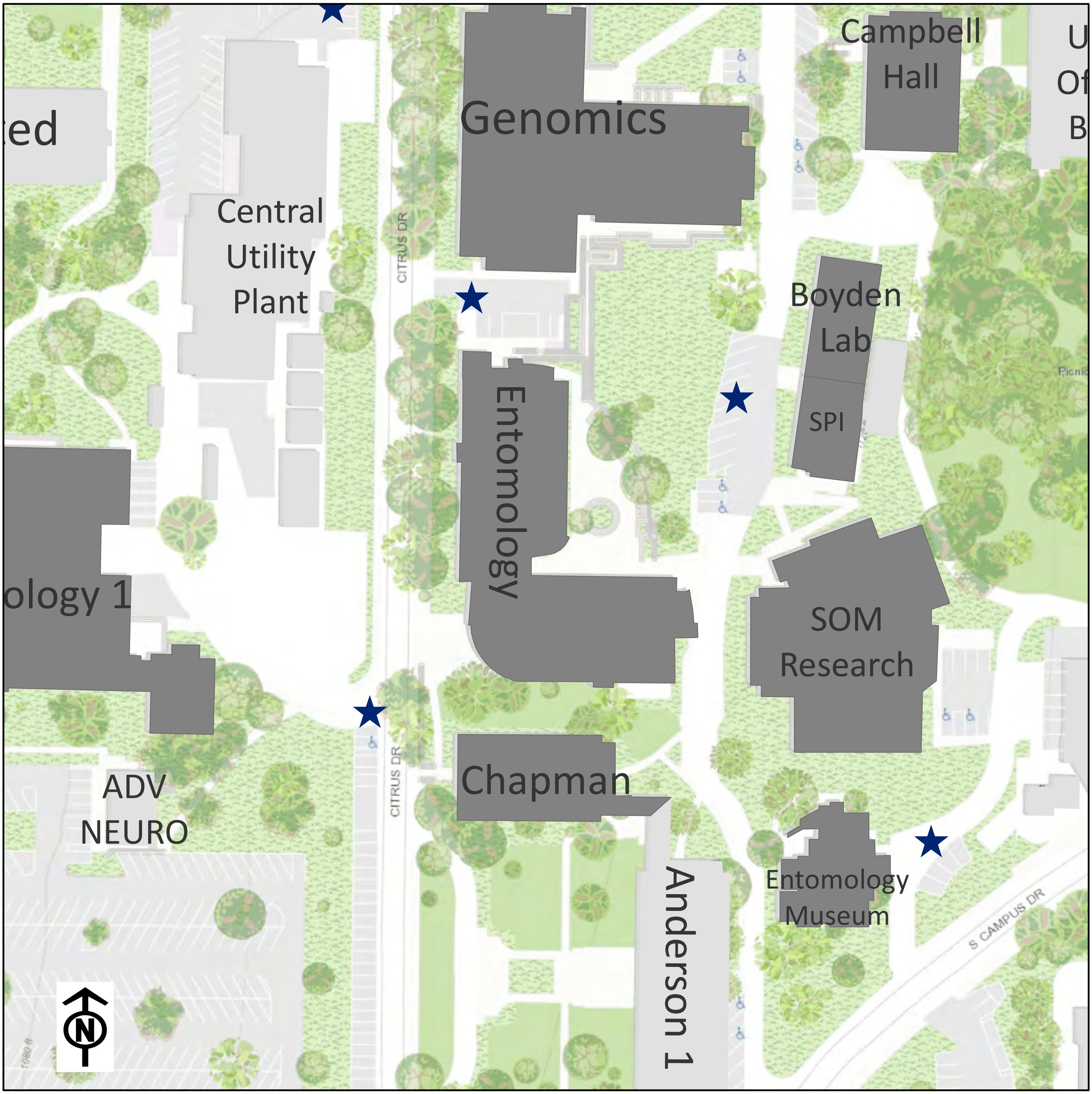
Entomology Museum

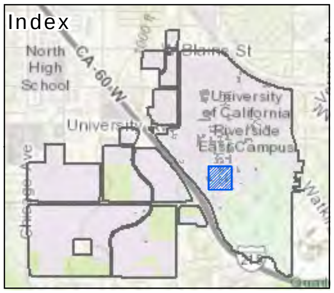
Floor 2

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F2.mxd 3/11/2020

Entomology

Index No: P5417





★ Emergency Assembly Areas

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Map not to scale

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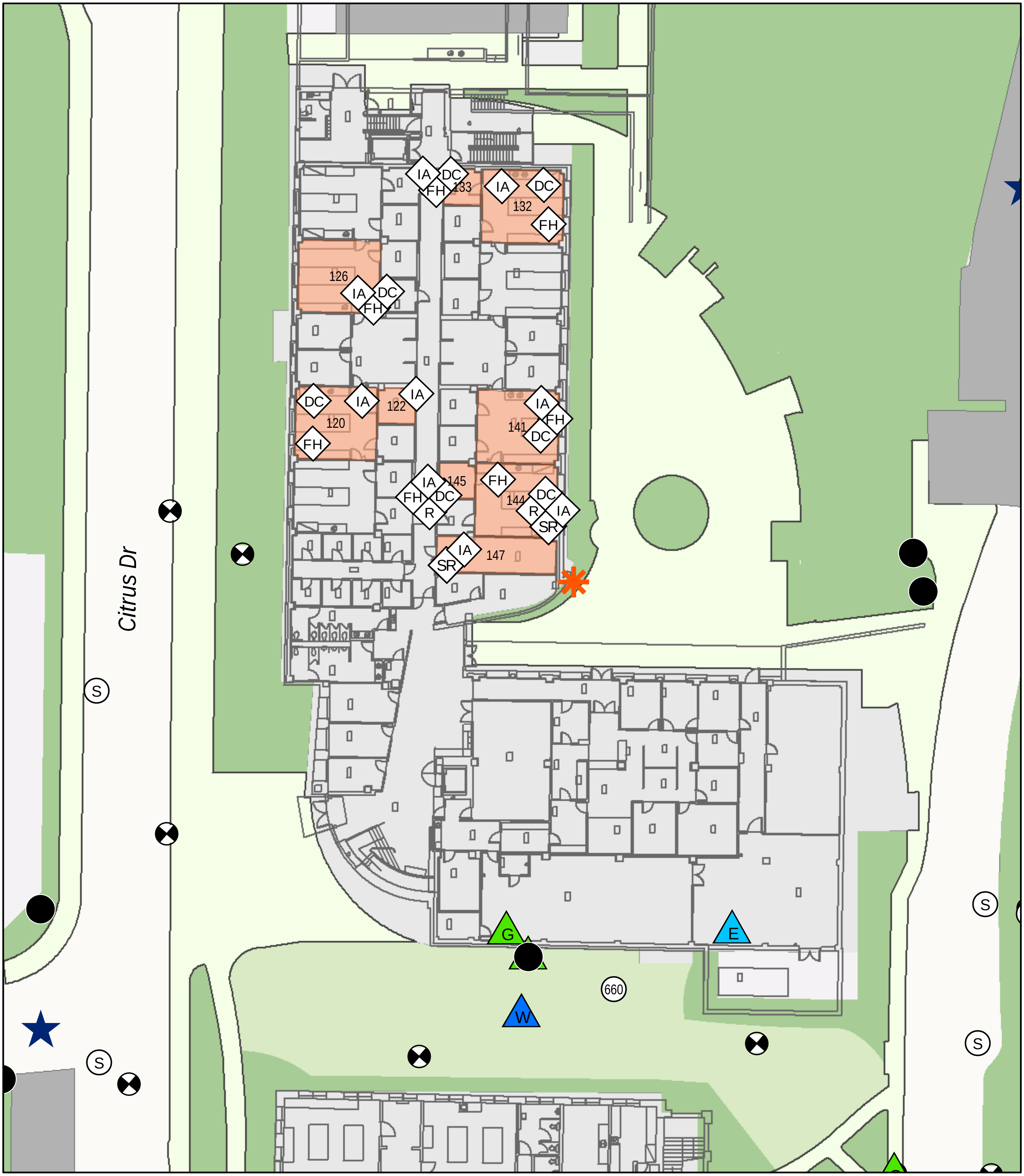
Entomolgy

Index No:
P5417



Entomolgy
Floor 1

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P5417

Entomology

Entomology

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Entomology

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Floor 3

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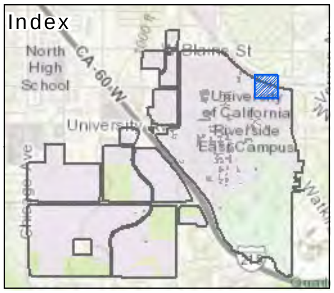
EH&S Expansion

Index No: P5388



Map not to scale

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Environmental Health & Safety Expansion

Index No:
P5388

Environmental Health & Safety Expansion

Floor 1

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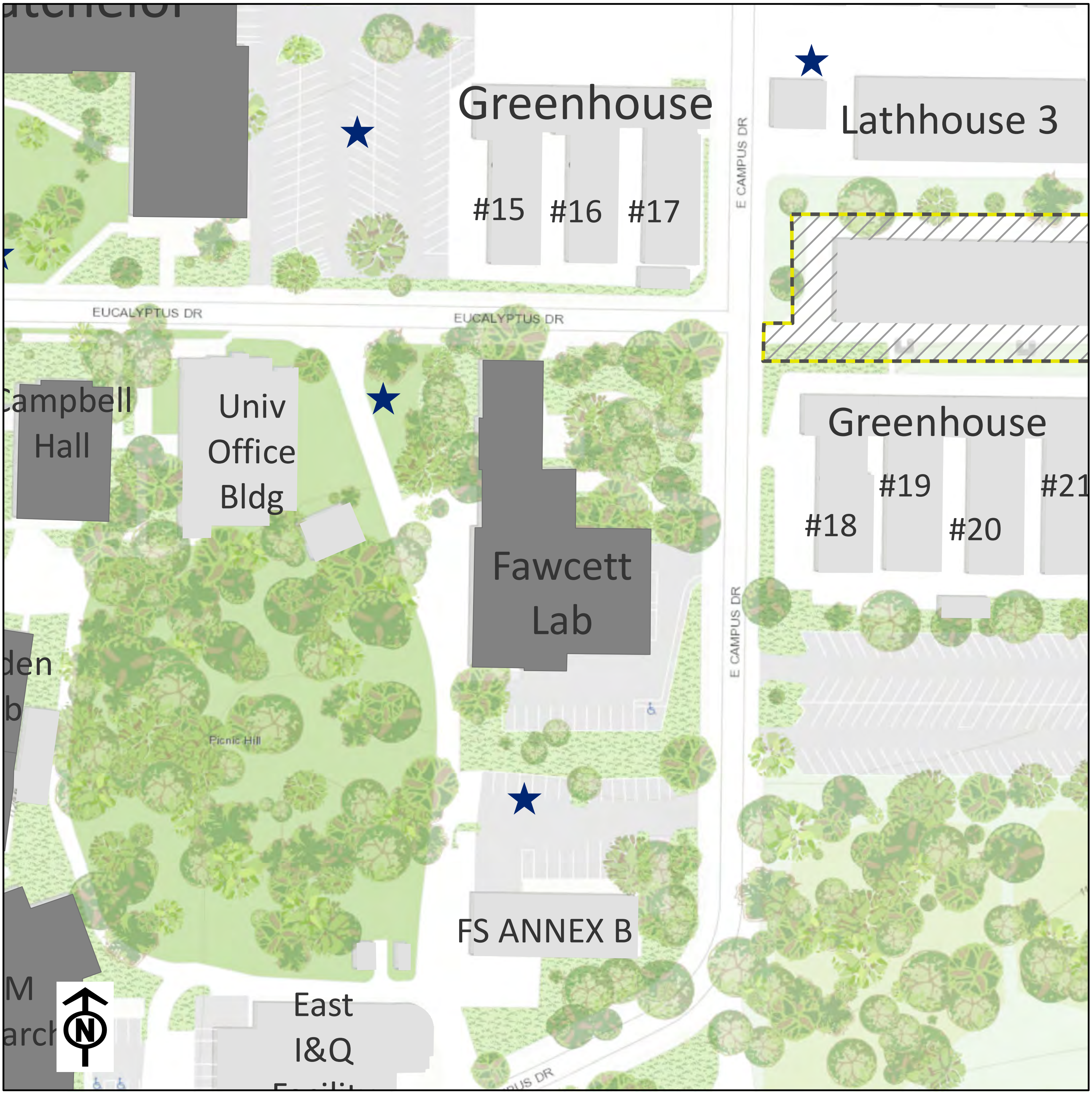
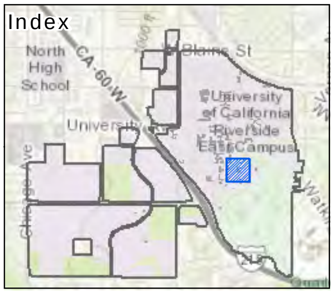
Fawcett Lab

Index No: P5503





★ Emergency Assembly Areas

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Map not to scale

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Fawcett Lab

Fawcett Lab

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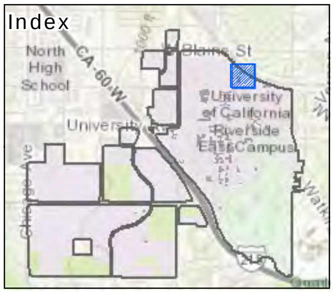
Corporation Yard Buildings

Index No:
P5364, P5487, Z1135



★ Emergency Assembly Areas

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Map not to scale

UCR
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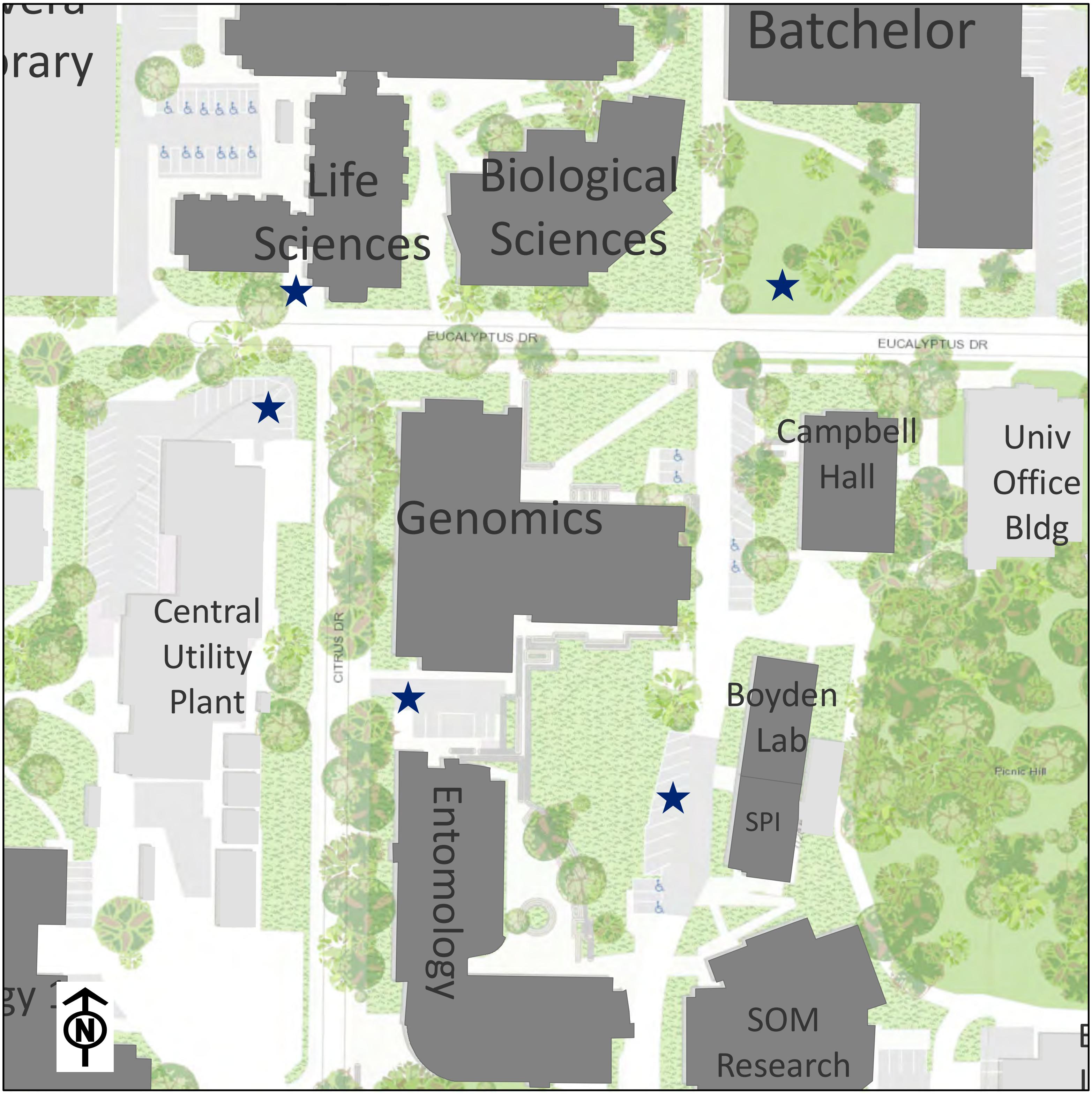
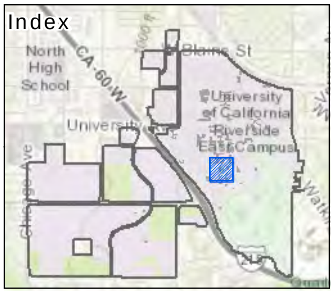
Corporation Yard Buildings
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Genomics

Index No:
P5196





Map not to scale

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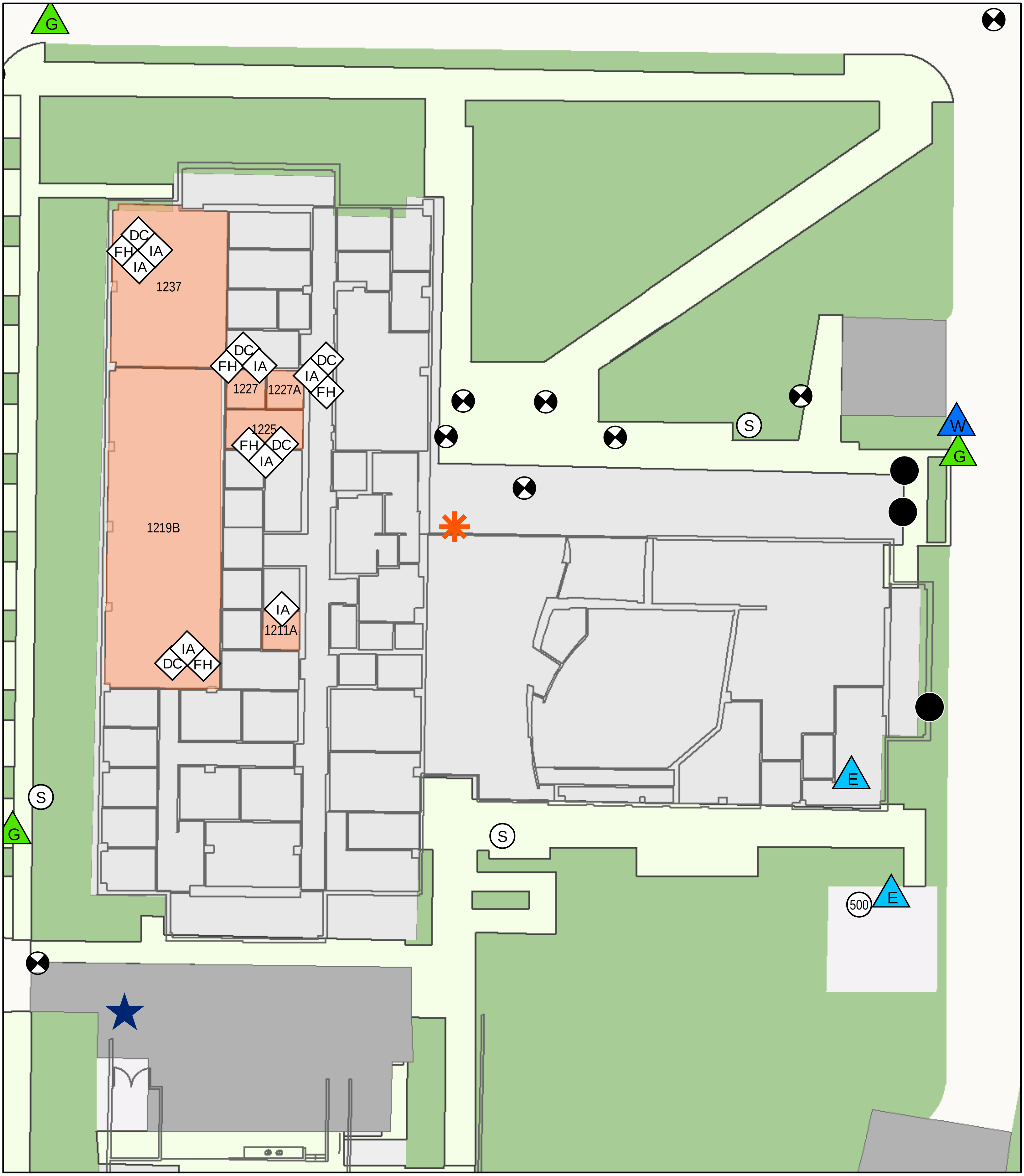
P5196



Genomics
Floor 1

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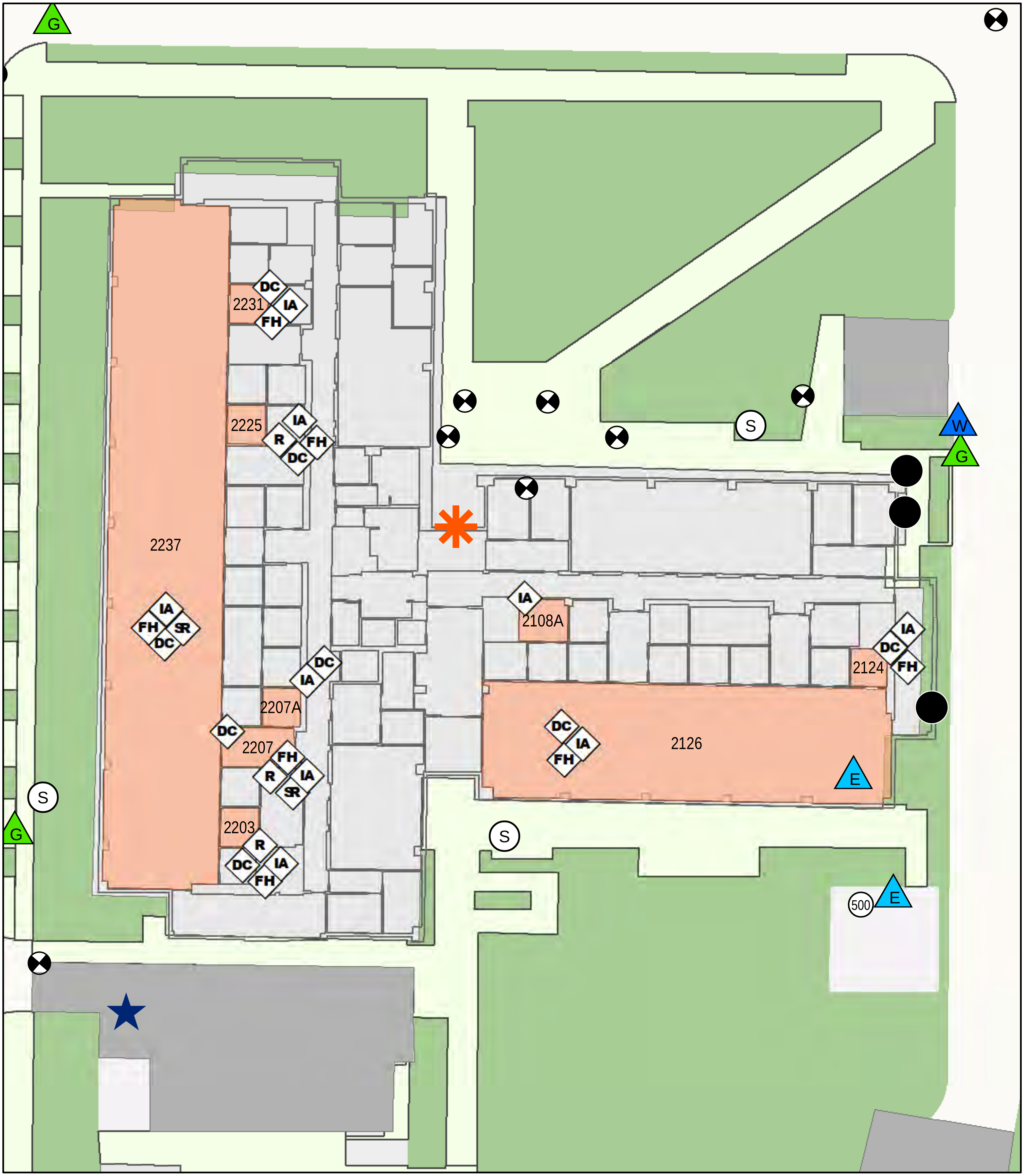
P5196

Genomics

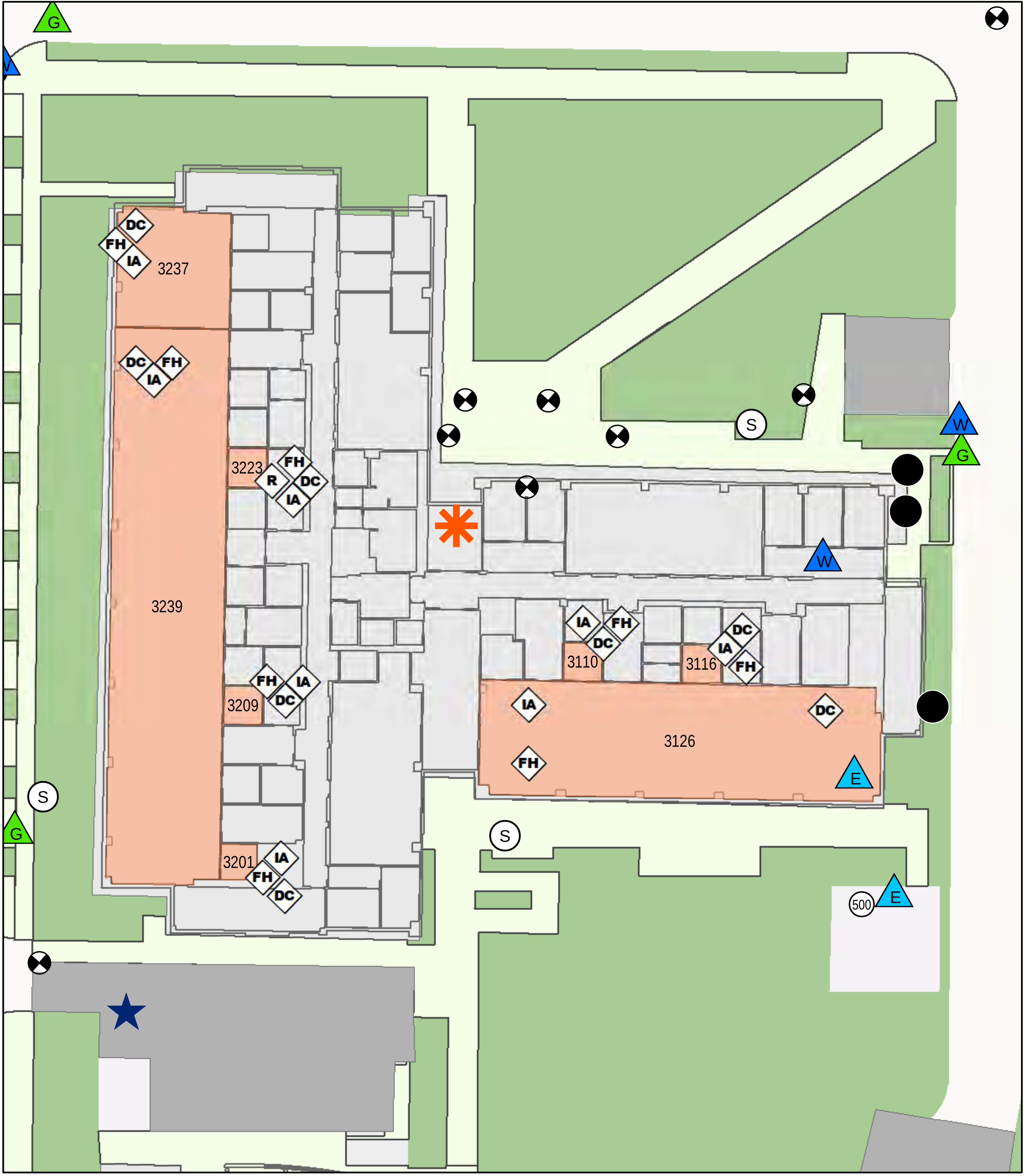


Genomics

Floor 2

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F2.mxd 3/11/2020

Genomics



Genomics

Floor 3

Genomics

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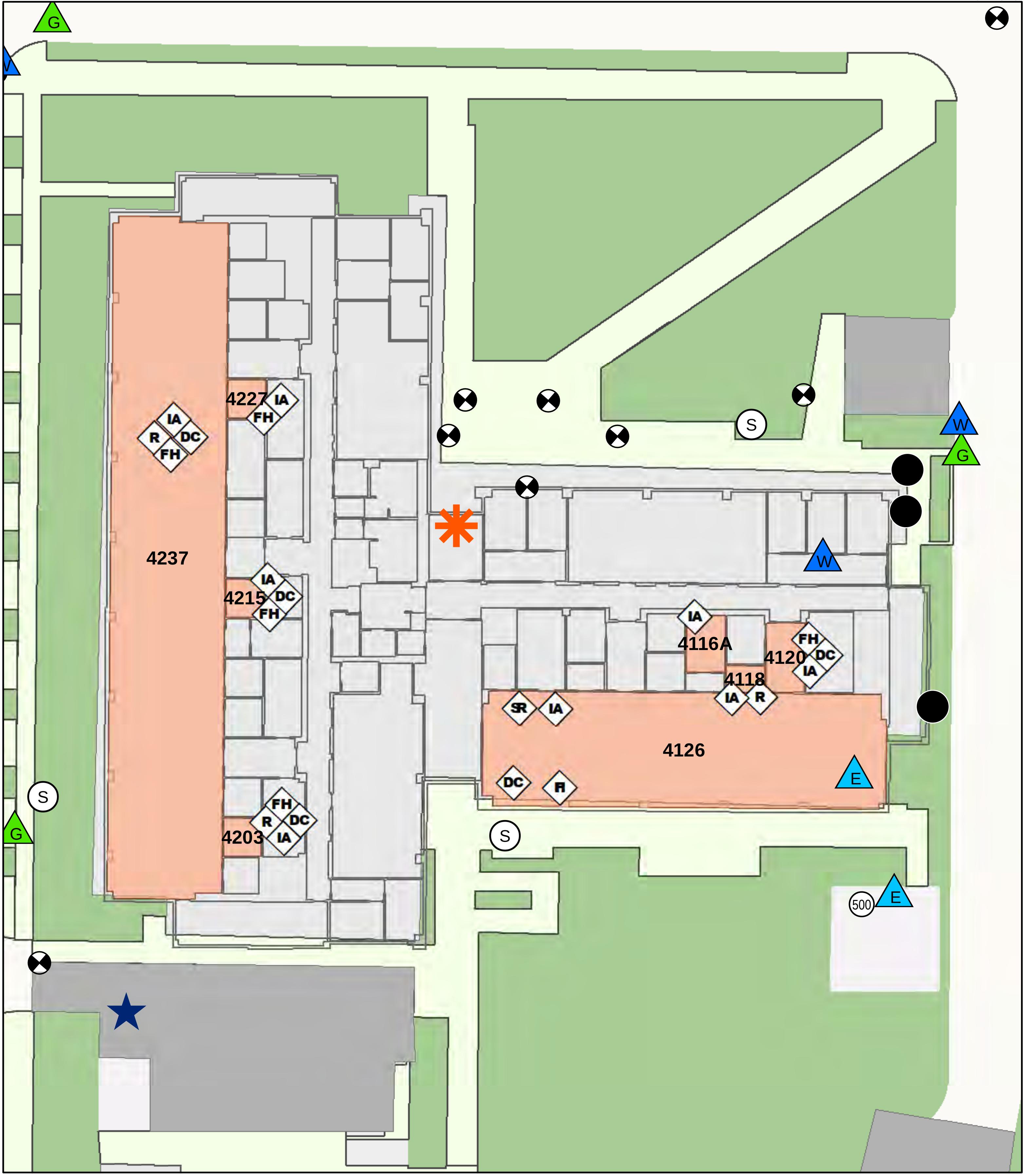


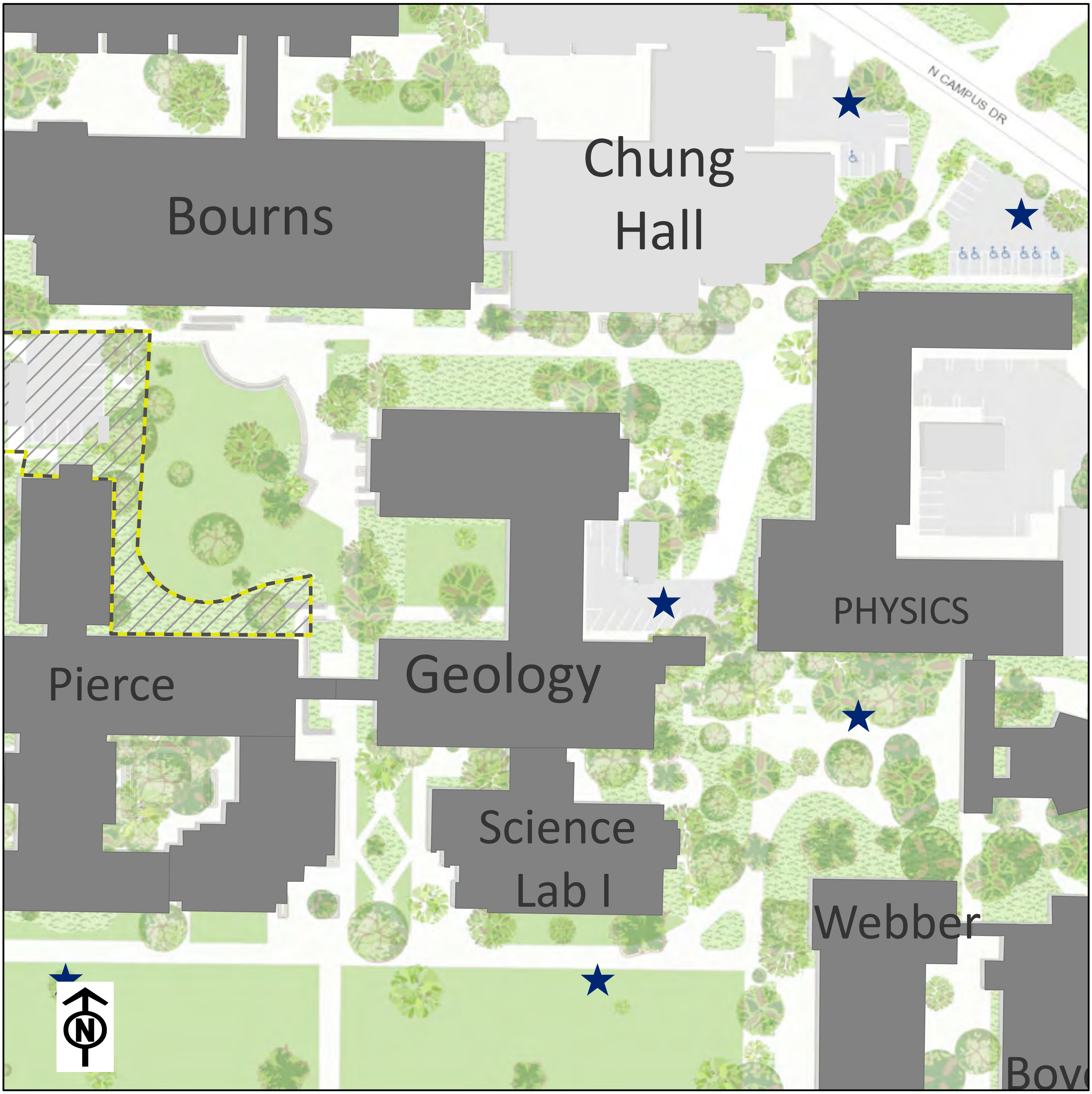
Genomics

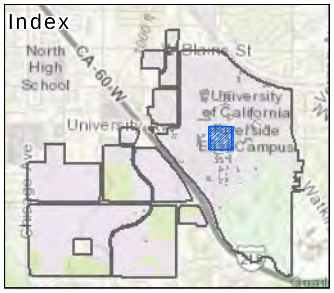
Floor 4

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F4.mxd 3/11/2020

Geology

Index No:
P5335





Map not to scale

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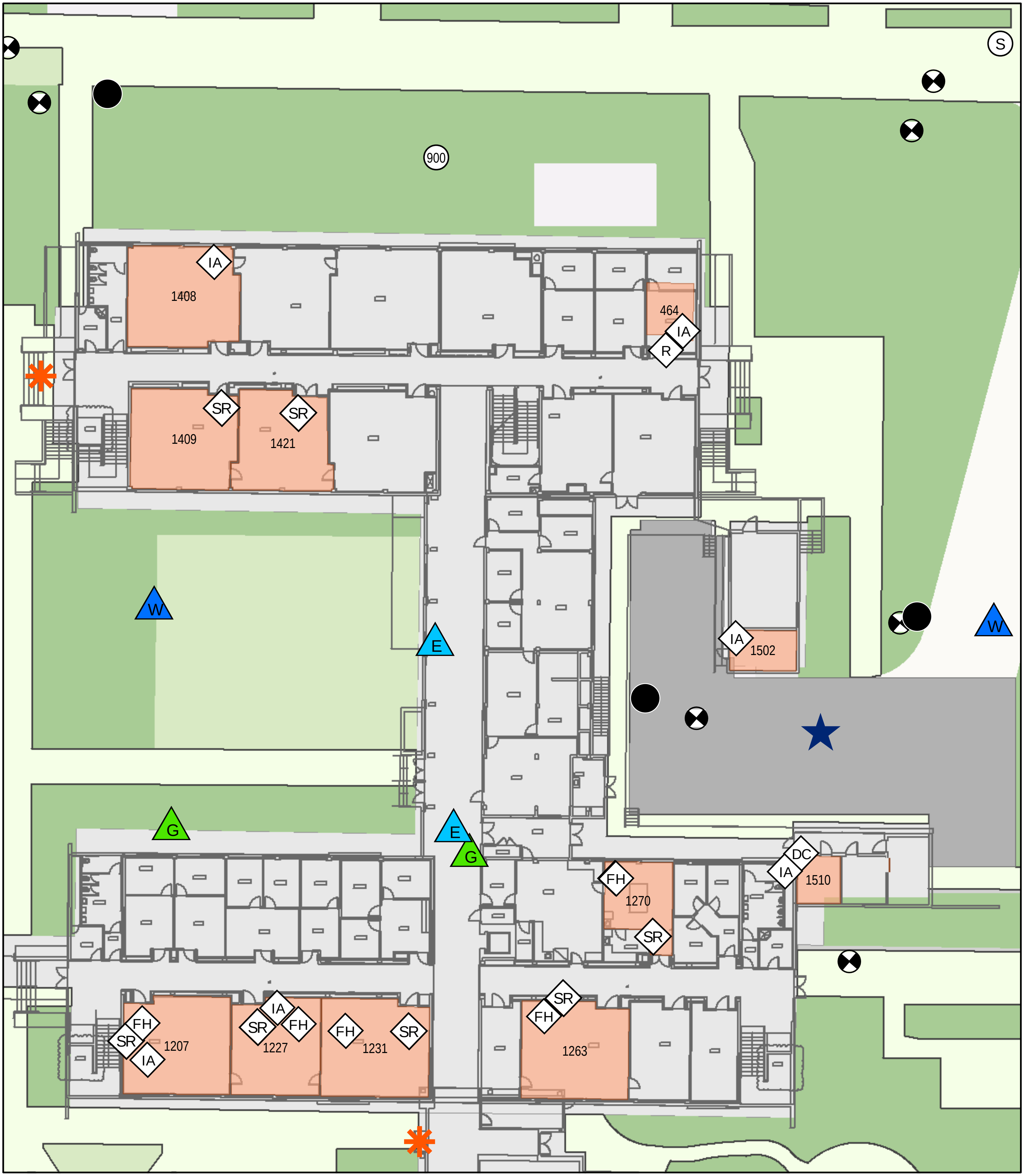
Geology

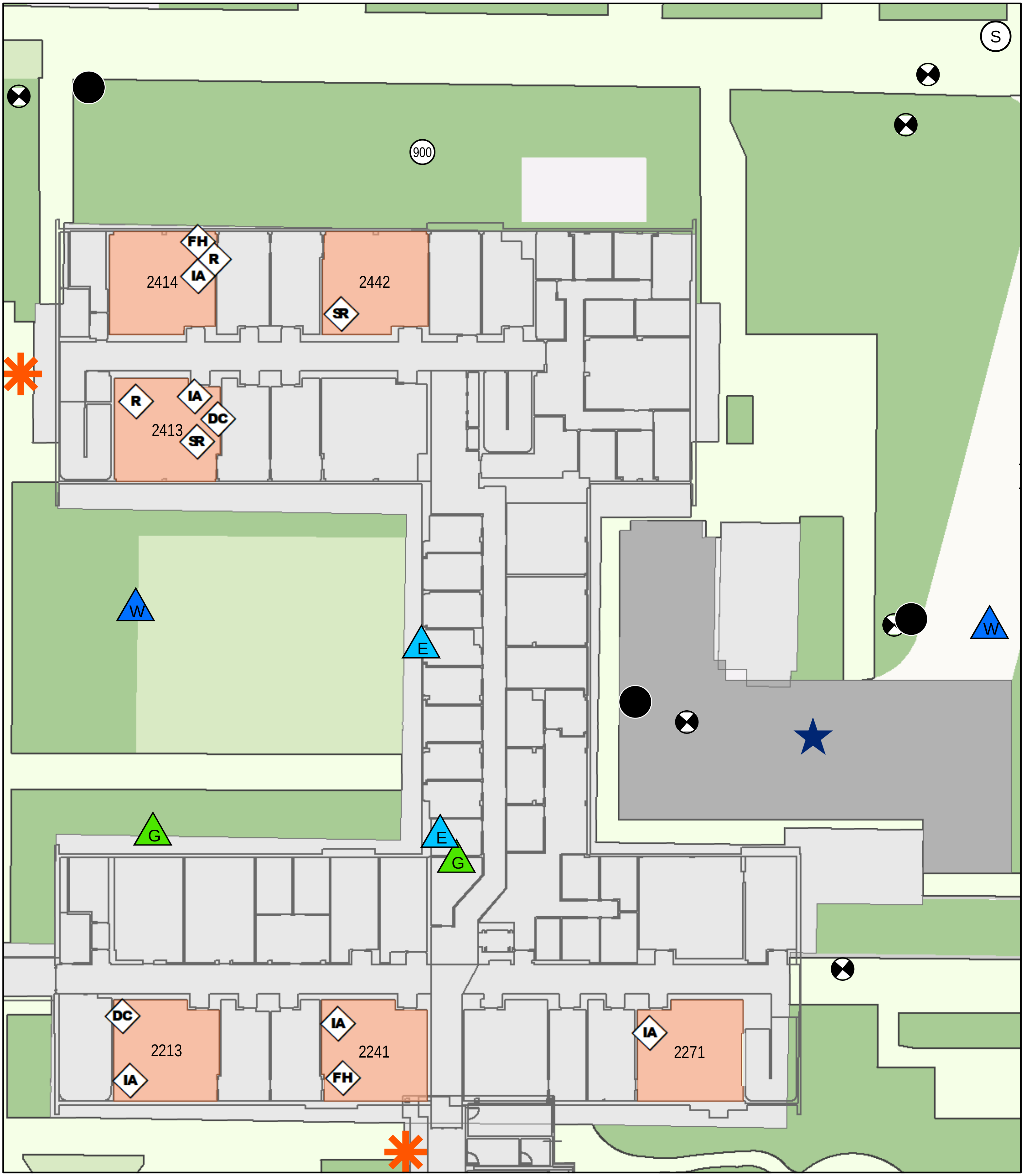
Index No:
P5335



Geology
Floor 1

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F1.mxd 3/10/2020

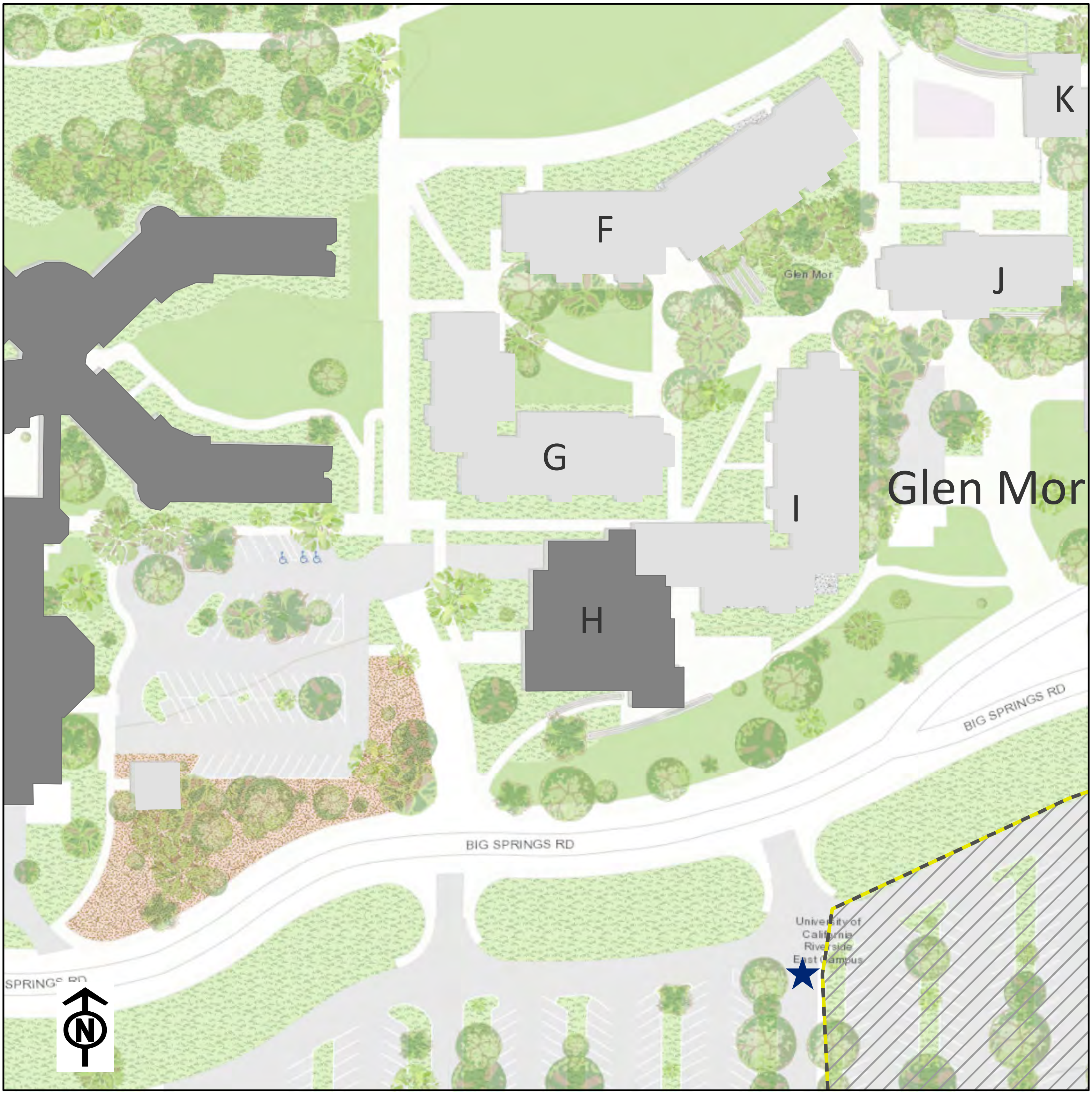
Geology

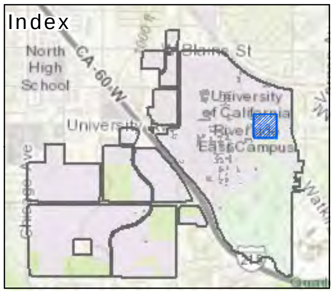


Geology
Floor 2

Glen Mor H

Index No:
P5952





Map not to scale

★ Emergency Assembly Areas

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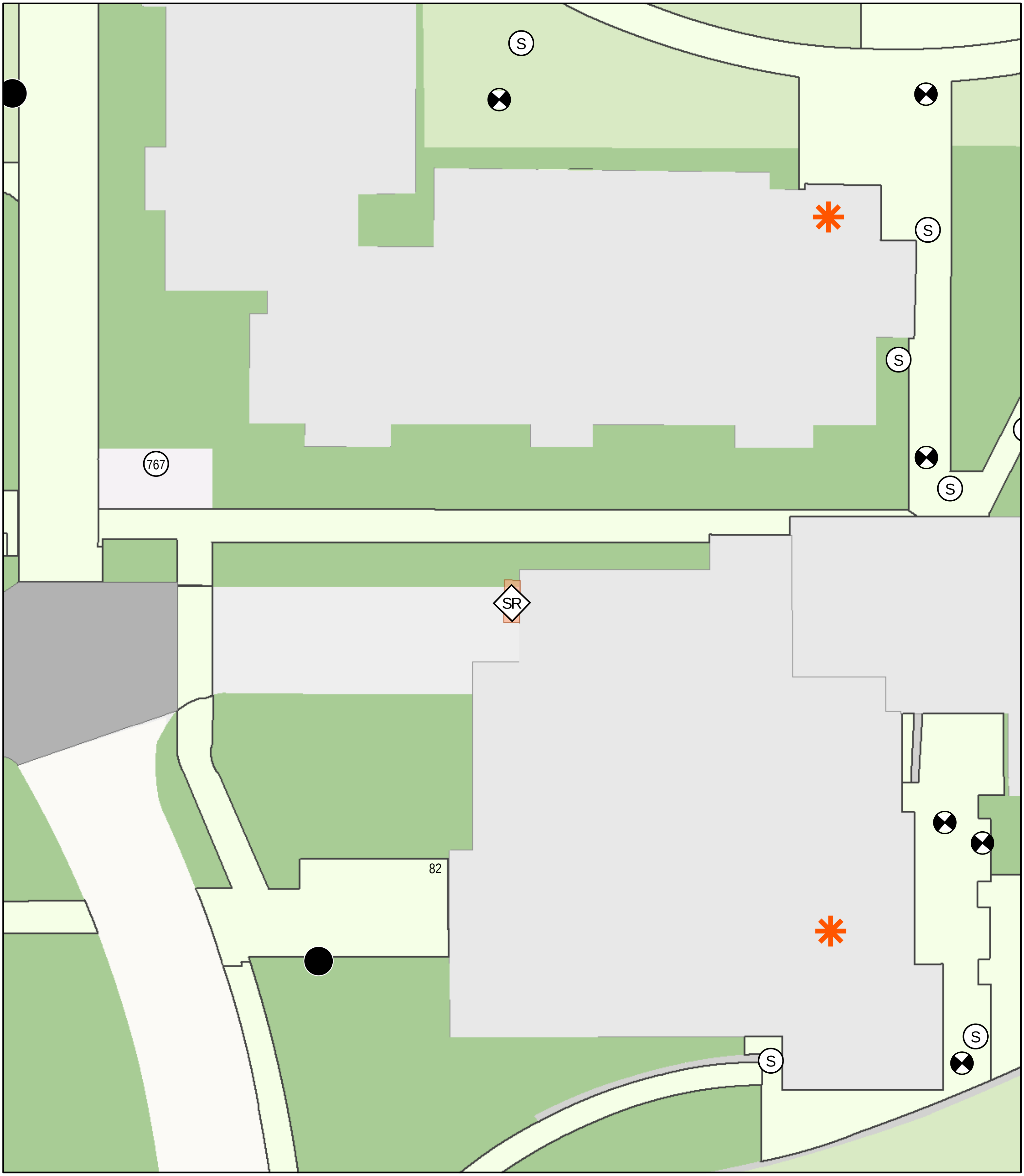
Index No:
P5952



Glen Mor H

Floor 1

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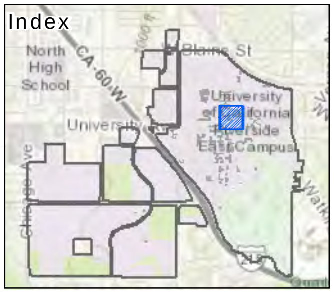
Health Service Bldg

Index No:
P5495



Map not to scale

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Health Service Bldg

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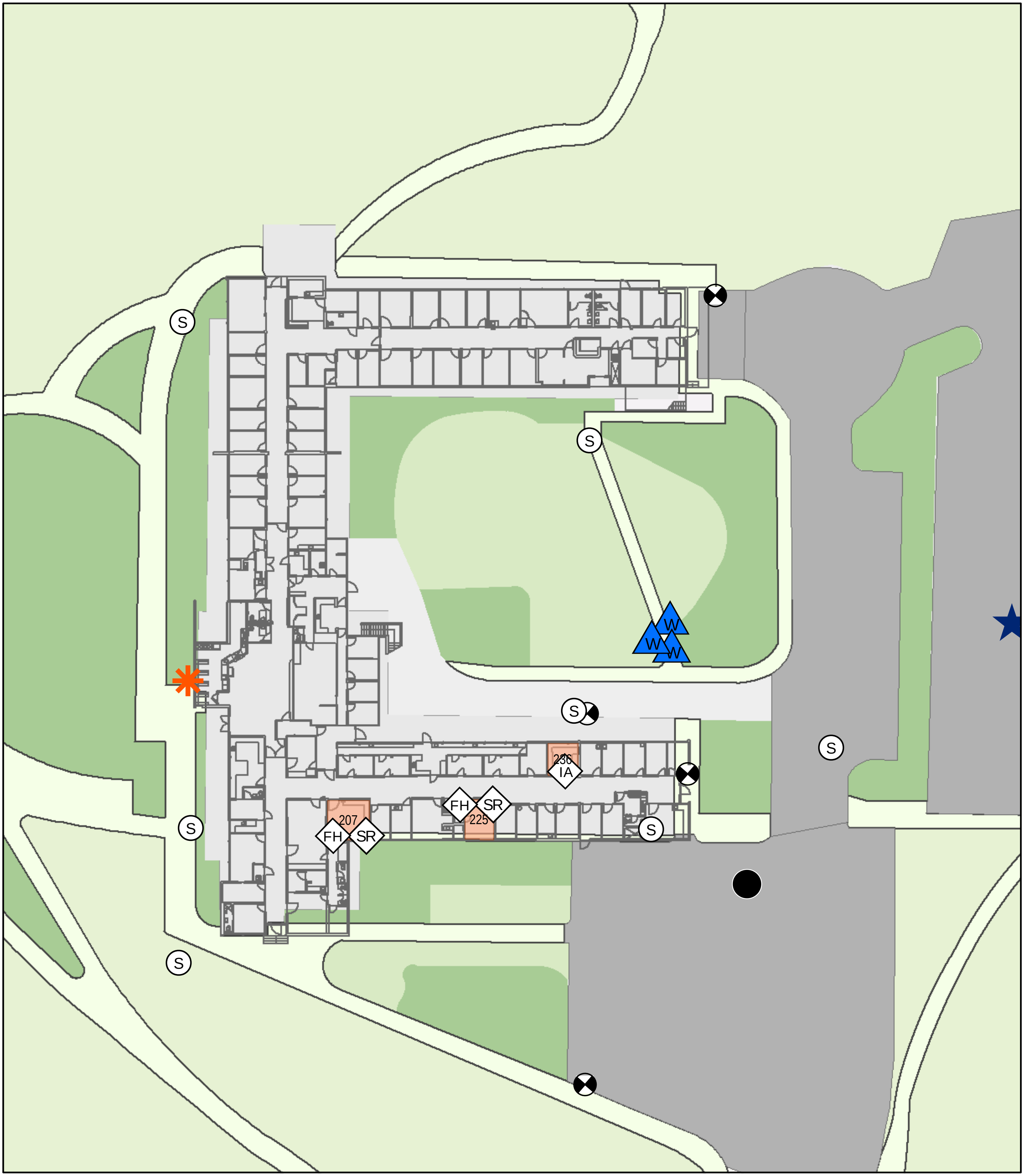
P5495



Health Service Bldg
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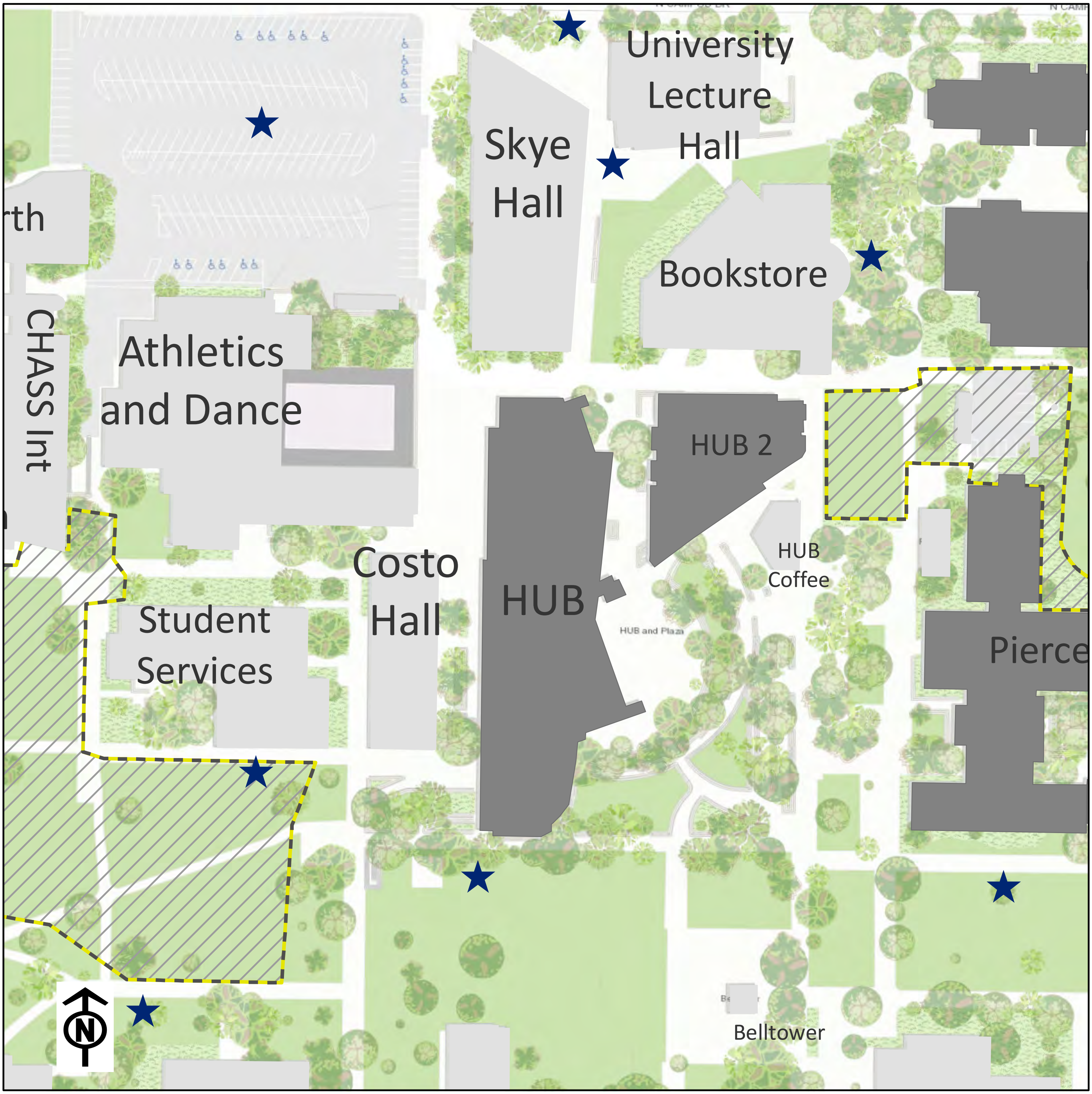
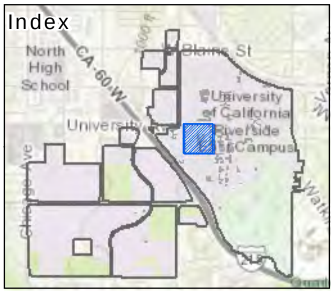
HUB

Index No:
P5404





Map not to scale

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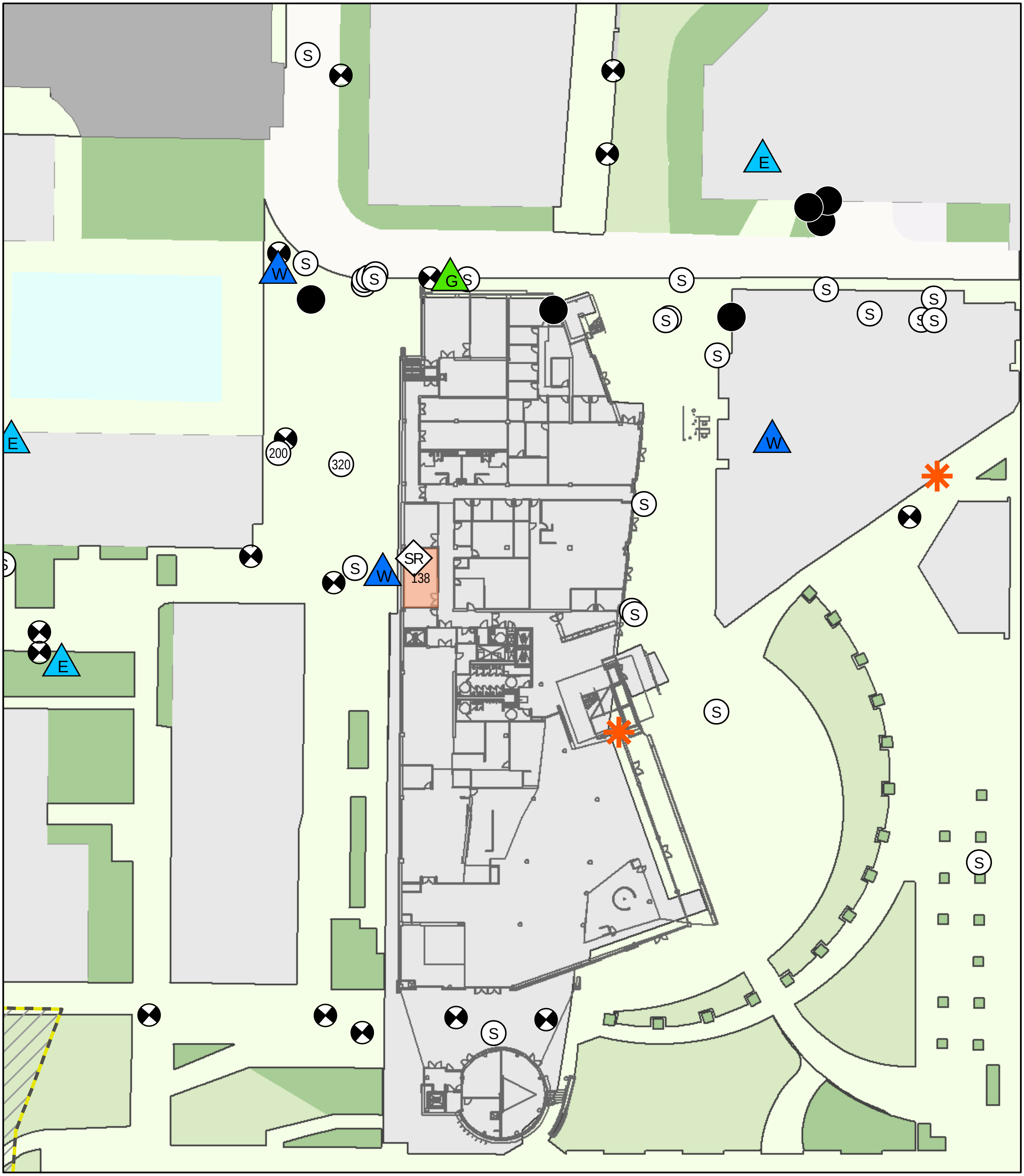
P5404



HUB

Floor 1

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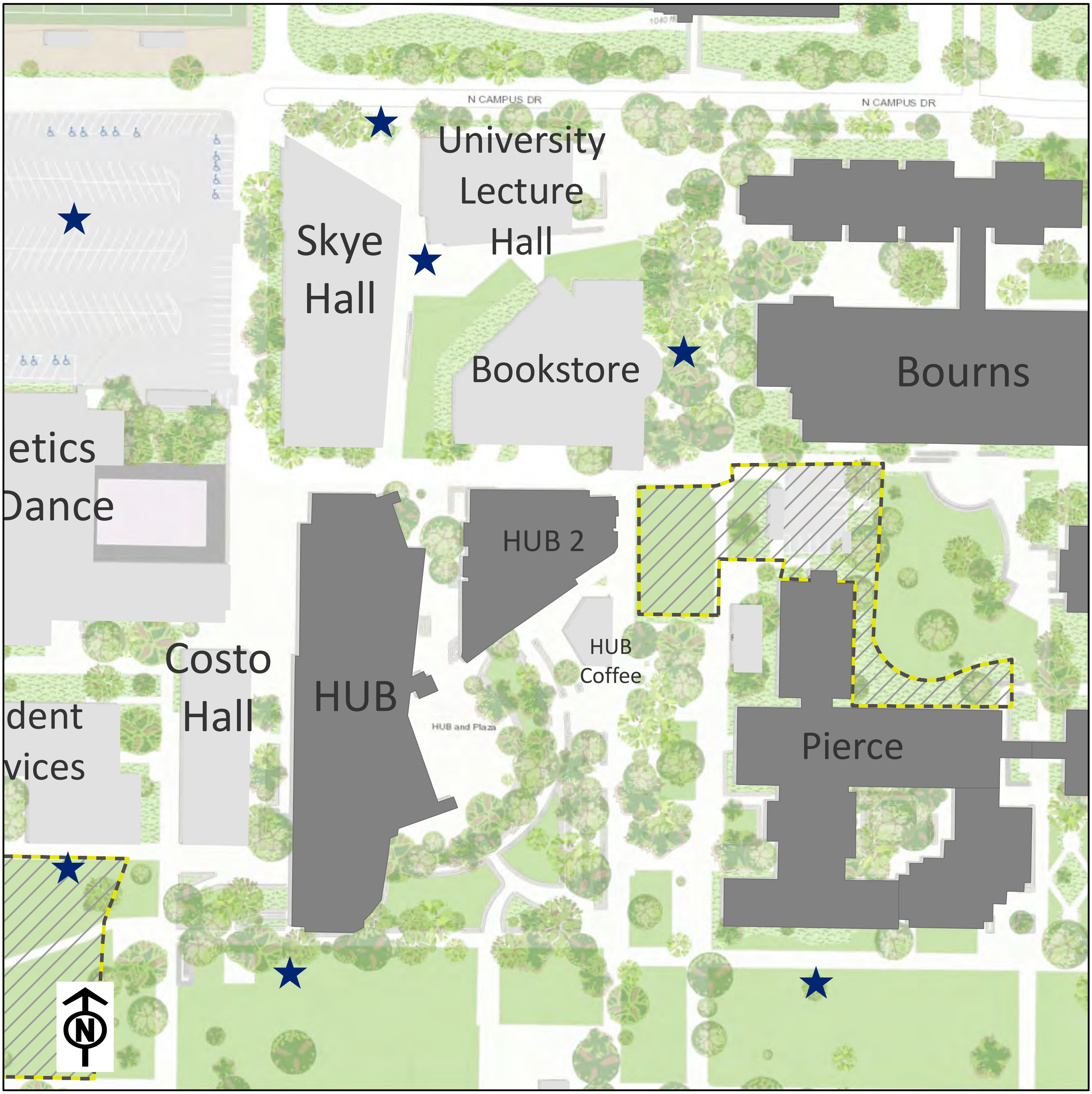
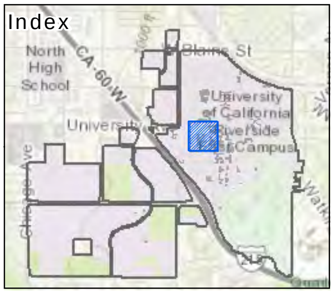
HUB 2

Index No:
P5199





Map not to scale

★ Emergency Assembly Areas

● Campus Entrance

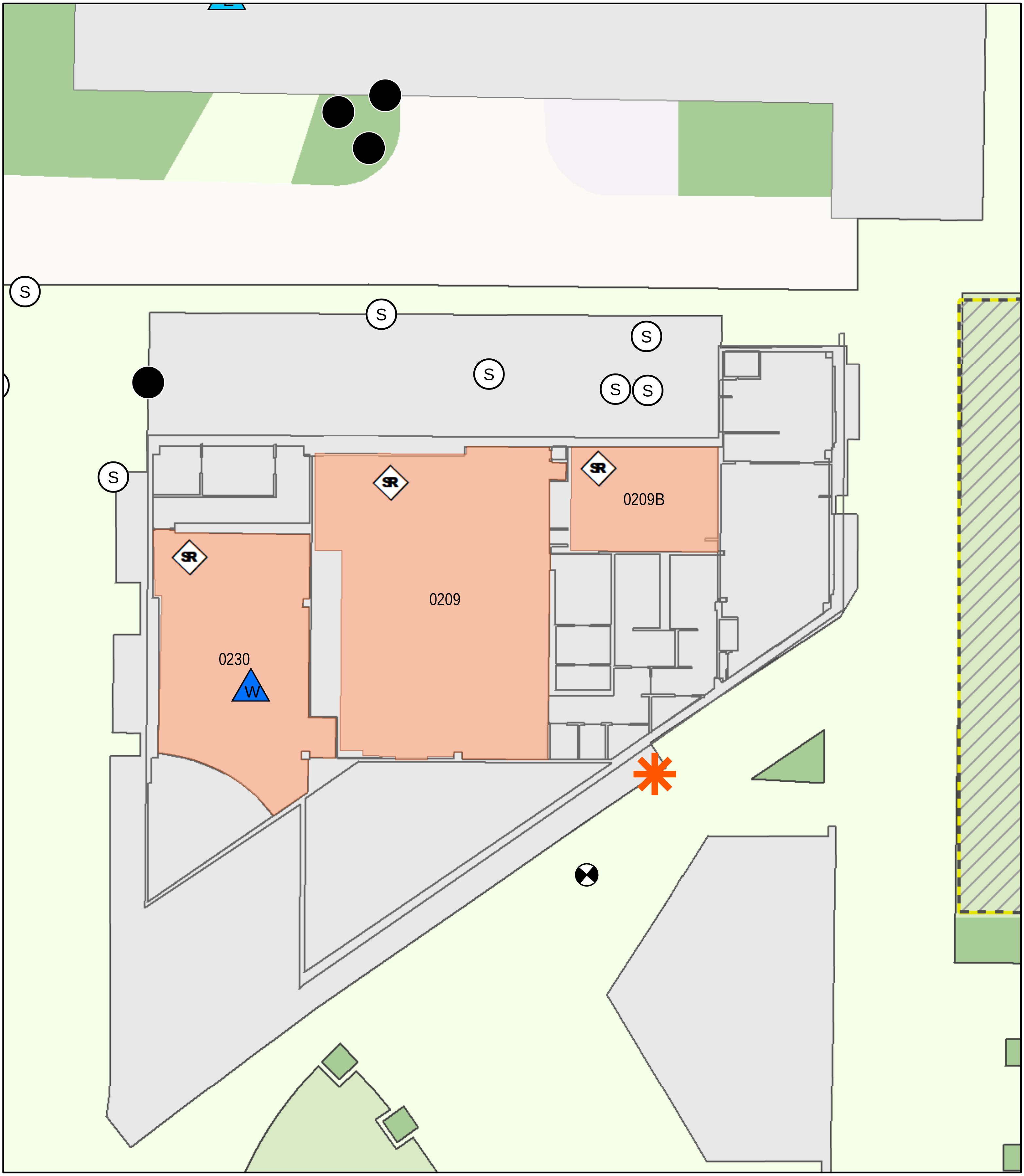
▬ High Priority Structures

☐ Campus Boundary

UCR
Hazardous Chemical Inventory
HUB 2
Area Map

Index No: P5199

HUB 2



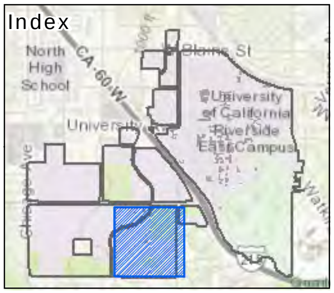
N

HUB 2

Floor 2

Insecticide Compounding & Storage

Index No:
P5304



★ Emergency Assembly Areas

● Campus Entrance

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▭ Campus Boundary

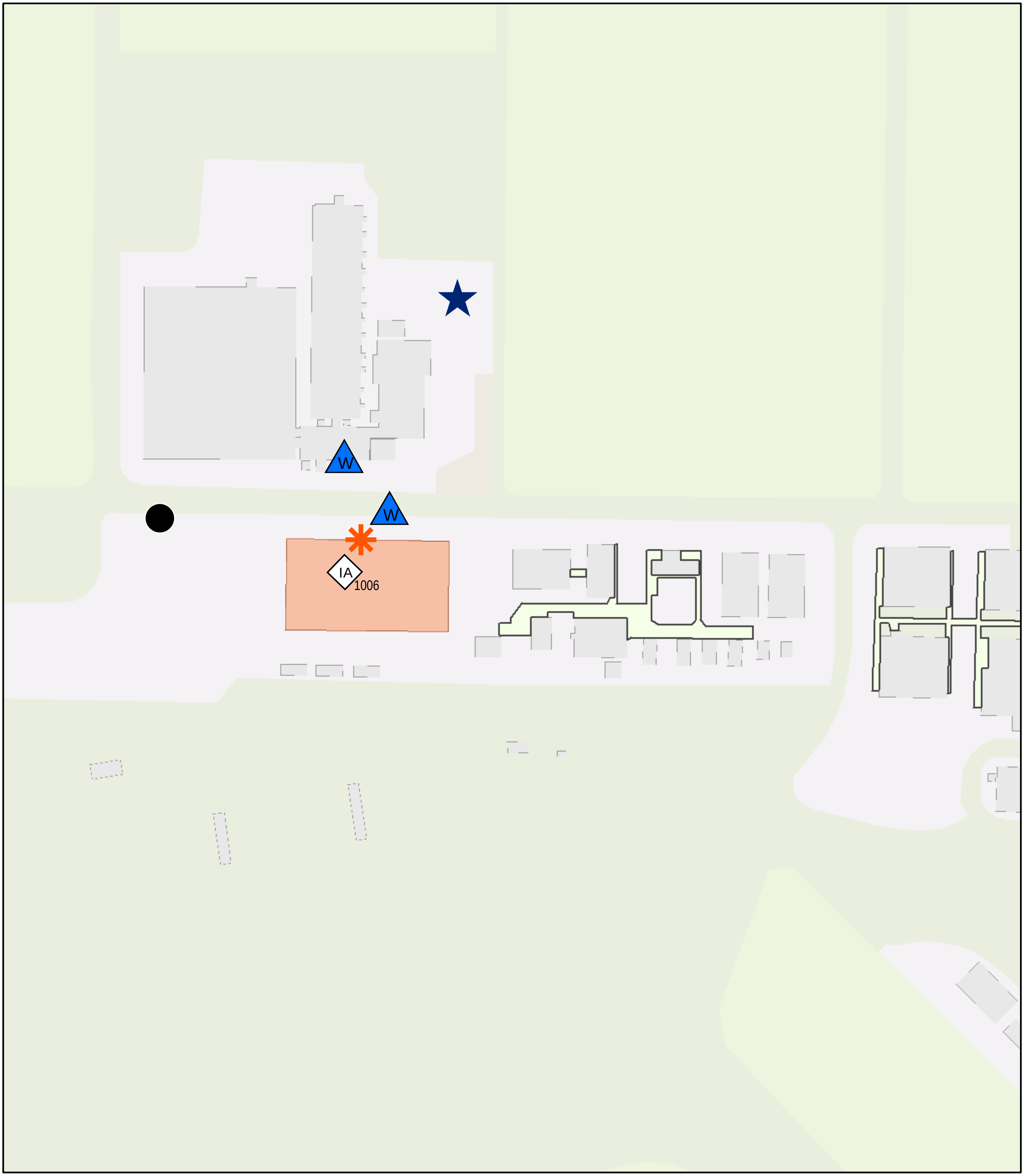
Map not to scale

UCR
Hazardous Chemical Inventory
Insecticide Compounding & Storage
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Insecticide Compounding & Storage

Index No:
P5304



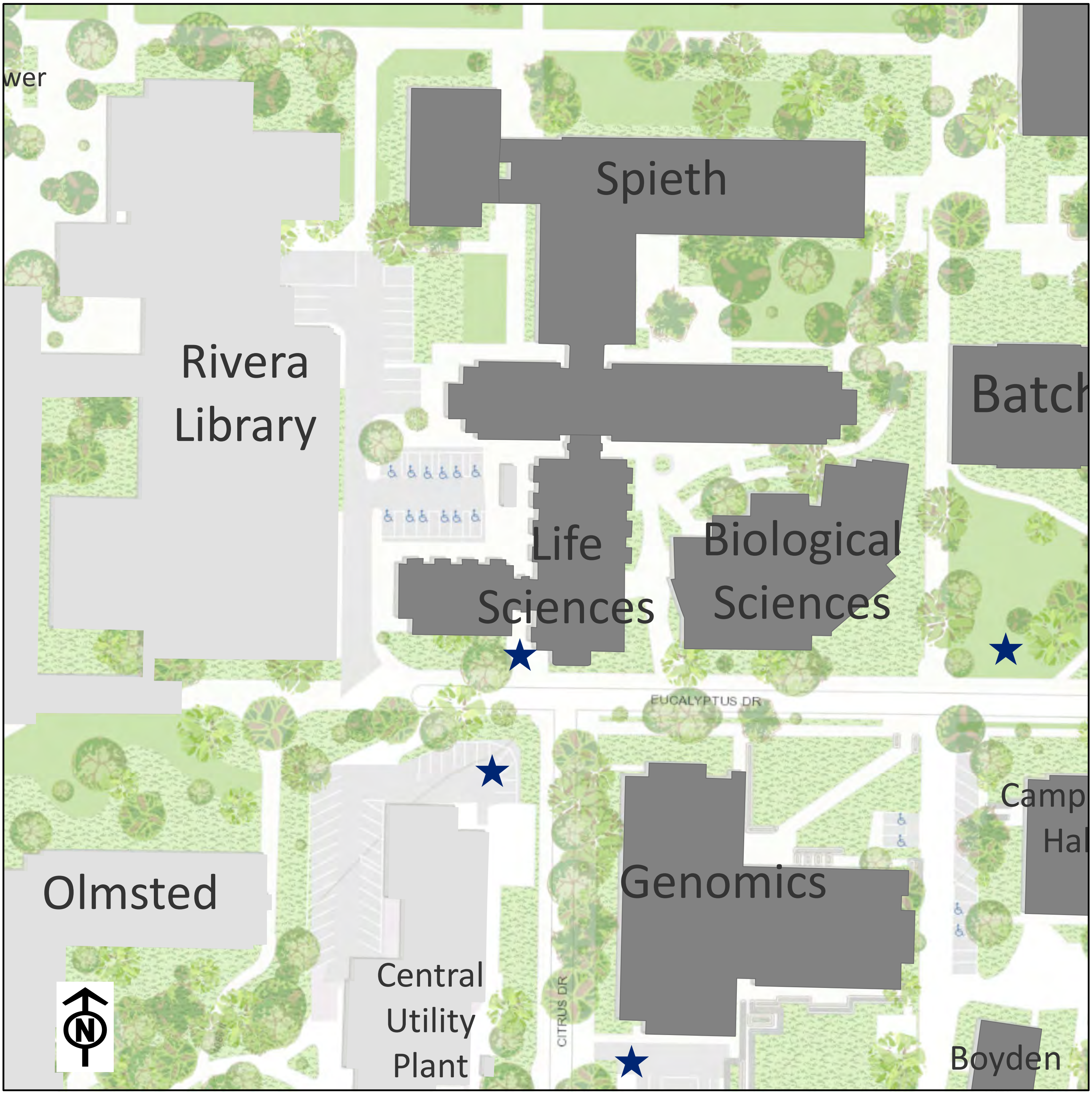
Insecticide Compounding & Storage

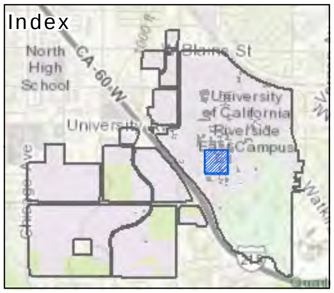
Floor 1

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F1.mxd 3/10/2020

Life Sciences

Index No: P5316





Map not to scale

★ Emergency Assembly Areas

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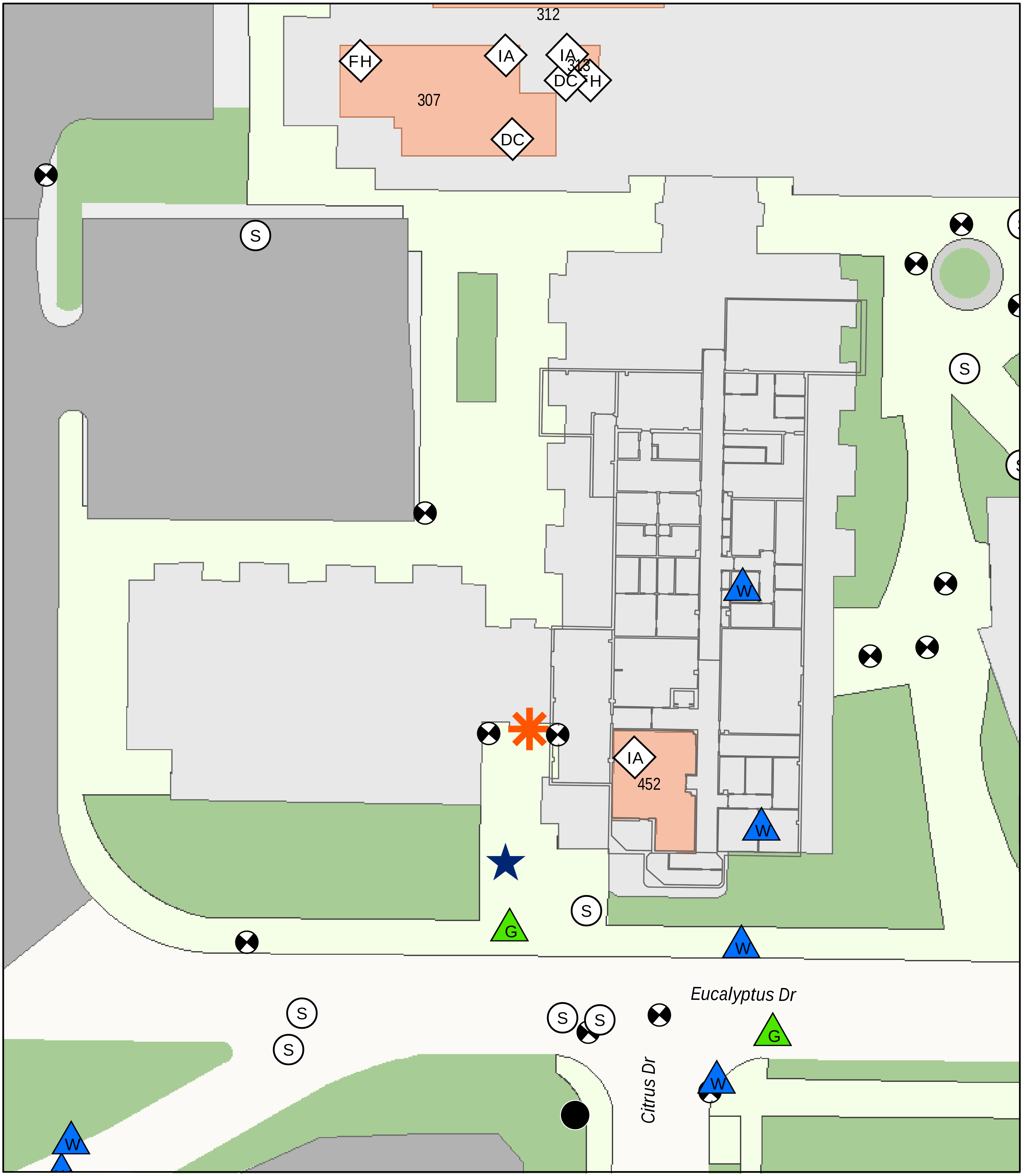
UCR
Hazardous Chemical Inventory
Life Sciences
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Life Sciences

Index No: P5316



UCR

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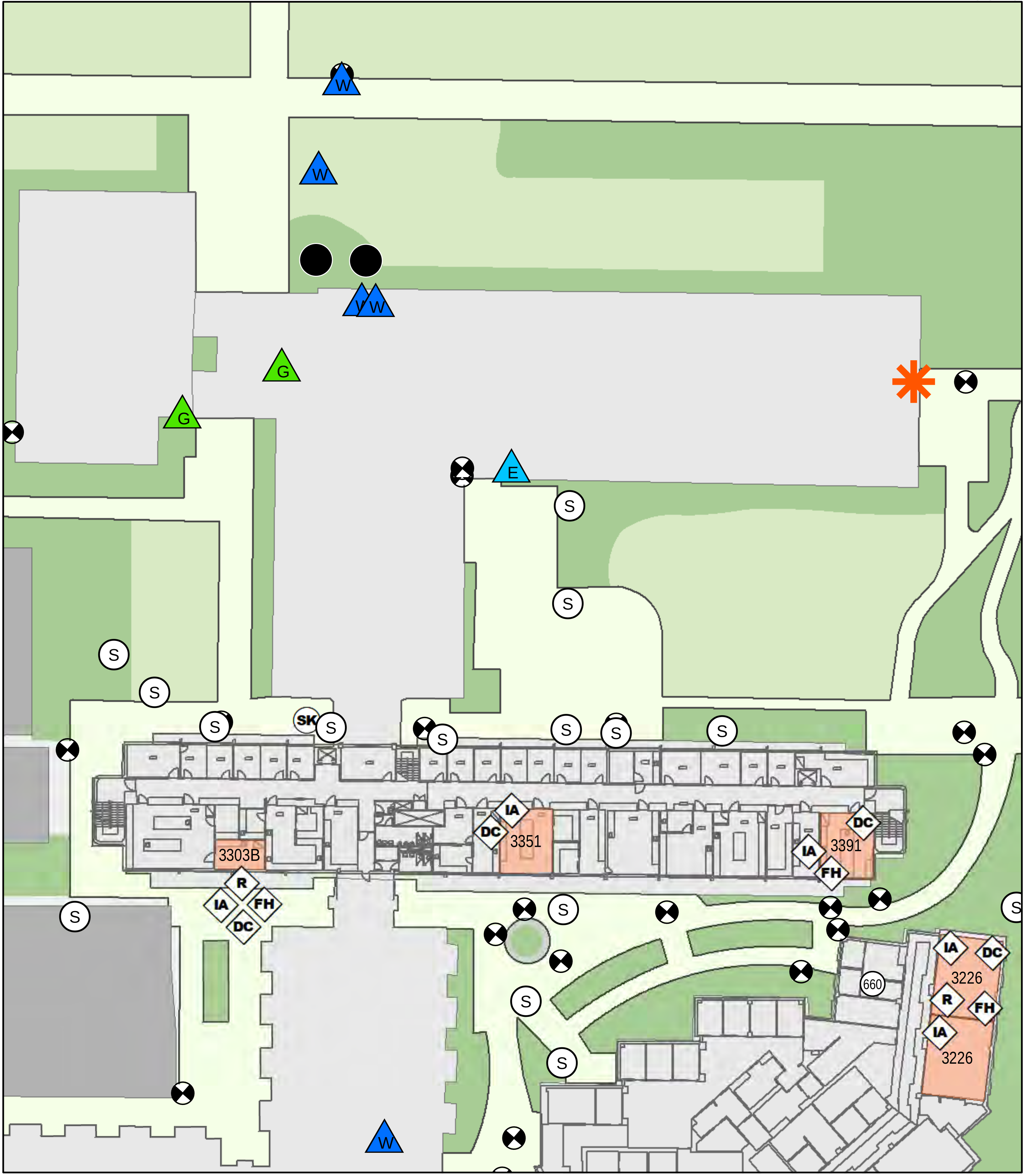
Life Sciences
Floor L-1

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_FL1.mxd 3/18/2020

Index No: P5323

Spieth Hall



Spieth Hall

Floor 3

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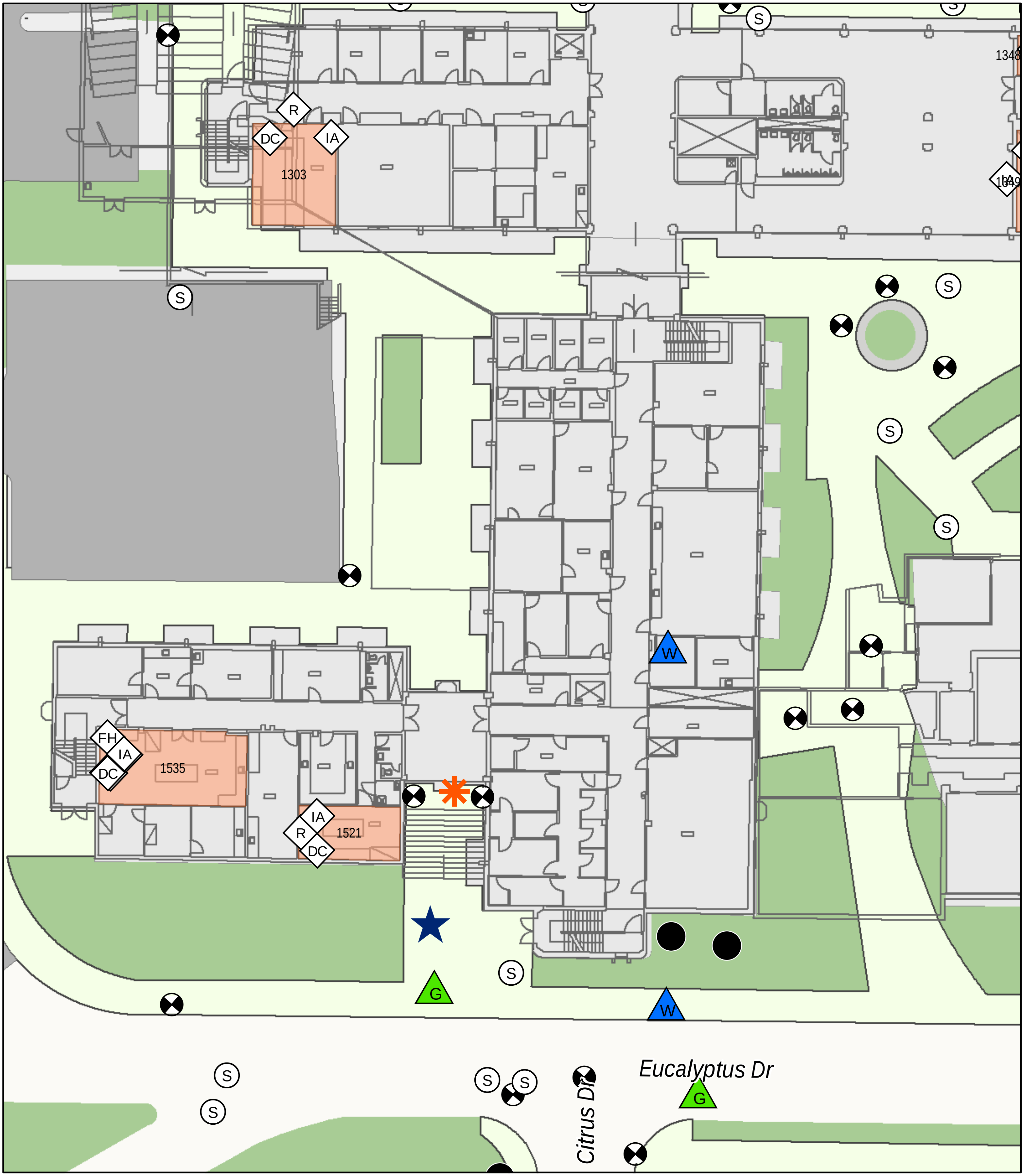
Life Sciences

Index No: P5316



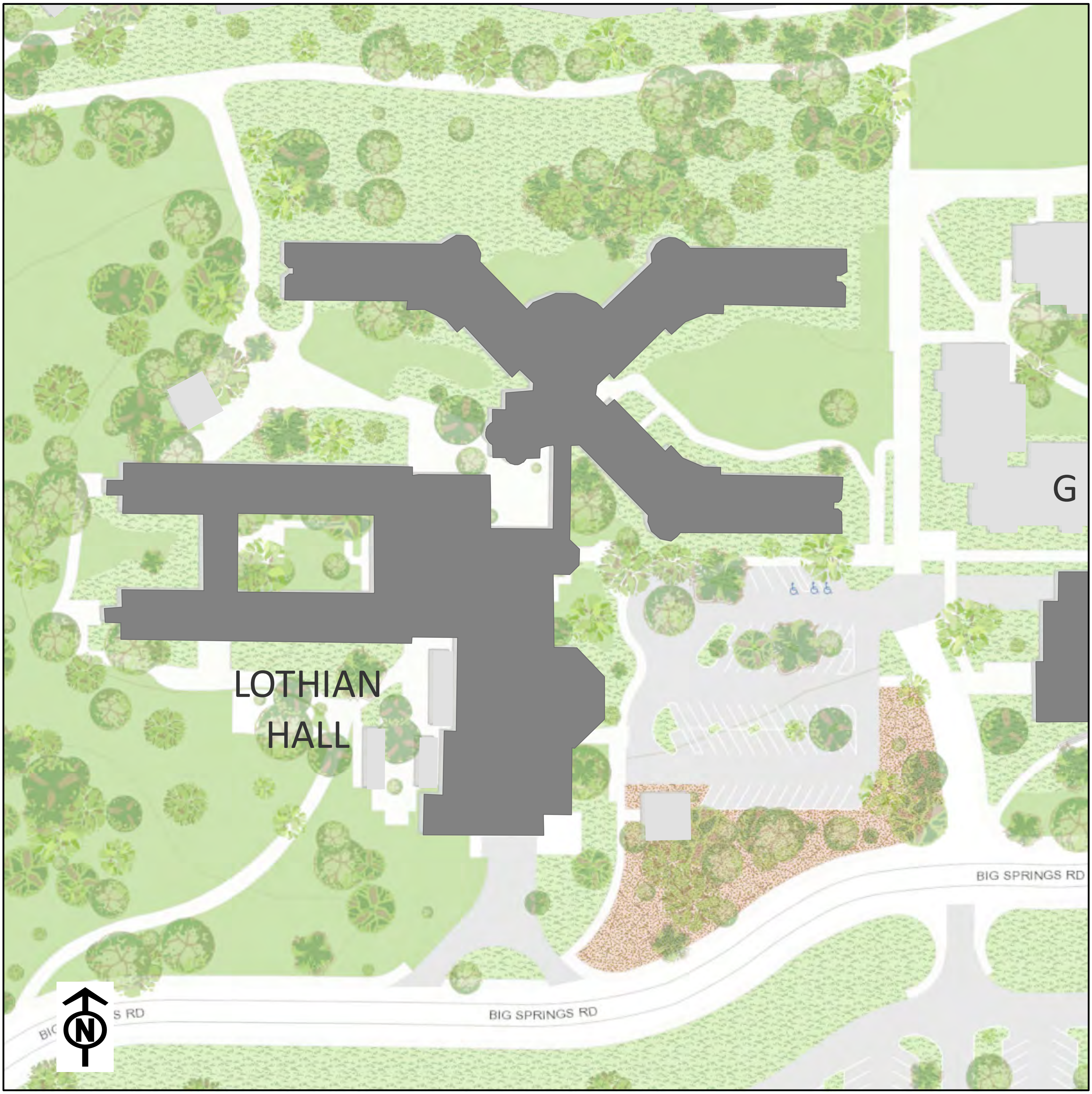
Life Sciences

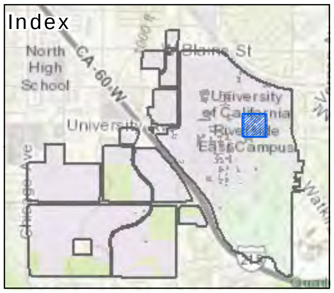
Floor 1

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F1.mxd 3/10/2020

Lothian Hall

Index No:
P5502





★ Emergency Assembly Areas

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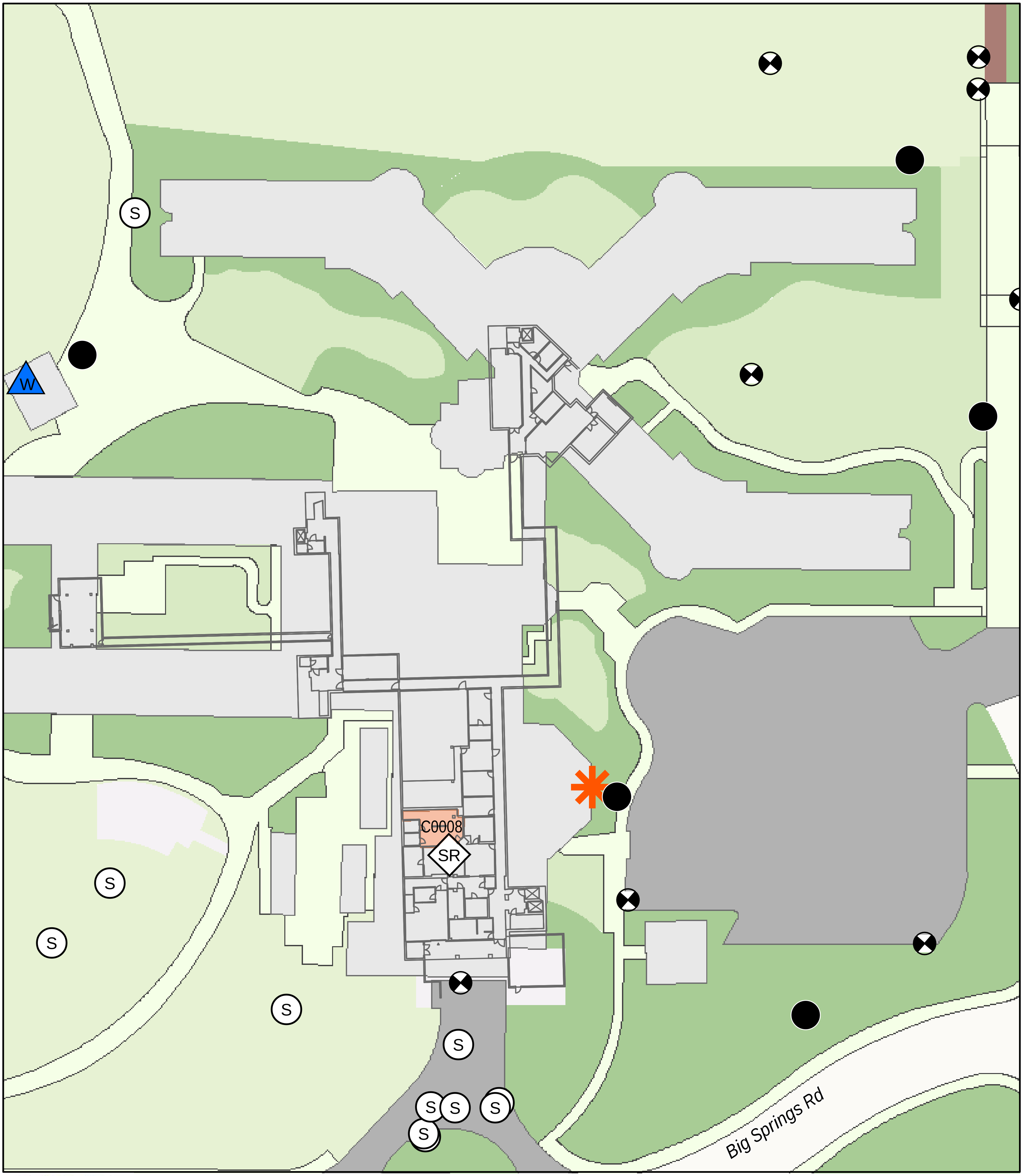
Map not to scale

UCR
Hazardous Chemical Inventory
Lothian Hall
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Index No:
P5502

Lothian Residence Hall



Lothian Residence Hall
Floor L-1

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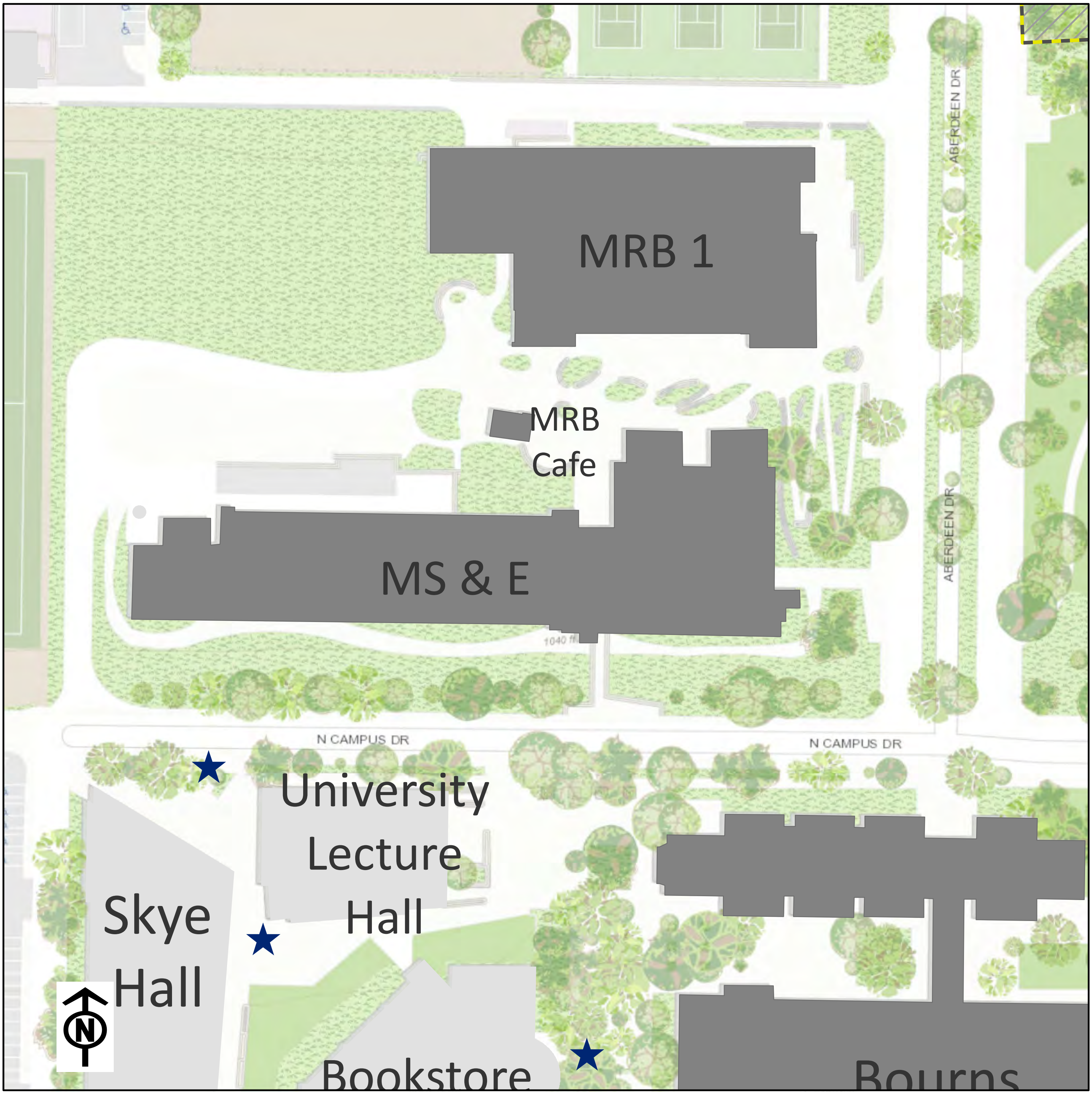
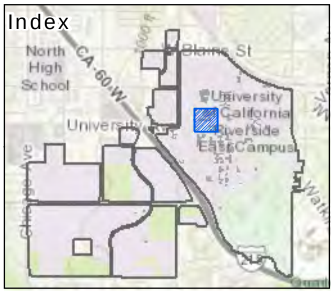
Materials Science & Engineering

Index No:
P5195





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Map not to scale

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Area Map

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P5195

Materials Science & Engineering

Materials Science & Engineering
Floor L-1

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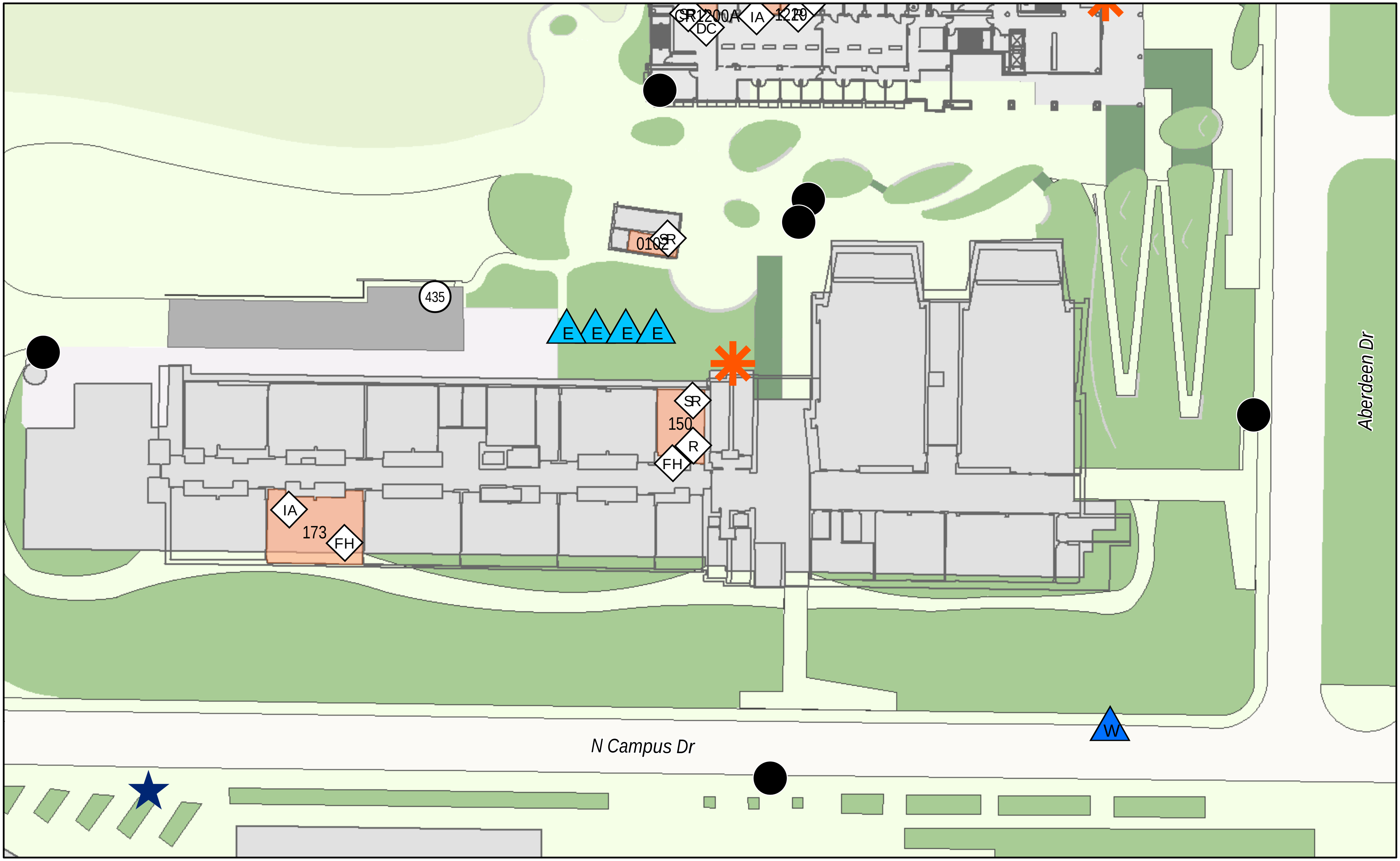
Materials Science & Engineering

Index No:
P5195



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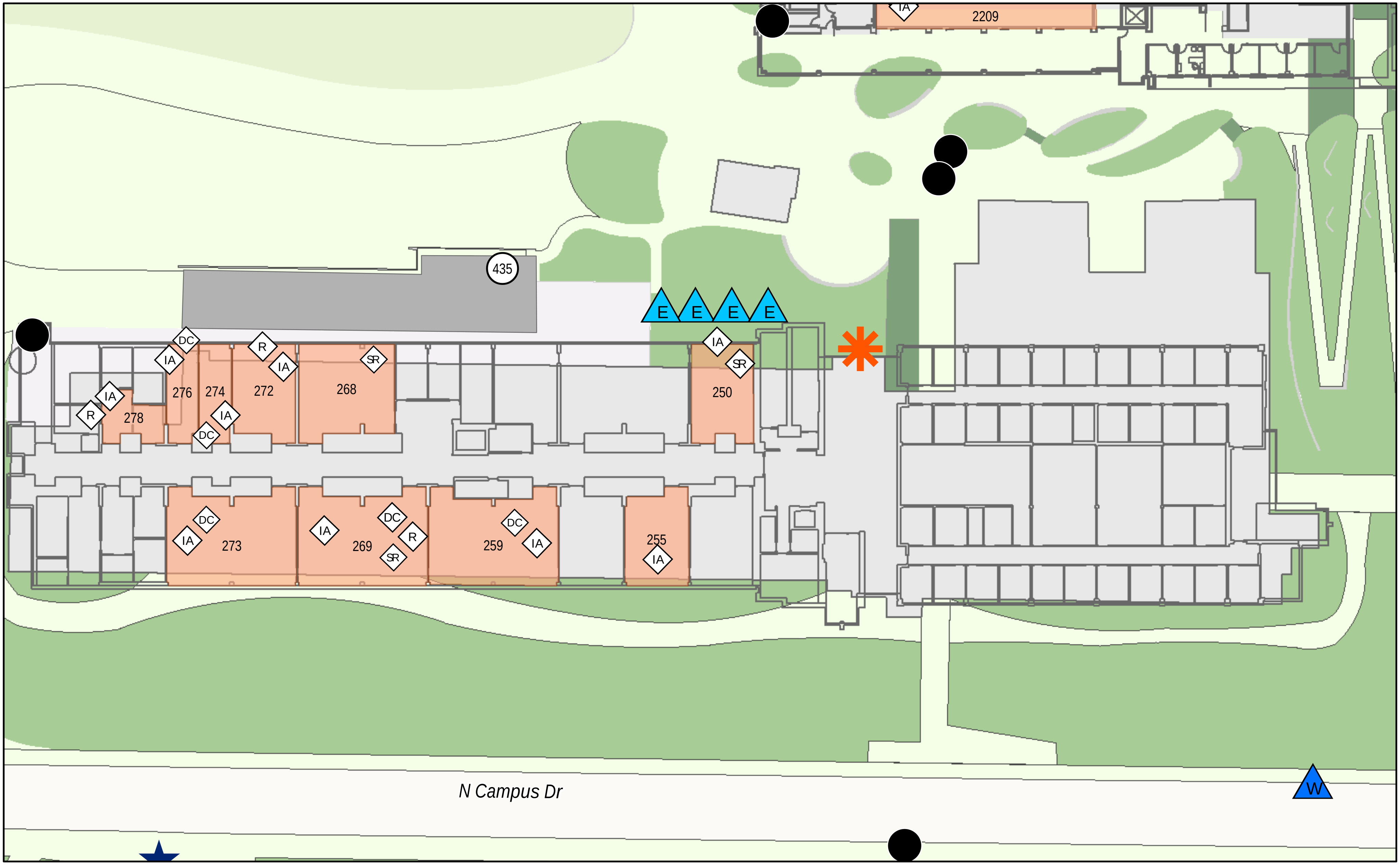
Materials Science & Engineering

Floor 1

Index No:
P5195

Materials Science & Engineering

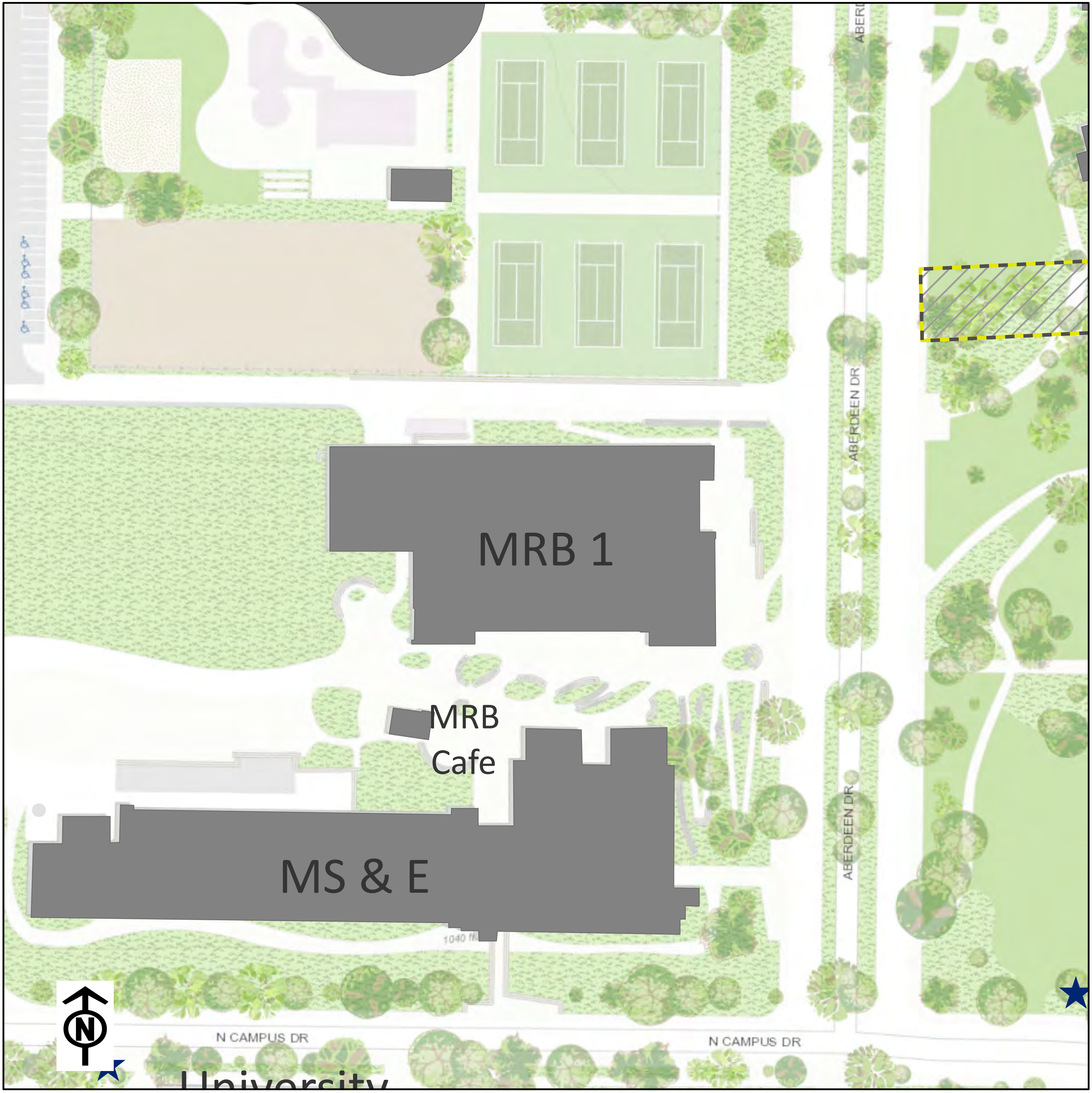


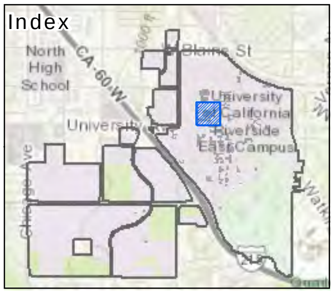
Materials Science & Engineering
Floor 2

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_LS_F2.mxd 3/10/2020

Multidisciplinary Research Bldg 1

Index No:
P5818, P5828





★ Emergency Assembly Areas

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■ High Priority Structures

☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
Multidisciplinary Research Bldg 1
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Multidisciplinary Research Bldg 1

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P5818, P5828

Multidisciplinary Research Bldg 1

Floor 1

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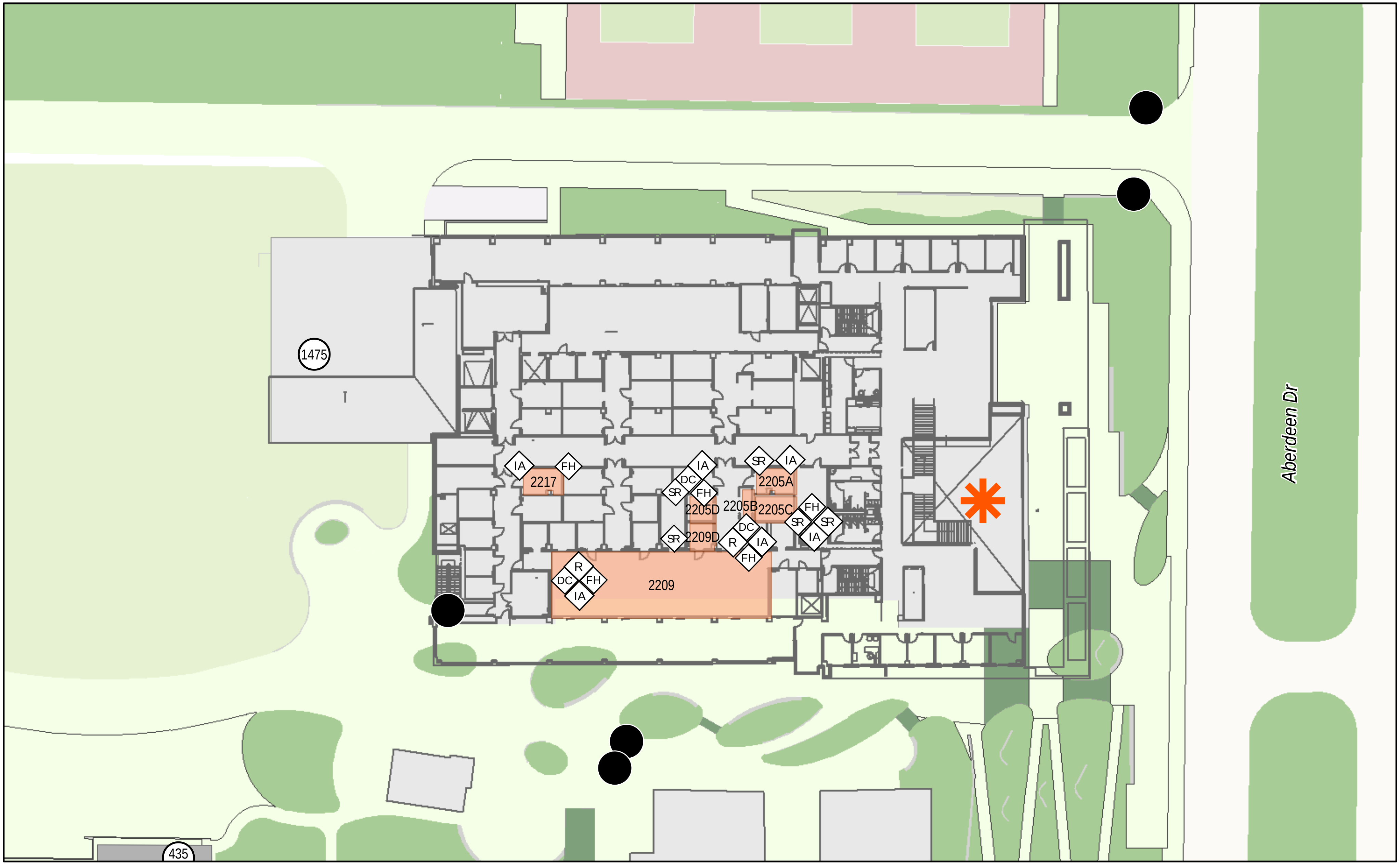
Index No:
P5818, P5828

Multidisciplinary Research Bldg 1



UCR

N

Multidisciplinary Research Bldg 1

Floor 2

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Multidisciplinary Research Bldg 1

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P5818, P5828

Multidisciplinary Research Bldg 1

Floor 3

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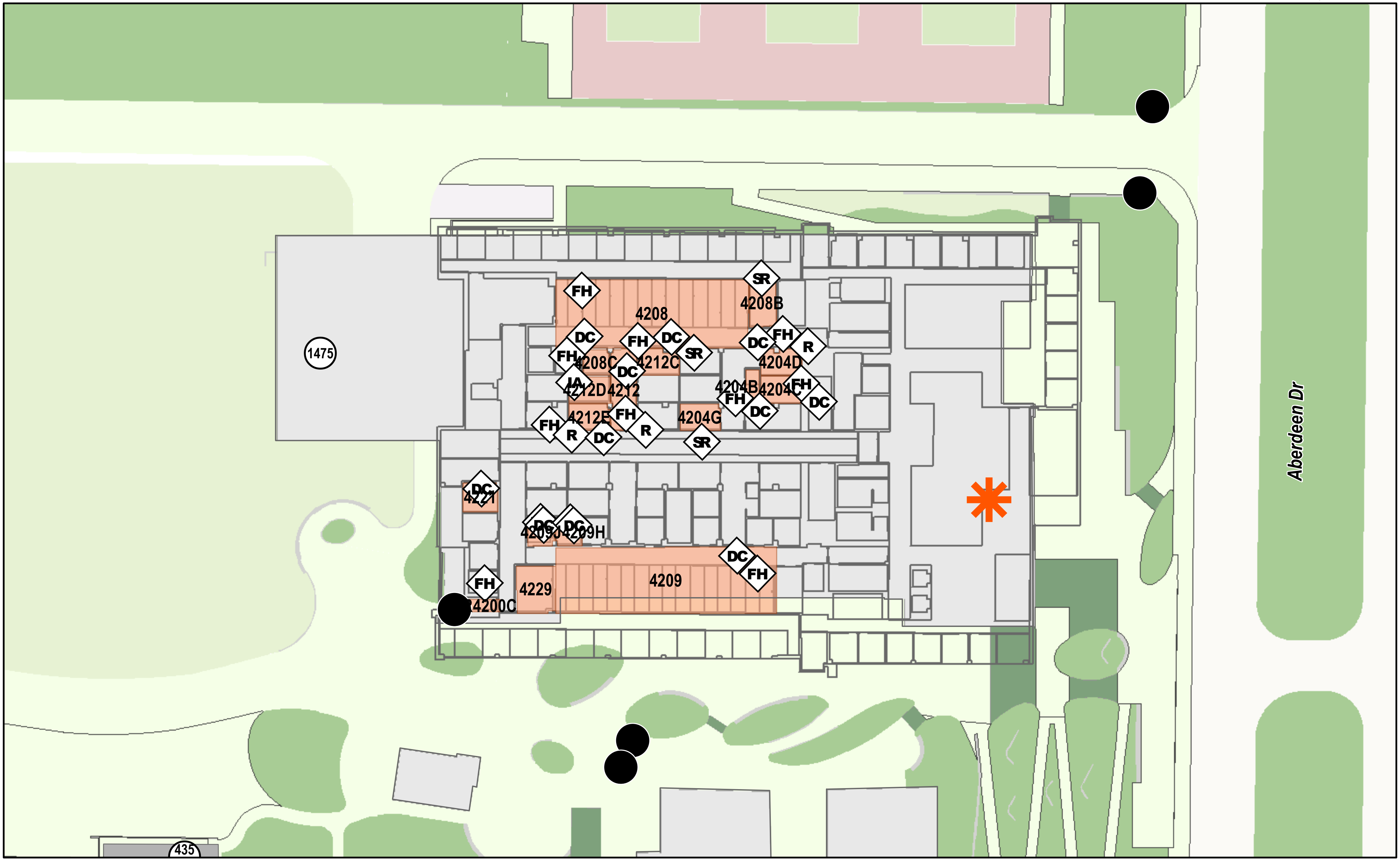
Multidisciplinary Research Bldg 1

Index No:
P5818, P5828



Multidisciplinary Research Bldg 1
Floor 4

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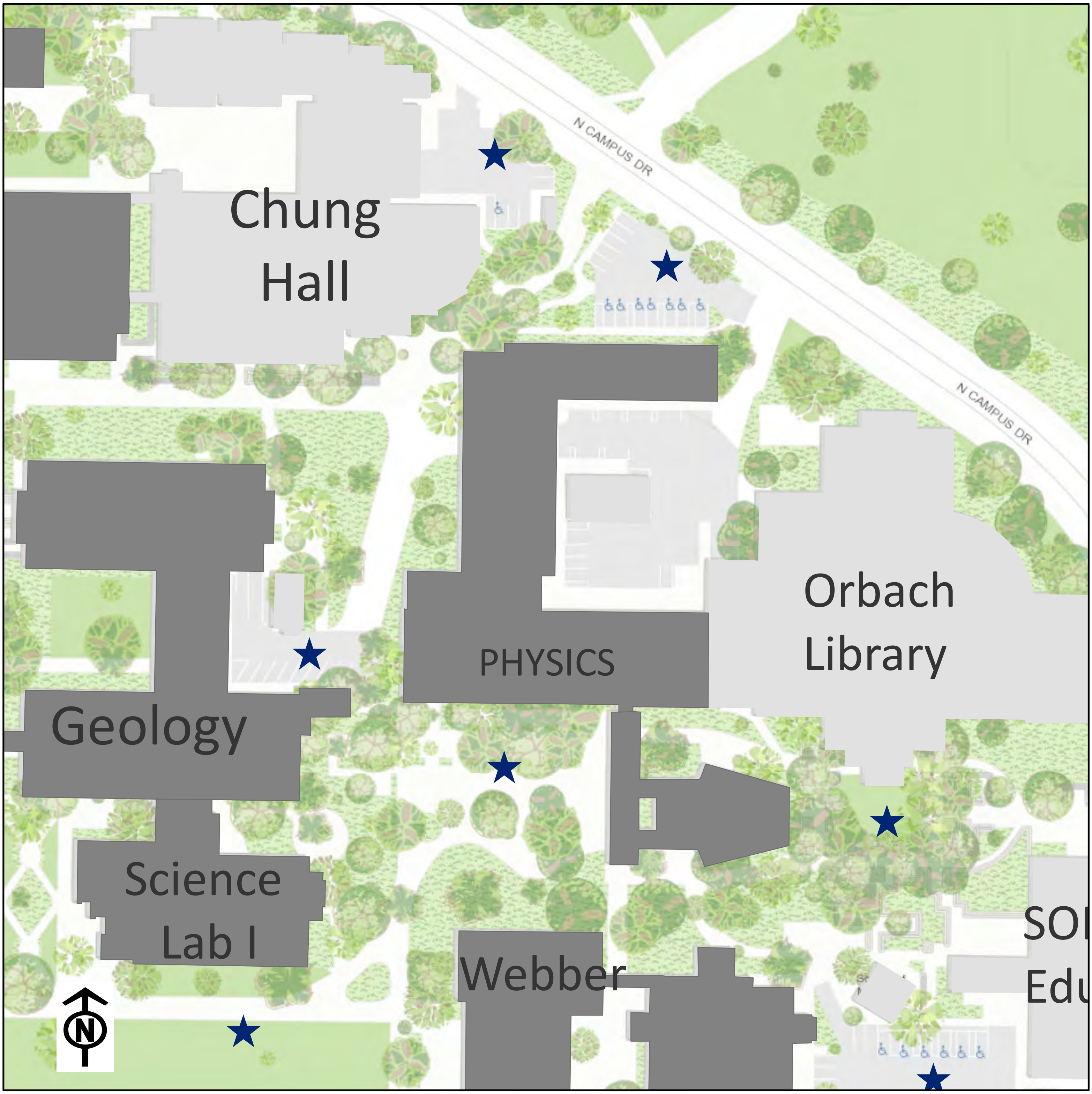
Physics

Index No:
P5504



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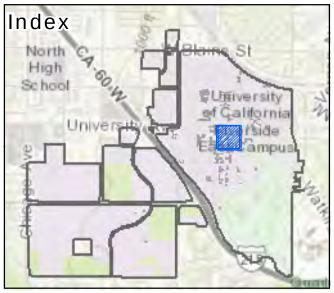

★ Emergency Assembly Areas

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▭ Campus Boundary

Map not to scale

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Hazardous Chemical Inventory
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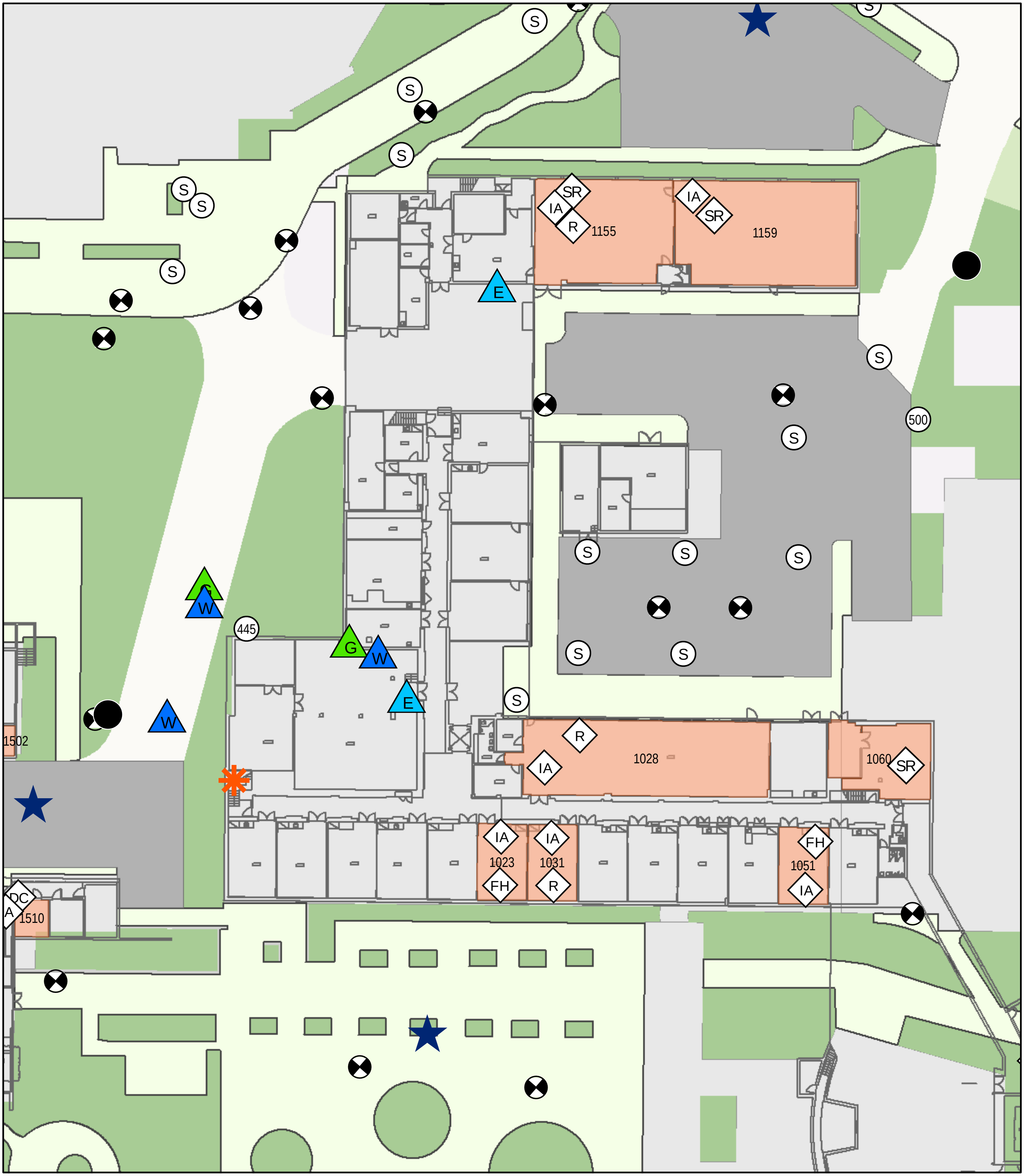
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Physics

Index No:
P5504



Physics
Floor 1

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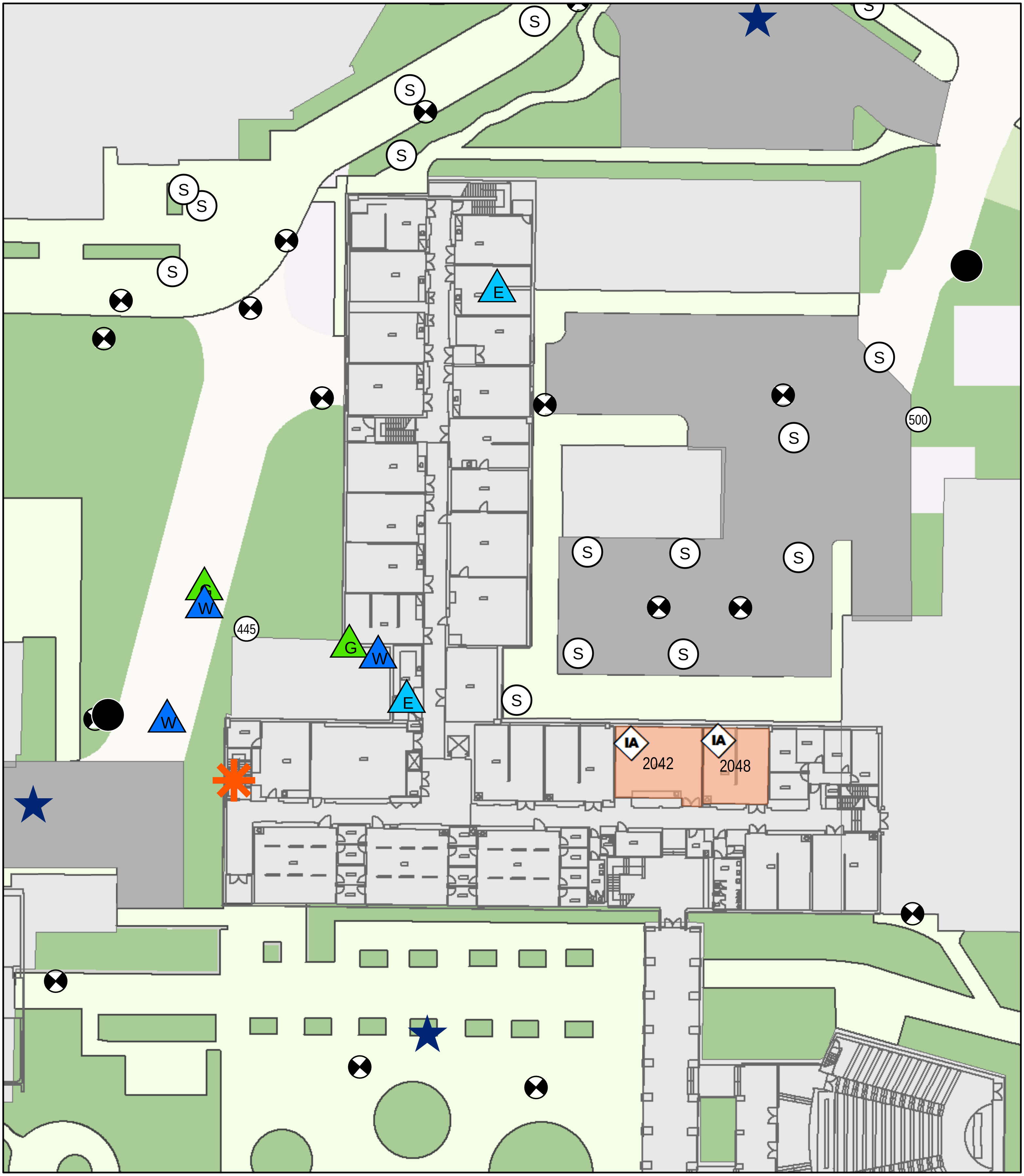
Index No:
P5504

Physics



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Physics

Floor 2

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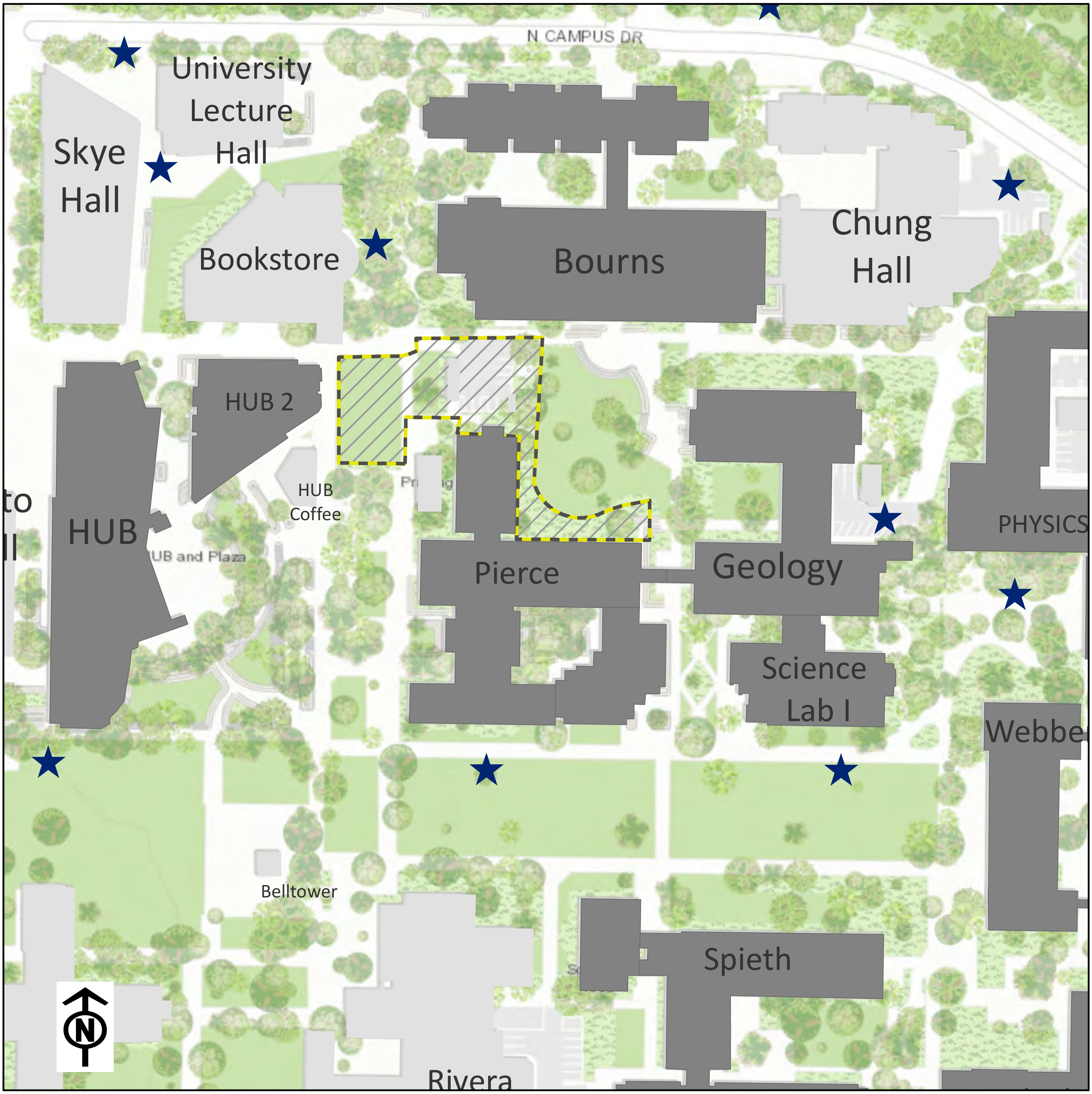
Pierce Hall & Pierce Hall Annex

Index No:
P5508



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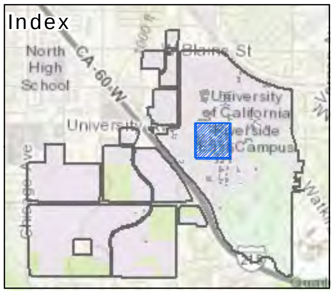

Map not to scale

★ Emergency Assembly Areas

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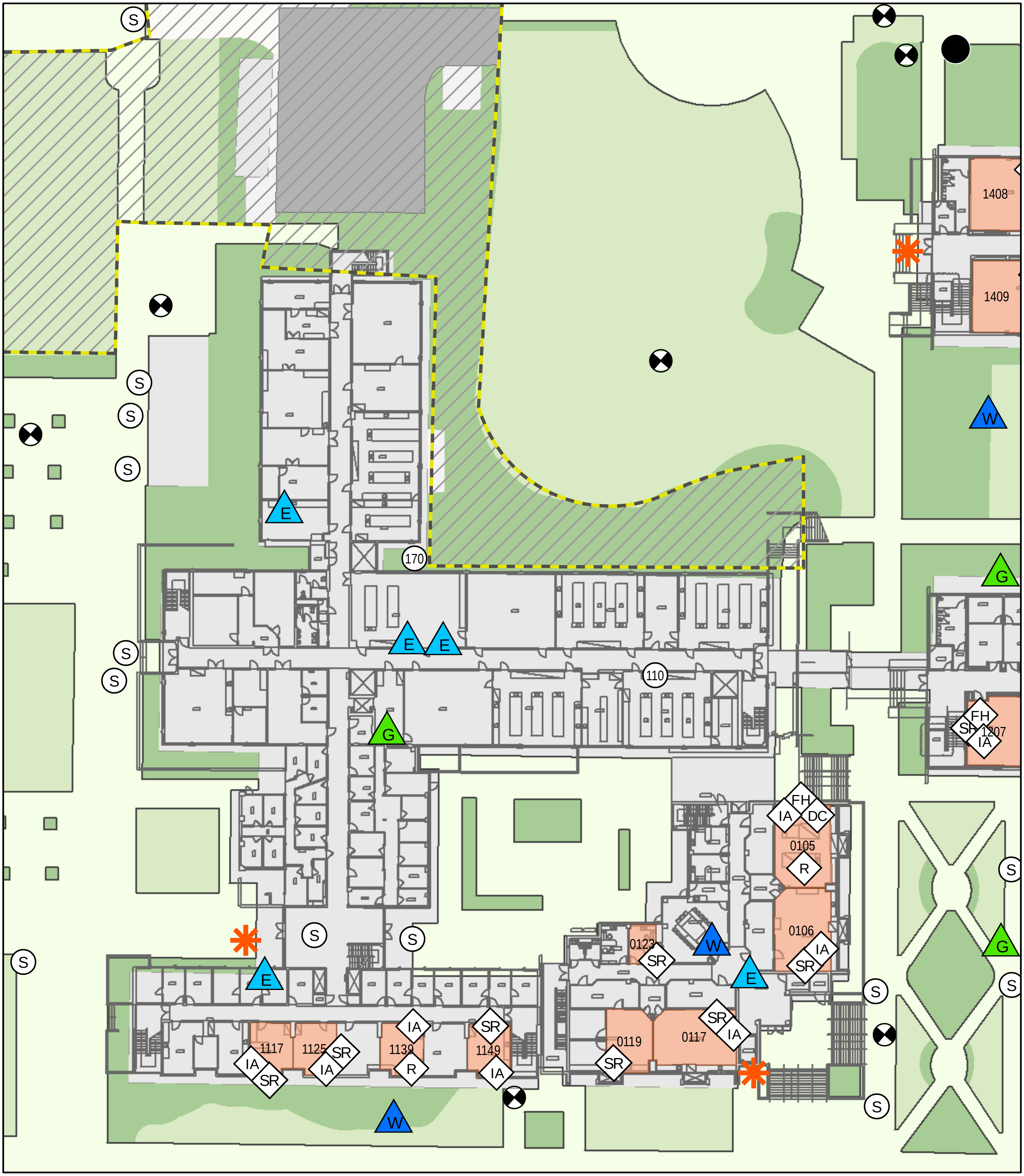
☐ Campus Boundary

UCR
Hazardous Chemical Inventory
Pierce Hall & Pierce Hall Annex
Area Map

Pierce Hall & Pierce Hall Annex

Index No:
P5508



Pierce Hall & Pierce Hall Annex
Floor 1

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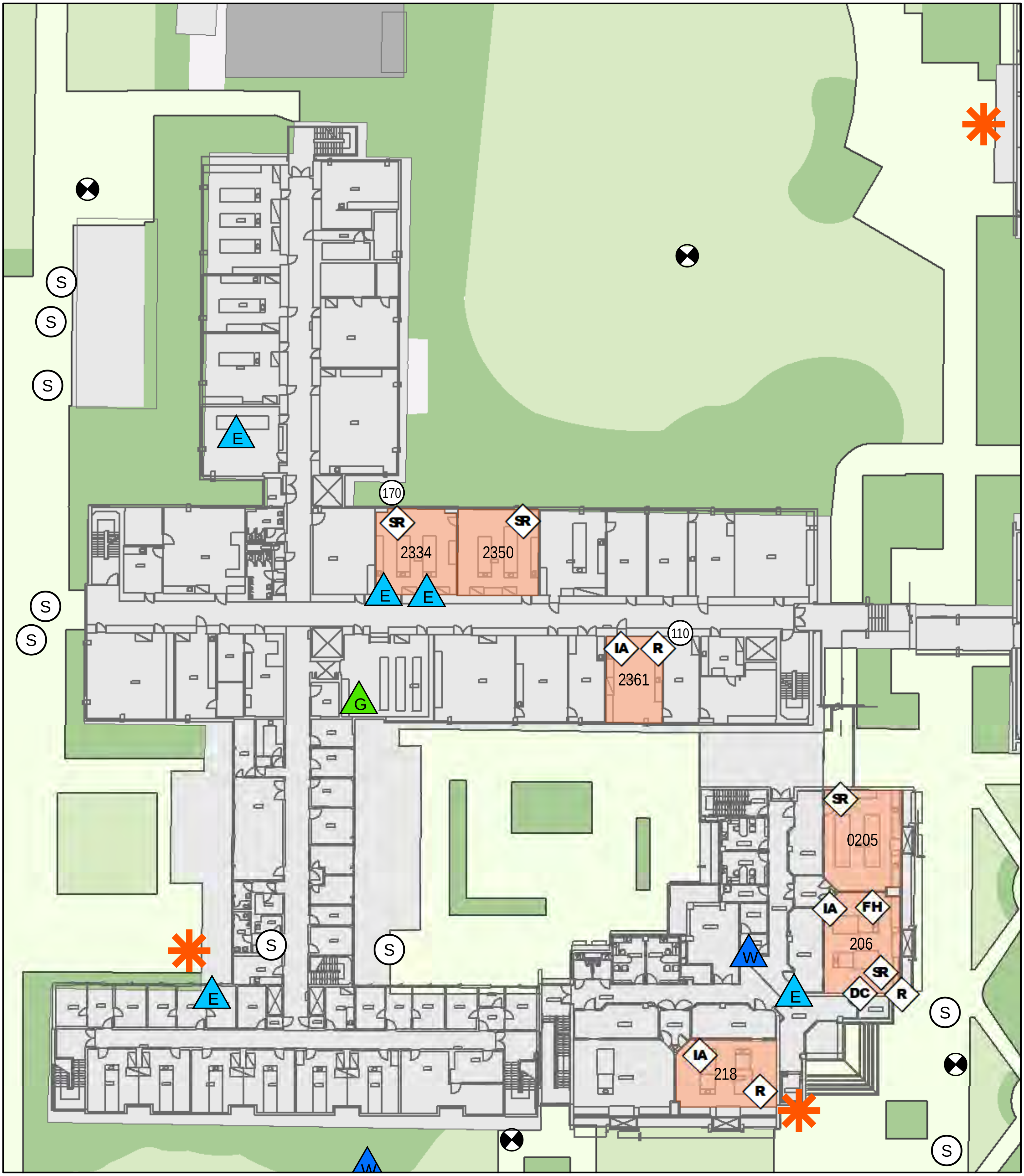
P5508

Pierce Hall & Pierce Hall Annex



Pierce Hall & Pierce Hall Annex

Floor 2

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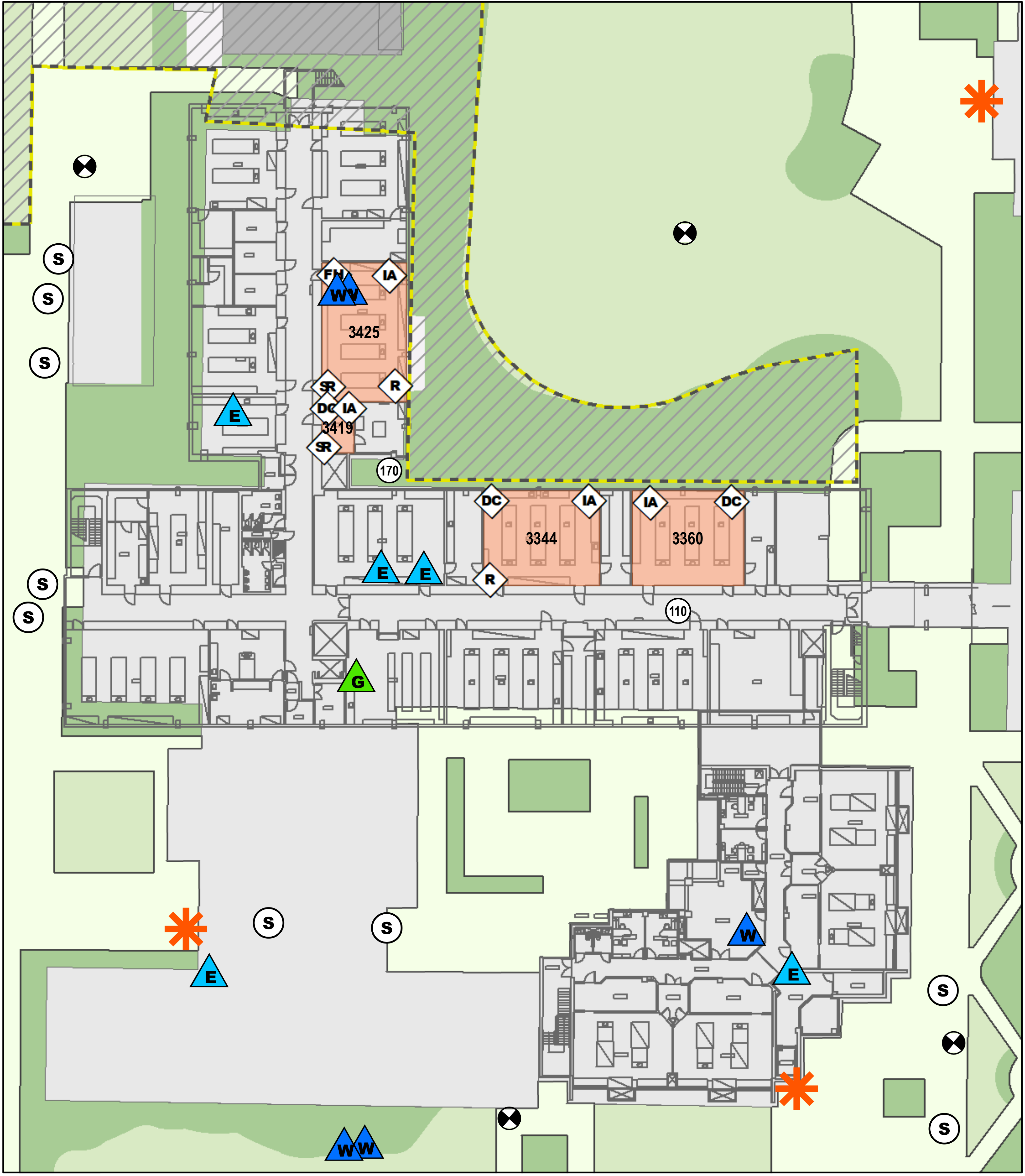
Index No:
P5508

Pierce Hall & Pierce Hall Annex



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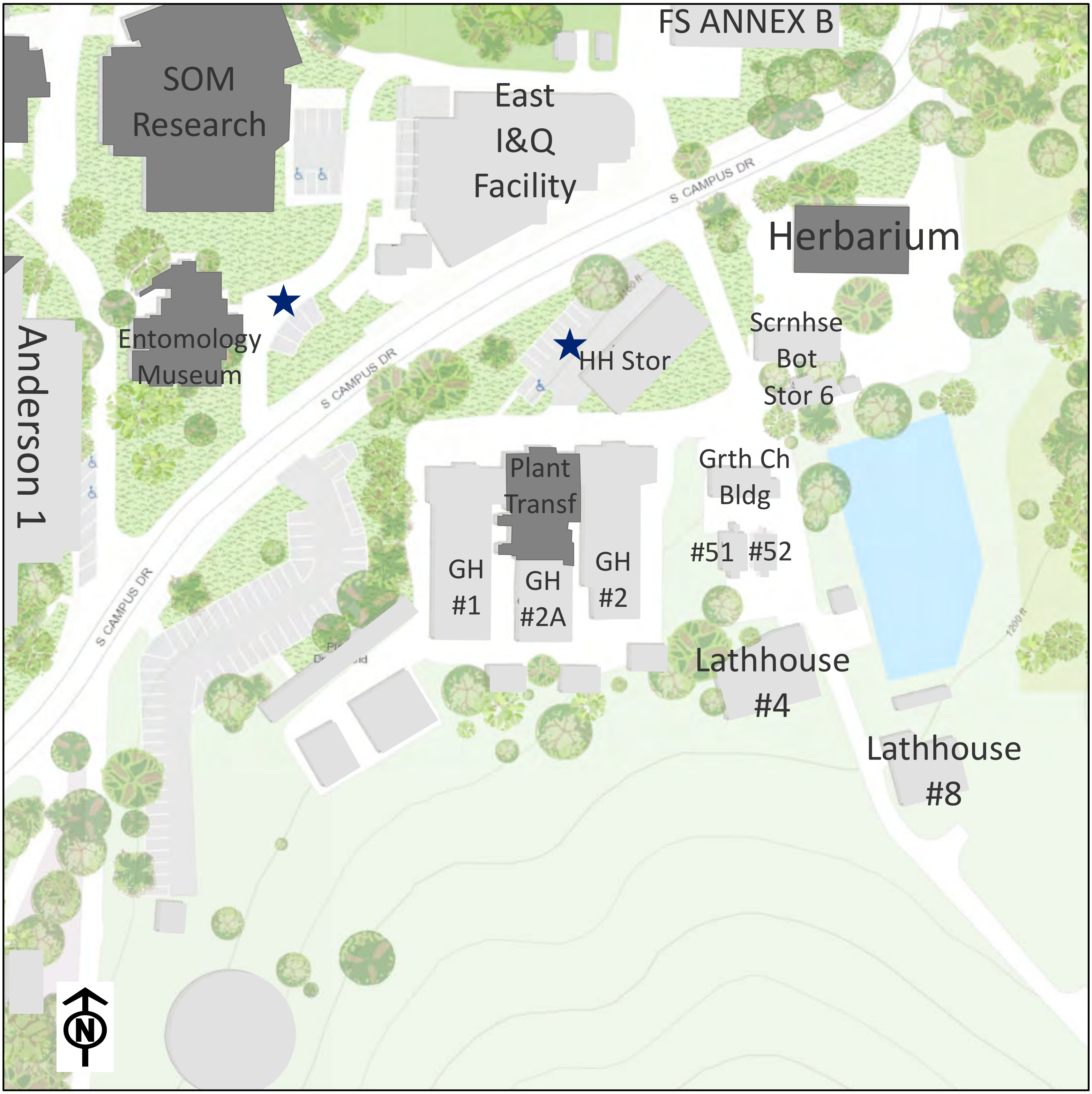
Pierce Hall & Pierce Hall Annex

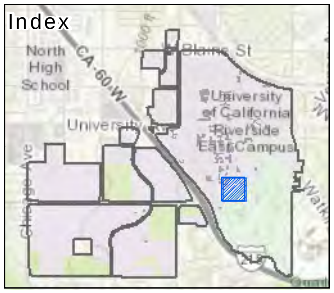
Floor 3

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_Bldg_Pt_F3.mxd 3/11/2020

Plant Transformation Facility

Index No: P5190





Map not to scale

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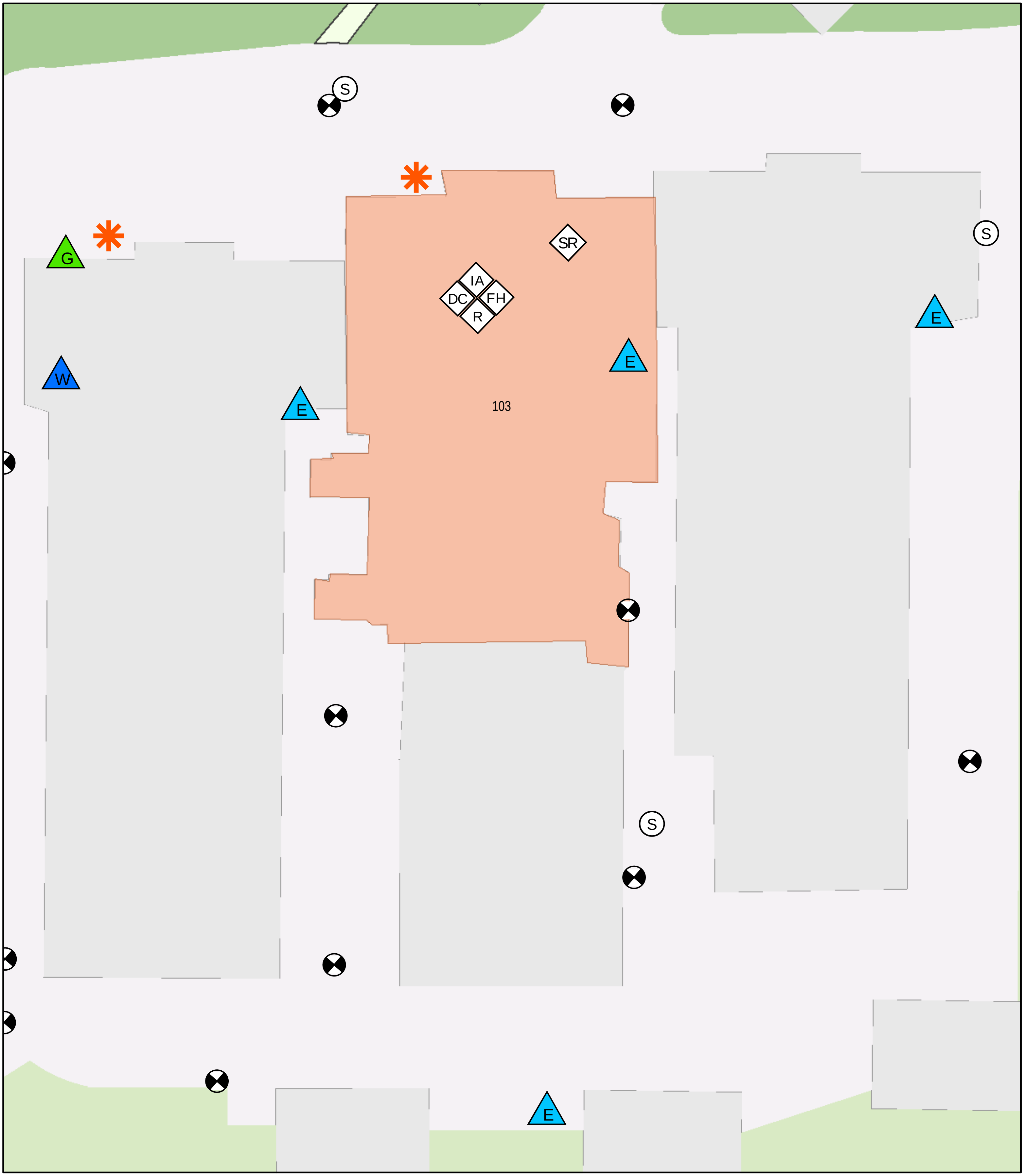
Plant Transformation Facility
Area Map

V:\map_docs\mxd\EHS\HMBP\HMP_Feb2020\HMP_DD_AreaMap.mxd 3/13/2020

Plant Transformation Facility

Index No:
P5190



Plant Transformation Facility
Floor 1

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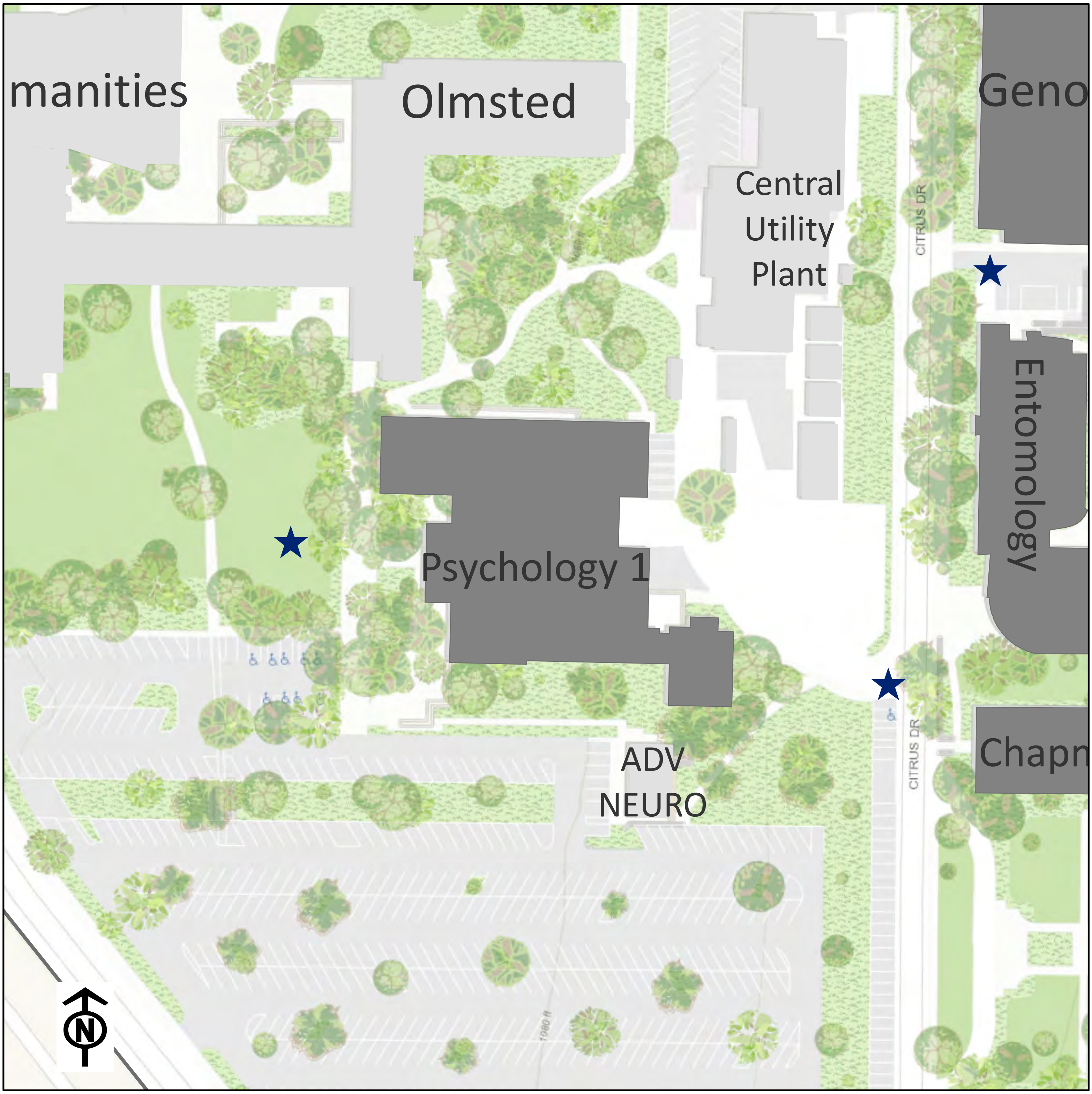
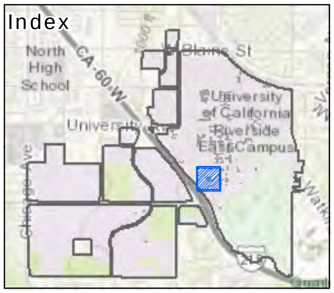
Psychology

Index No: P5373





★ Emergency Assembly Areas

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Map not to scale

UCR
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Psychology

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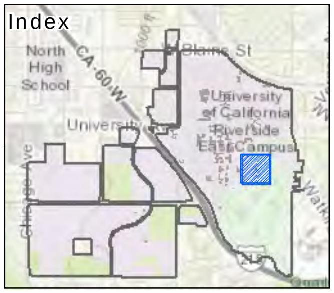
P5373

Psychology

Floor 1

Satellite Chiller Plant

Index No:
P5367



★ Emergency Assembly Areas

● Campus Entrance

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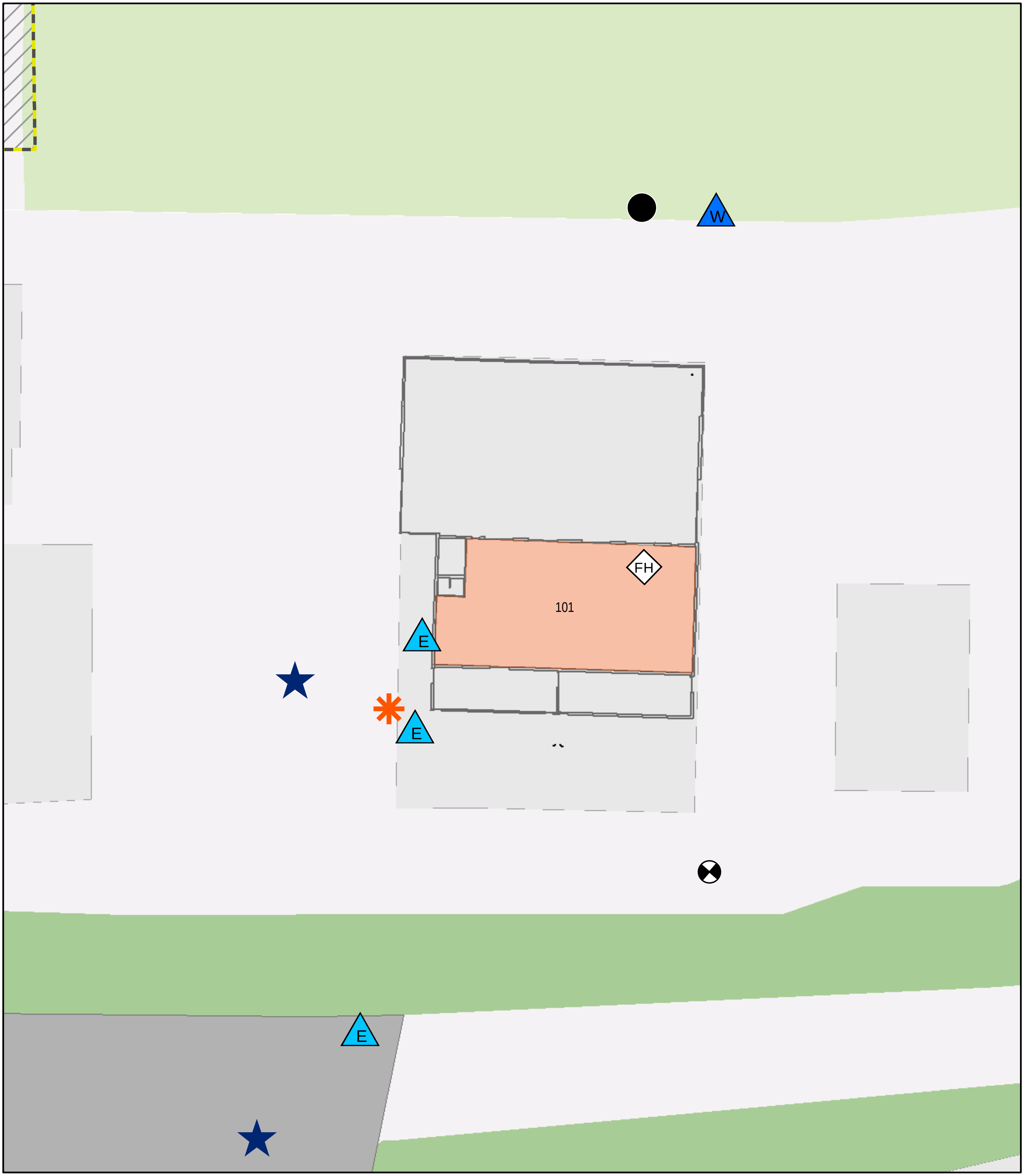
Map not to scale

UCR
Hazardous Chemical Inventory
Satellite Chiller Plant
Area Map

Satellite Chiller Plant



Satellite Chiller Plant

Floor 1

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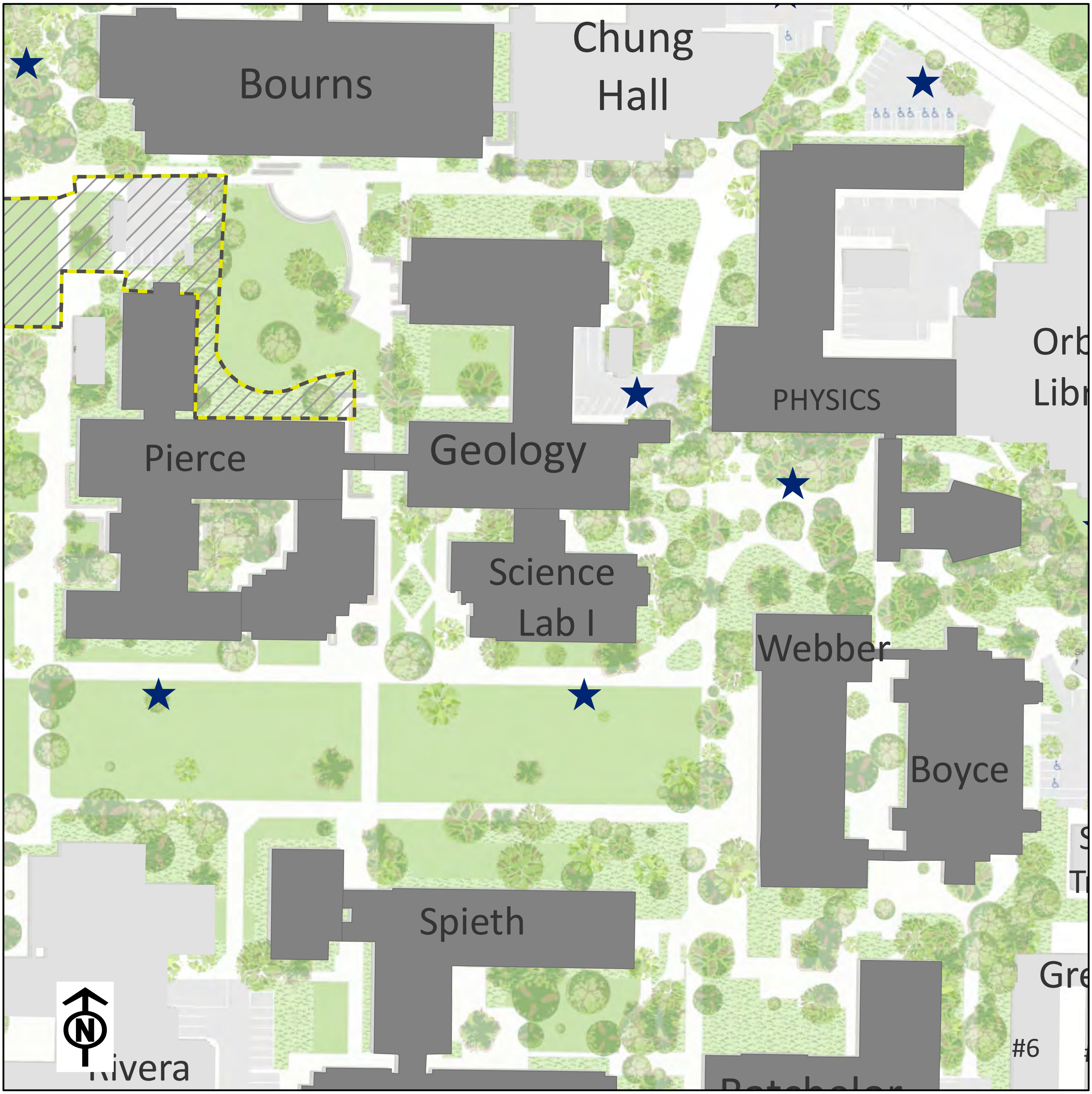
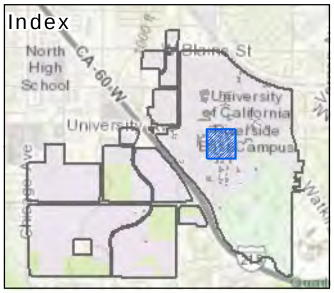
Science Lab 1

Index No:
P5416





★ Emergency Assembly Areas

● Campus Entrance

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Map not to scale

UCR
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Area Map

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Science Lab 1

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P5416

Science Lab 1
Floor 1

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P5416

Science Lab 1

Science Lab 1

Floor 2

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P5416

Science Lab 1

Science Lab 1

Floor 3

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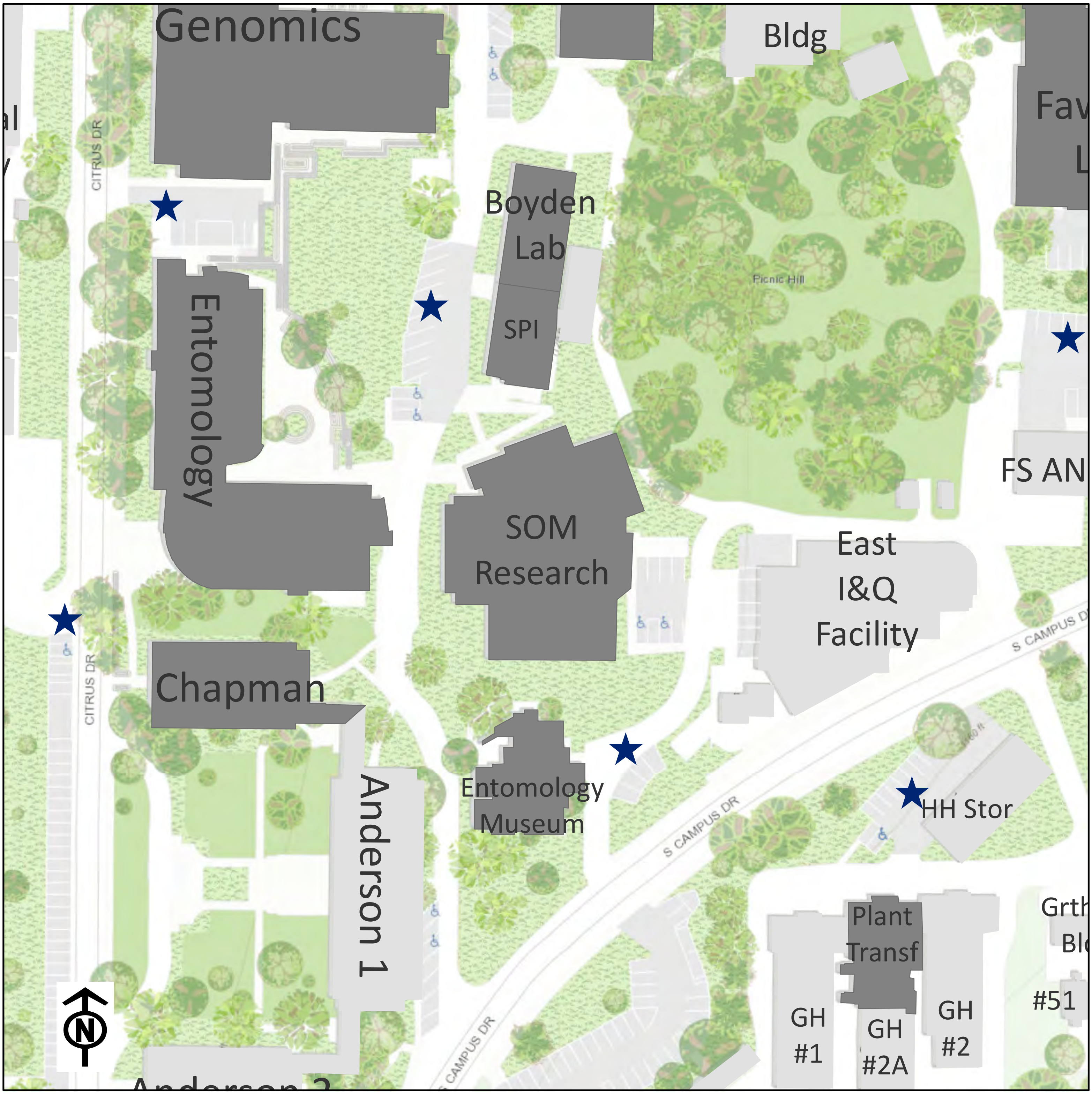
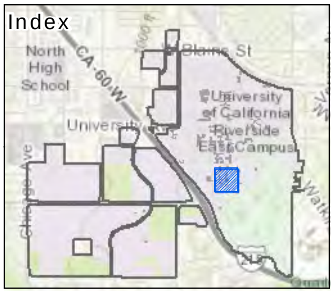
SOM Research

Index No: P5406





★ Emergency Assembly Areas

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Map not to scale

UCR
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SOM Research
Area Map

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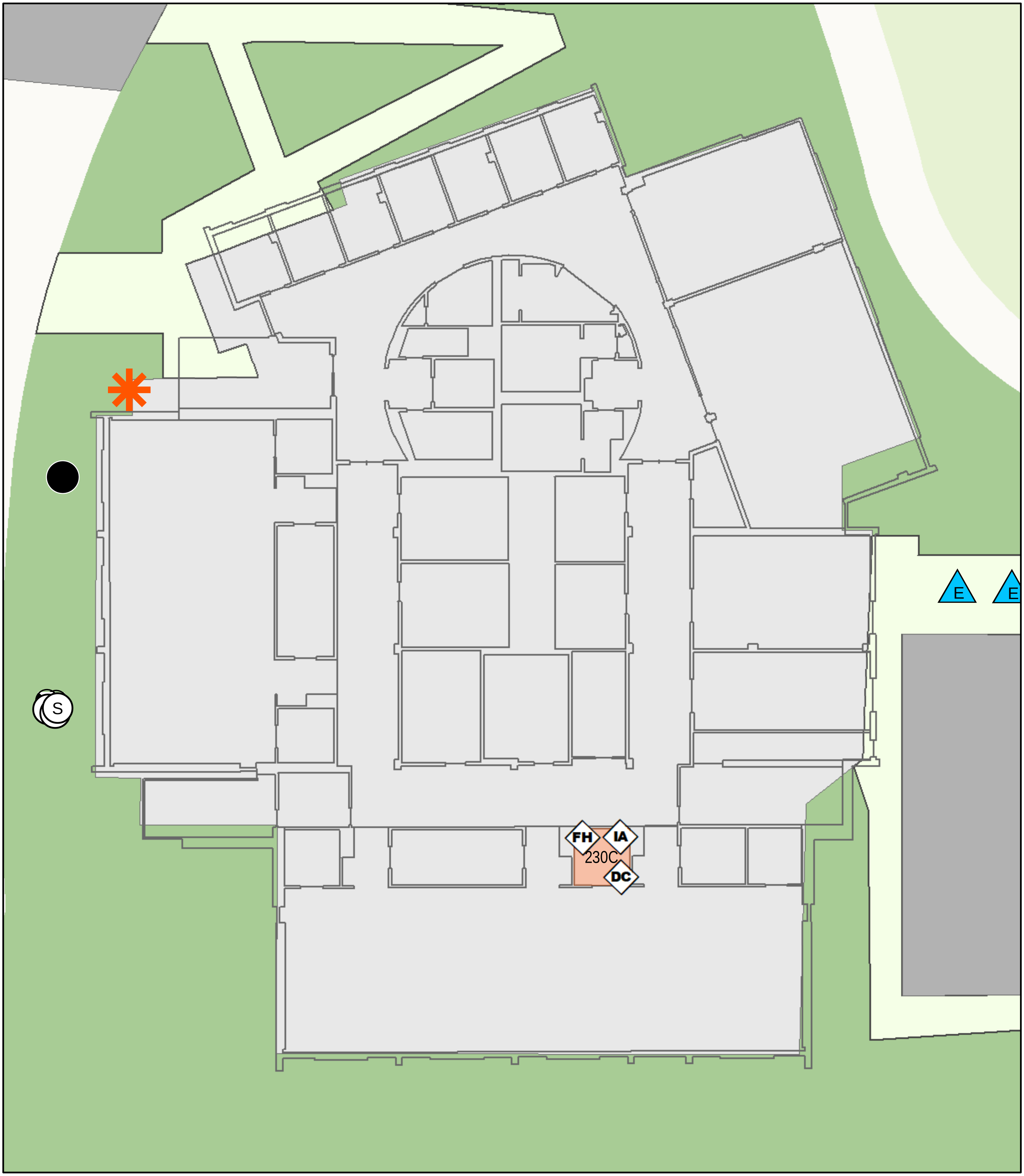
SOM Research

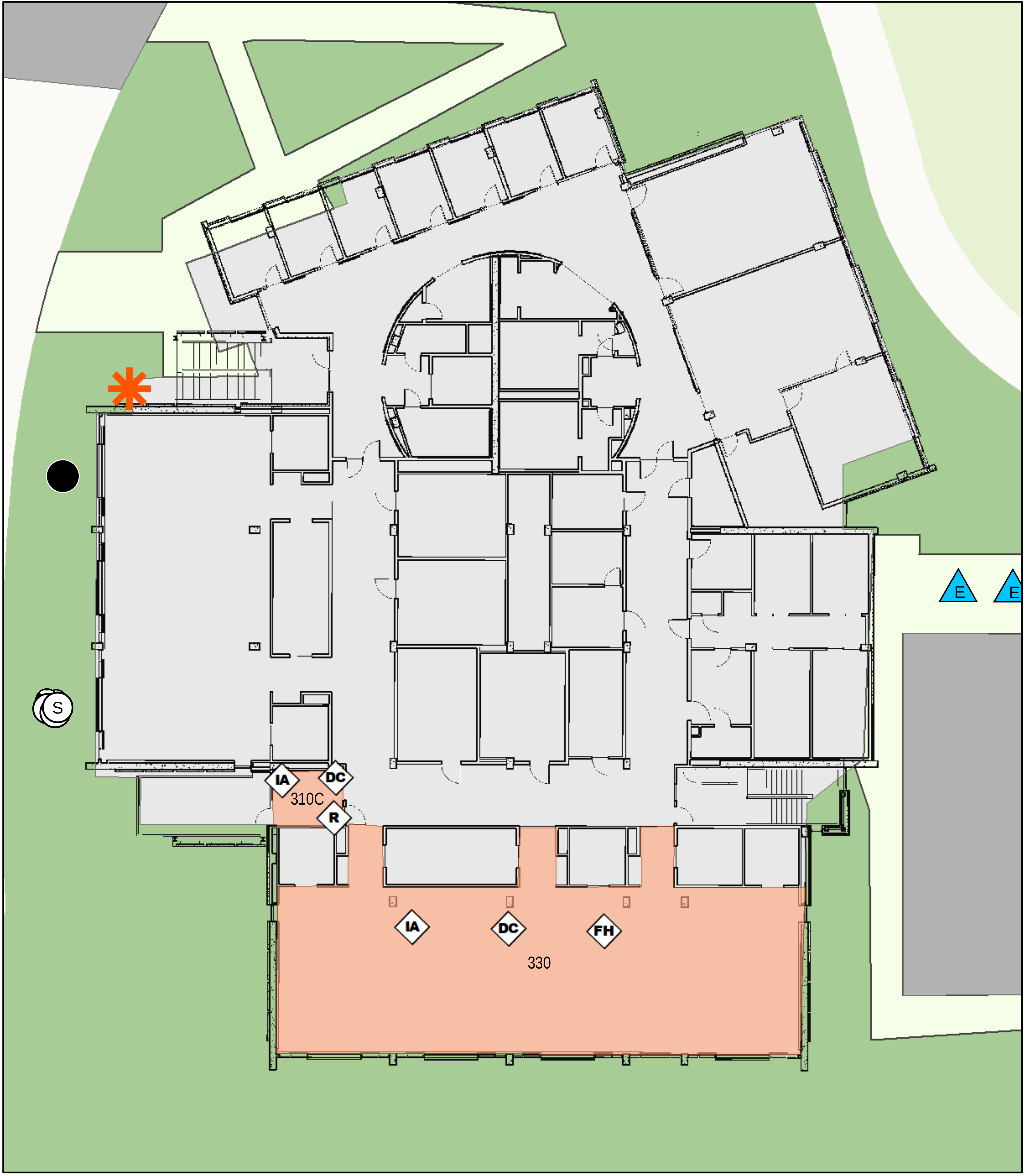


SOM Research

Floor 2

SOM Research

Index No:
P5406



SOM Research

Floor 3

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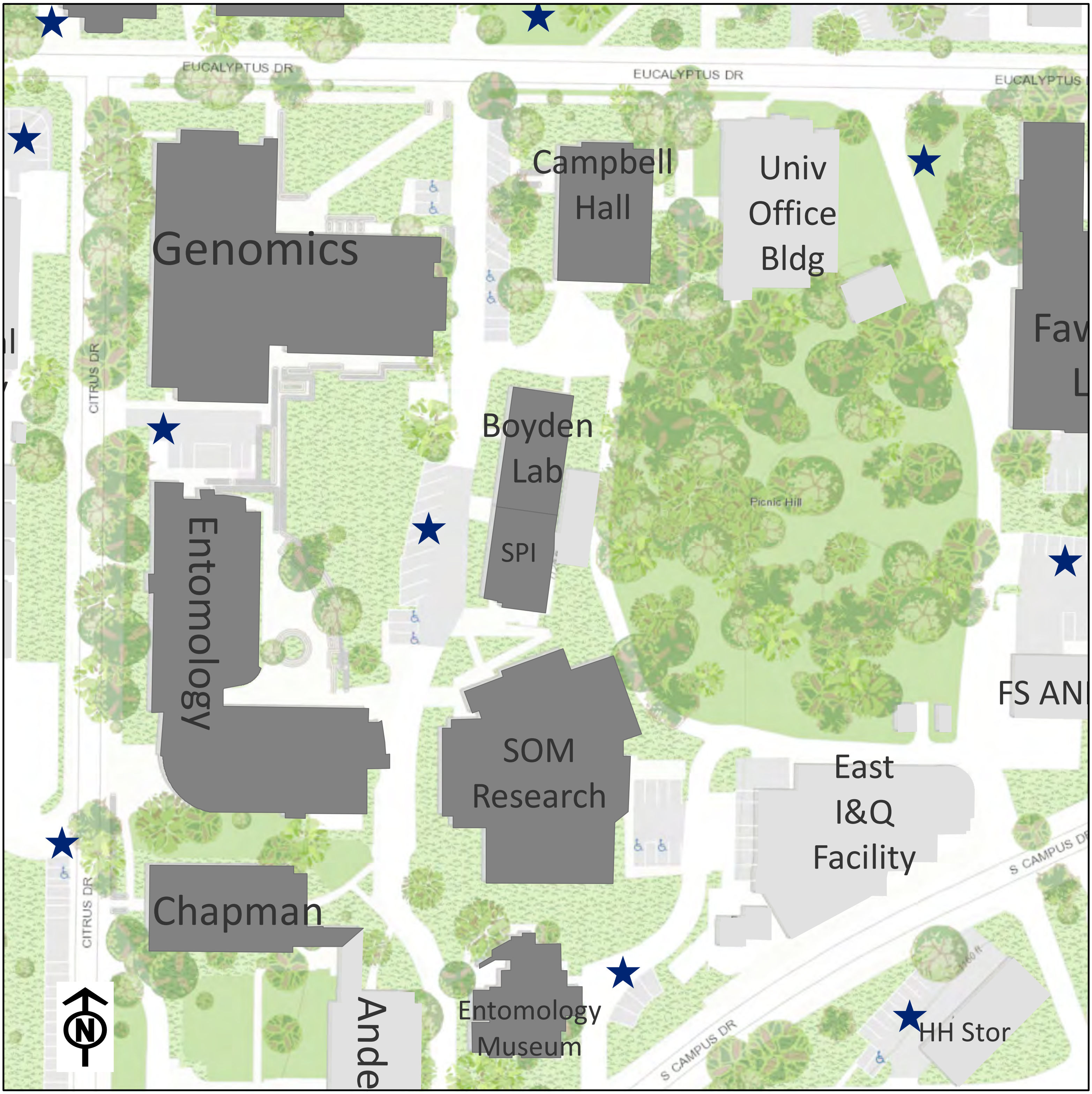
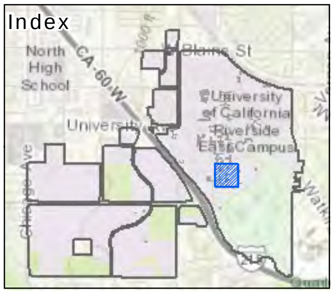
Stored Products Insecticide Bldg

Index No: P5305





★ Emergency Assembly Areas

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Map not to scale

UCR
Hazardous Chemical Inventory
Stored Products Insecticide Bldg
Area Map

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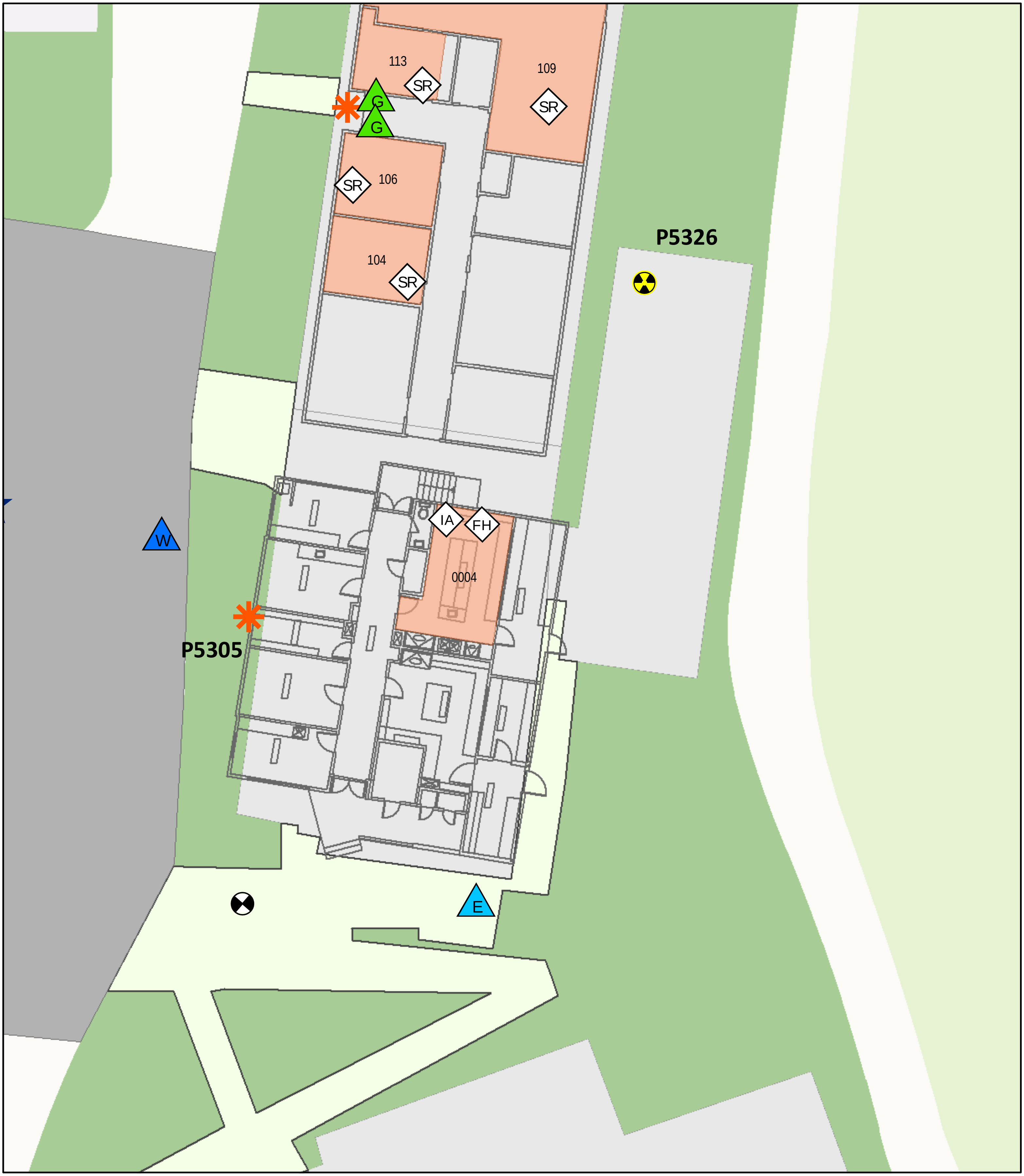
SPI & Colbalt 60

Index No:
P5305; P5326



SPI & Colbalt 60

Floor 1

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Spieth Hall & Life Sciences 1500

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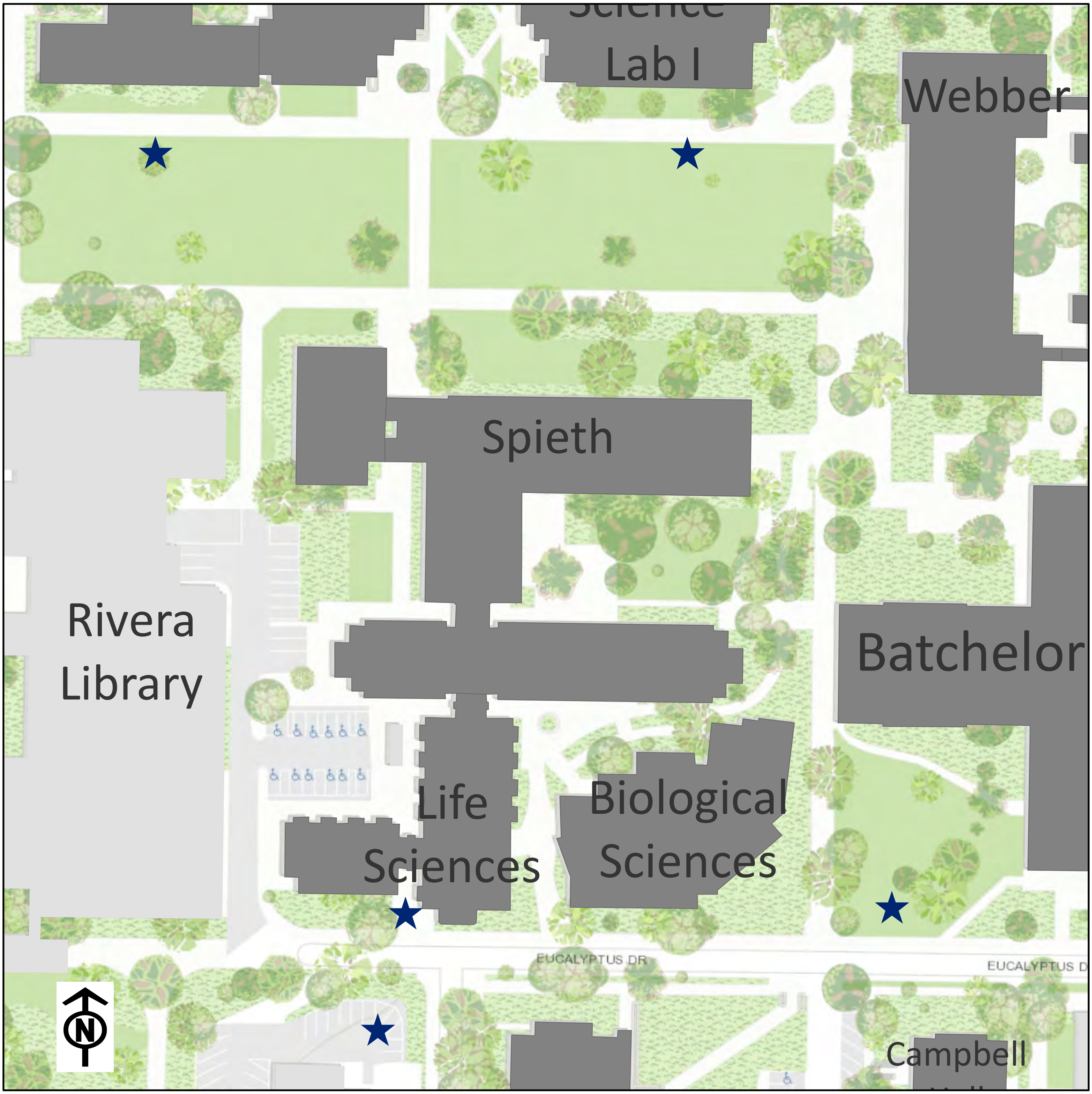
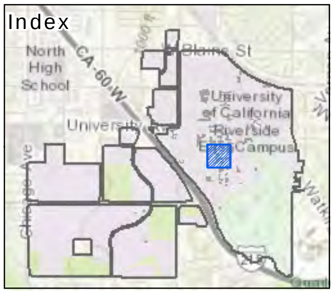
P5323**





Map not to scale

★ Emergency Assembly Areas

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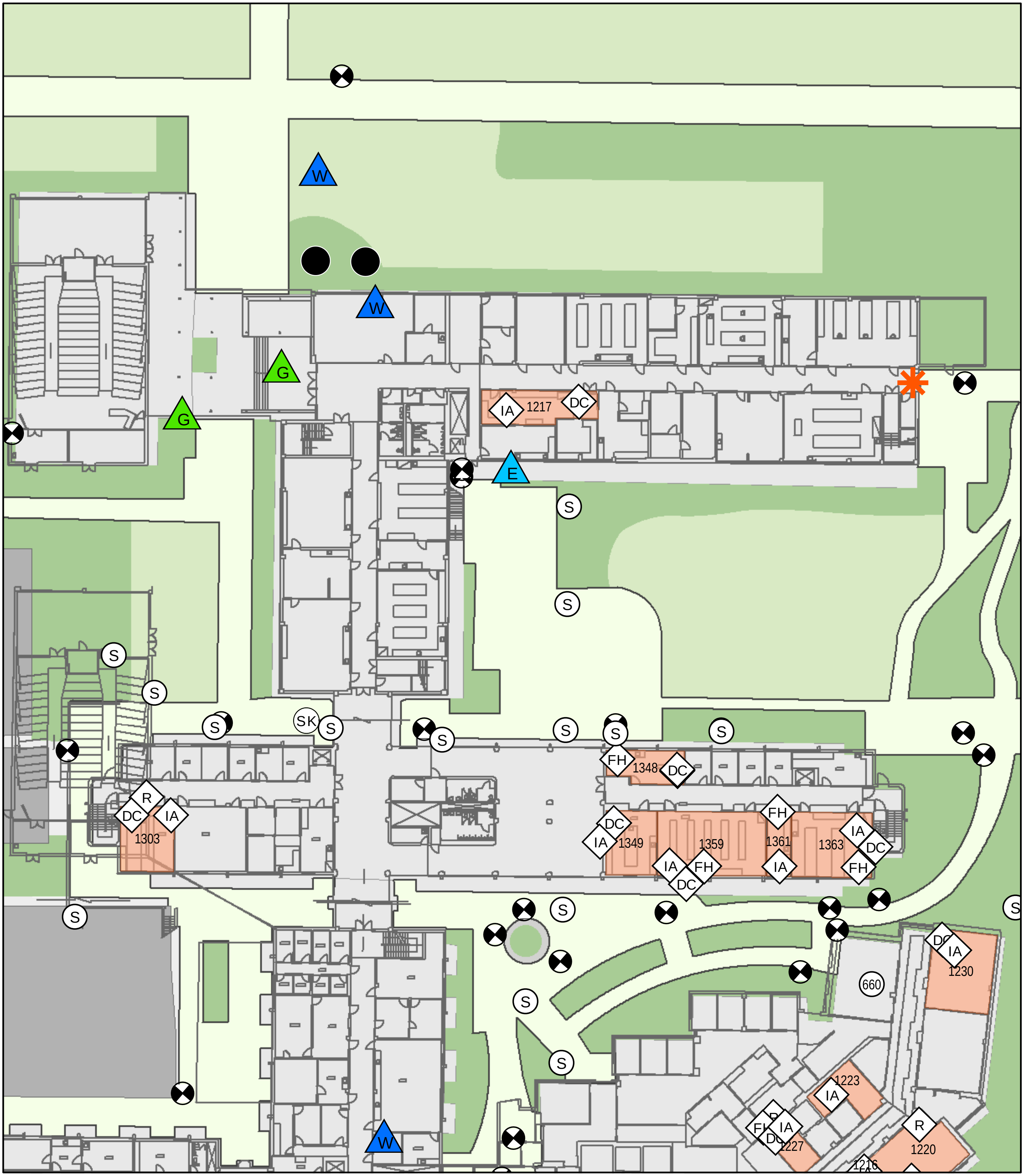
**UCR
Hazardous Chemical Inventory
Spieth Hall & Life Sciences 1500
Area Map**

Spieth Hall

Index No:
P5323

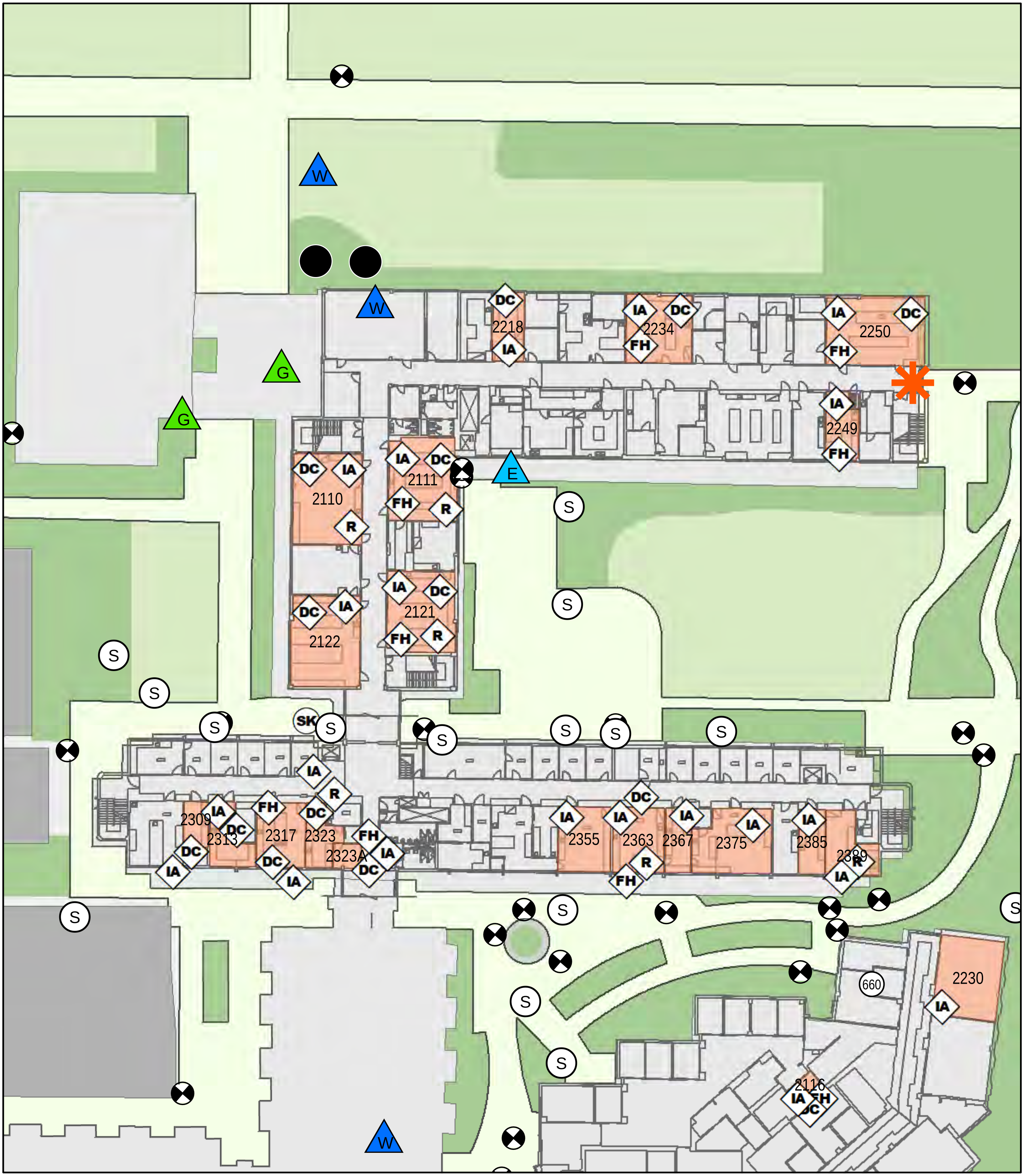


Spieth Hall

Floor 1

Index No: P5323

Spieth Hall

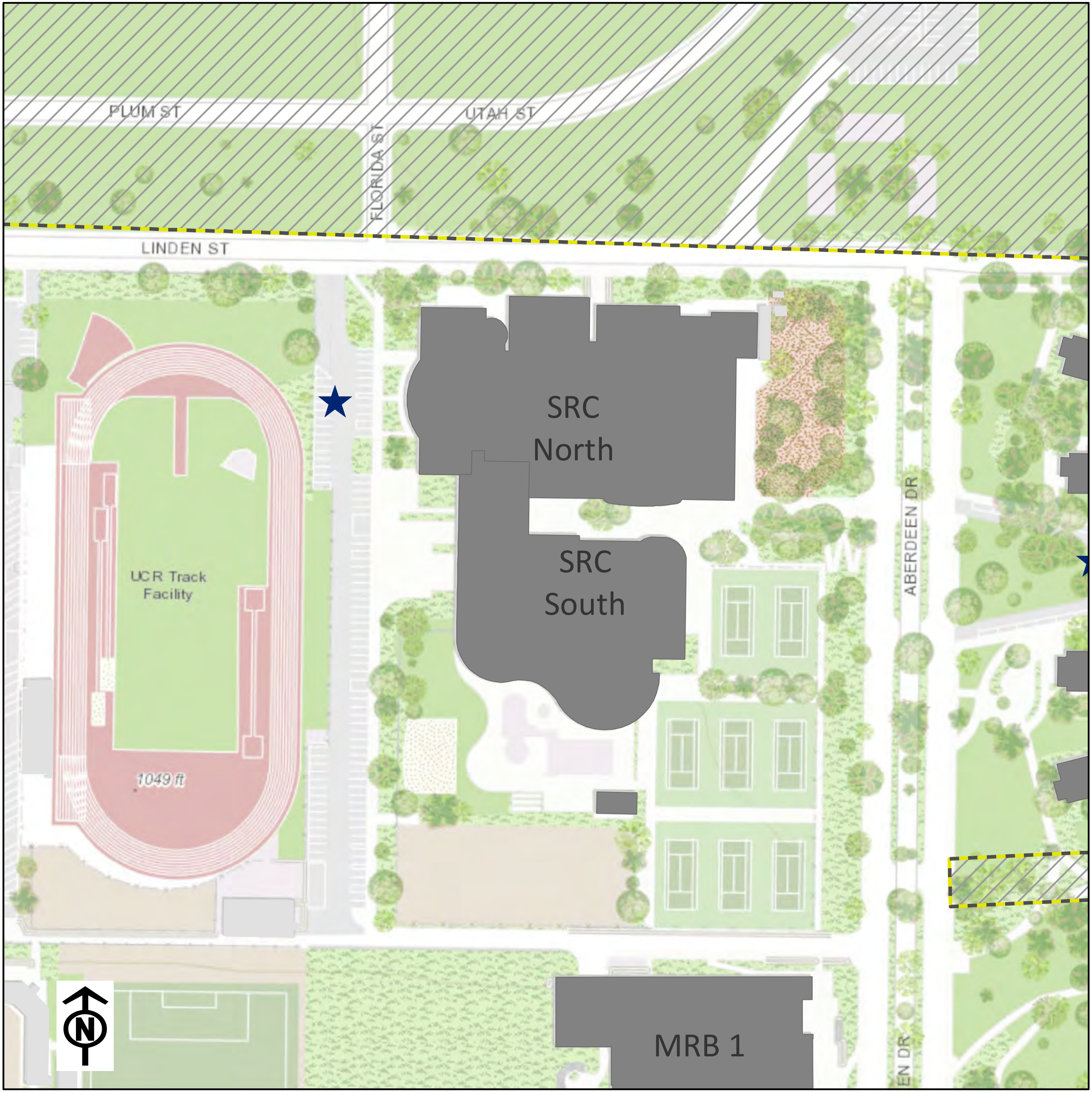


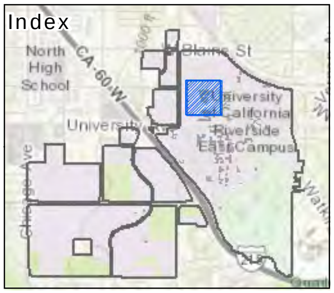
Spieth Hall

Floor 2

SRC North, South & SRC Pool Building

Index No:
P5511, P5695, P5696





★ Emergency Assembly Areas

● Campus Entrance

▇ High Priority Structures

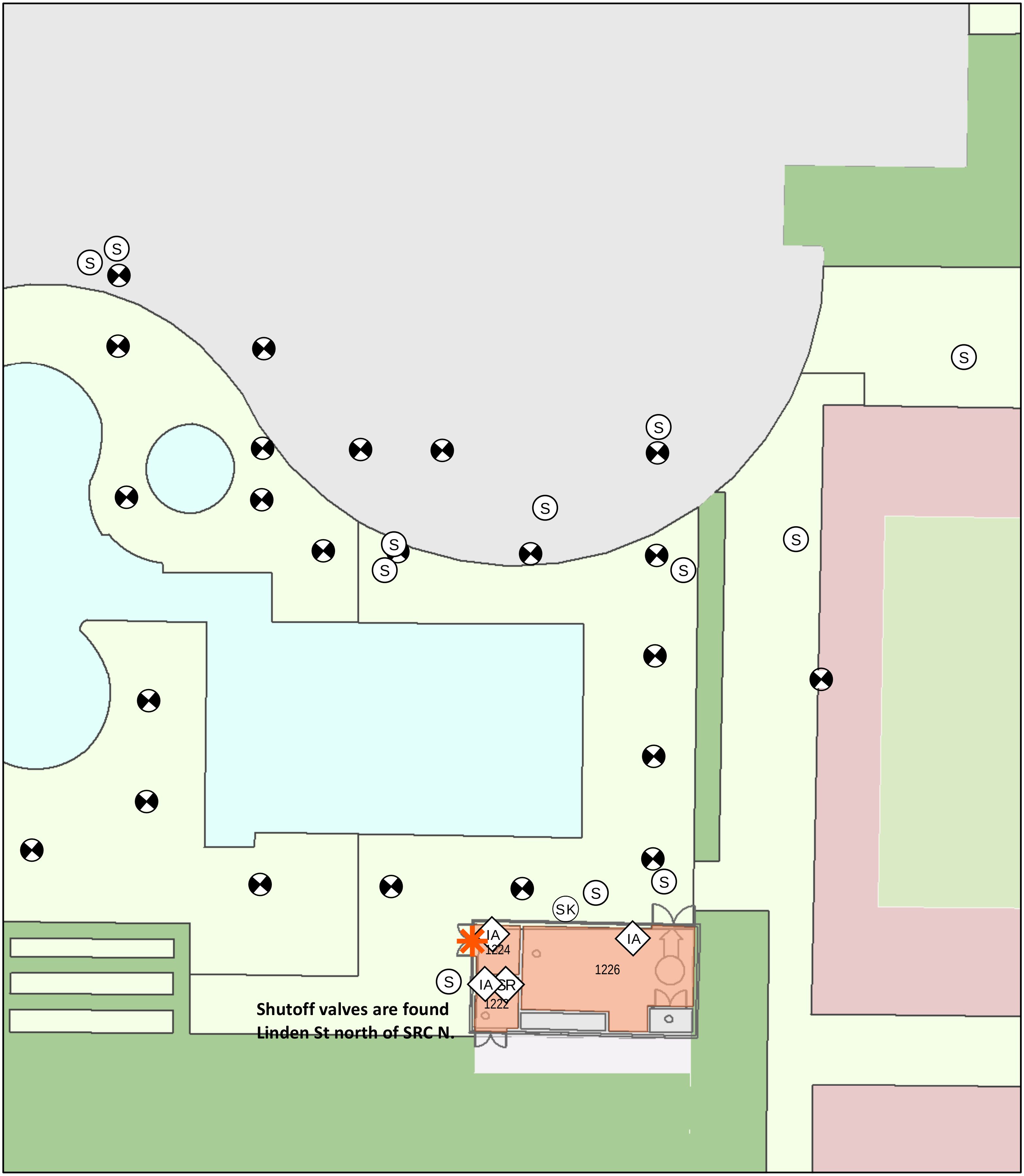
☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
SRC North, South & SRC Pool Building
Area Map

SRC Pool Building

Index No:
P5696



Shutoff valves are found Linden St north of SRC N.

SRC Pool Building

Floor 1

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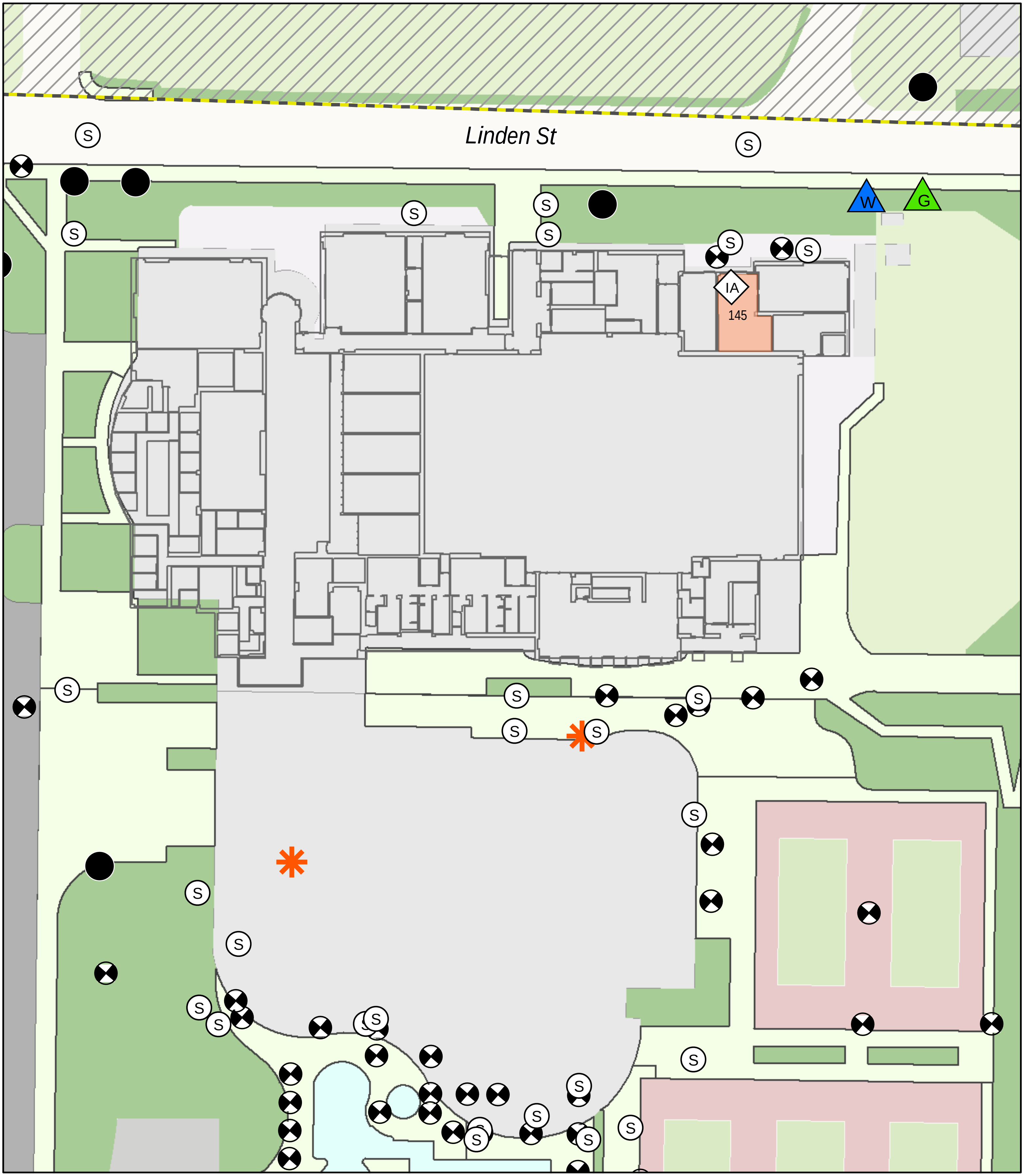
SRC North

Index No:
P5511



SRC North
Floor 1

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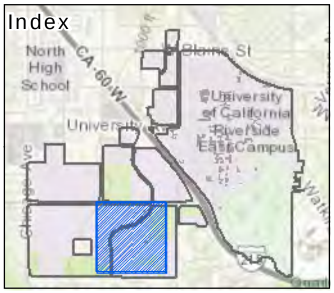
Turf Fertil

Index No:
Z1098

Index



Map not to scale

★ Emergency Assembly Areas

● Campus Entrance

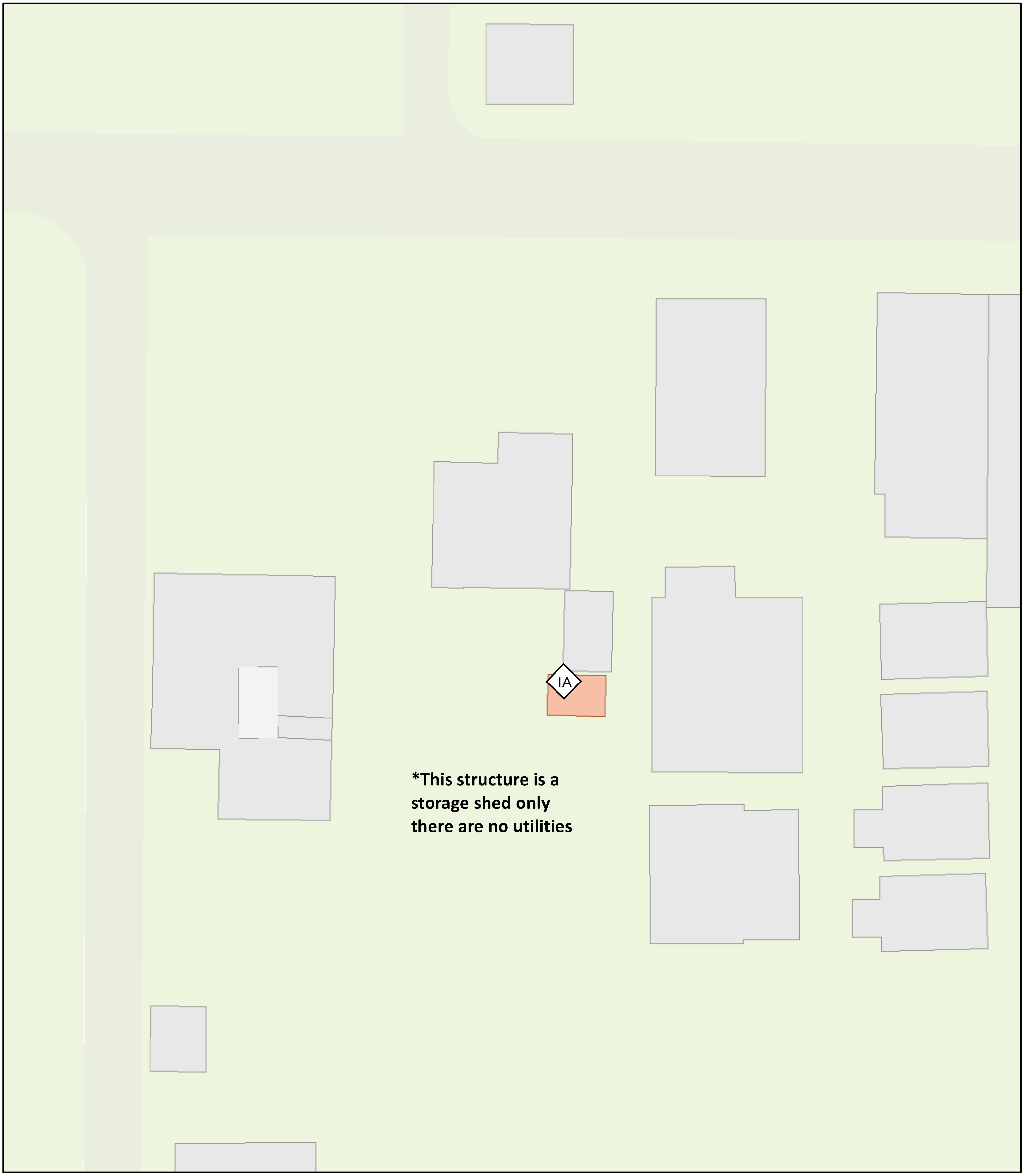
▬ High Priority Structures

☐ Campus Boundary

UCR
Hazardous Chemical Inventory
Turf Fertil
Area Map

Turf Fertil

Index No:
Z1098



*This structure is a storage shed only there are no utilities

Turf Fertil
Floor 1

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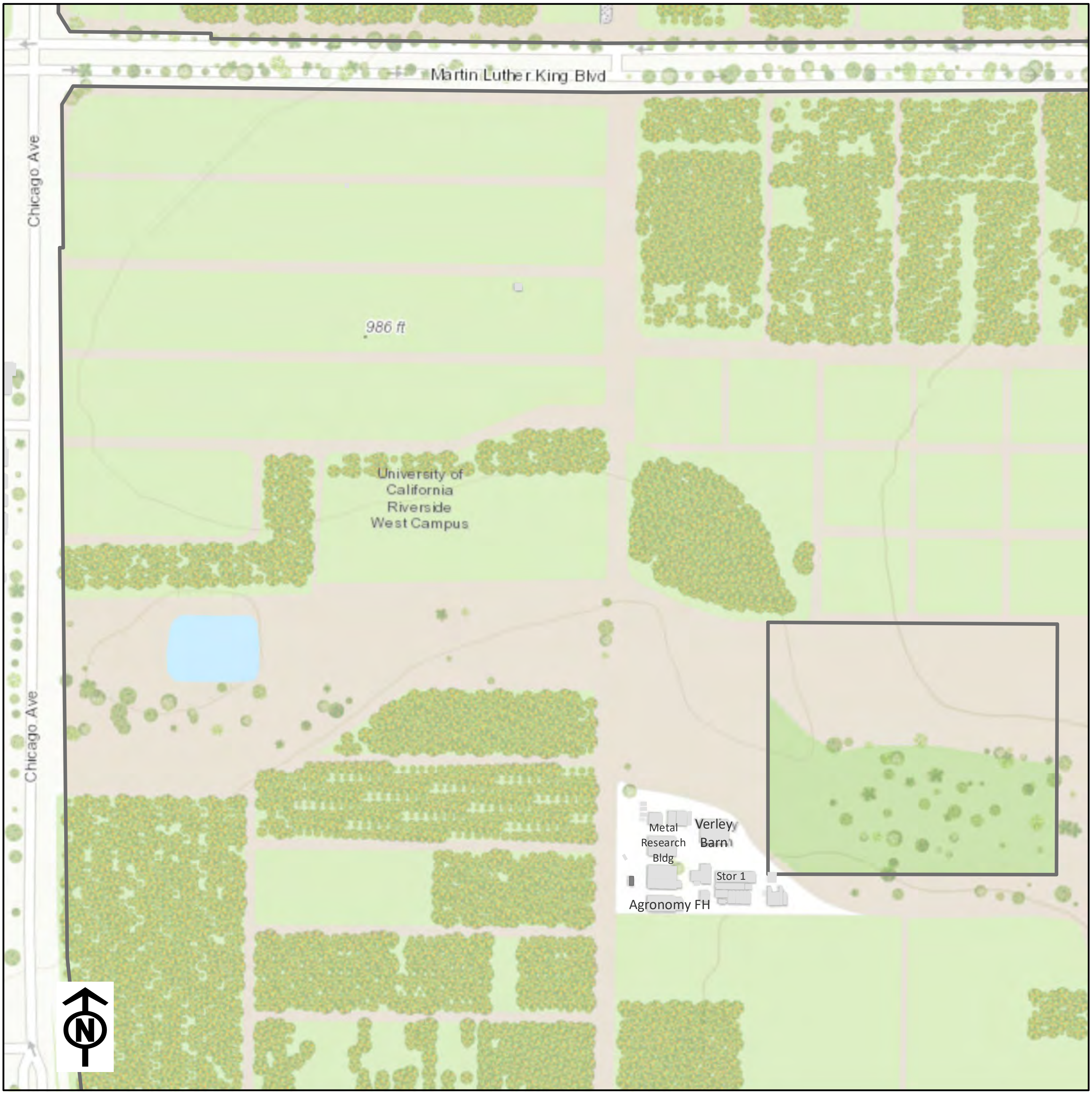
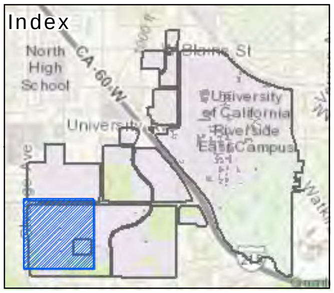
Verley Barn - Tank Storage

**Index No:
Z1104**





Map not to scale

★ Emergency Assembly Areas

● Campus Entrance

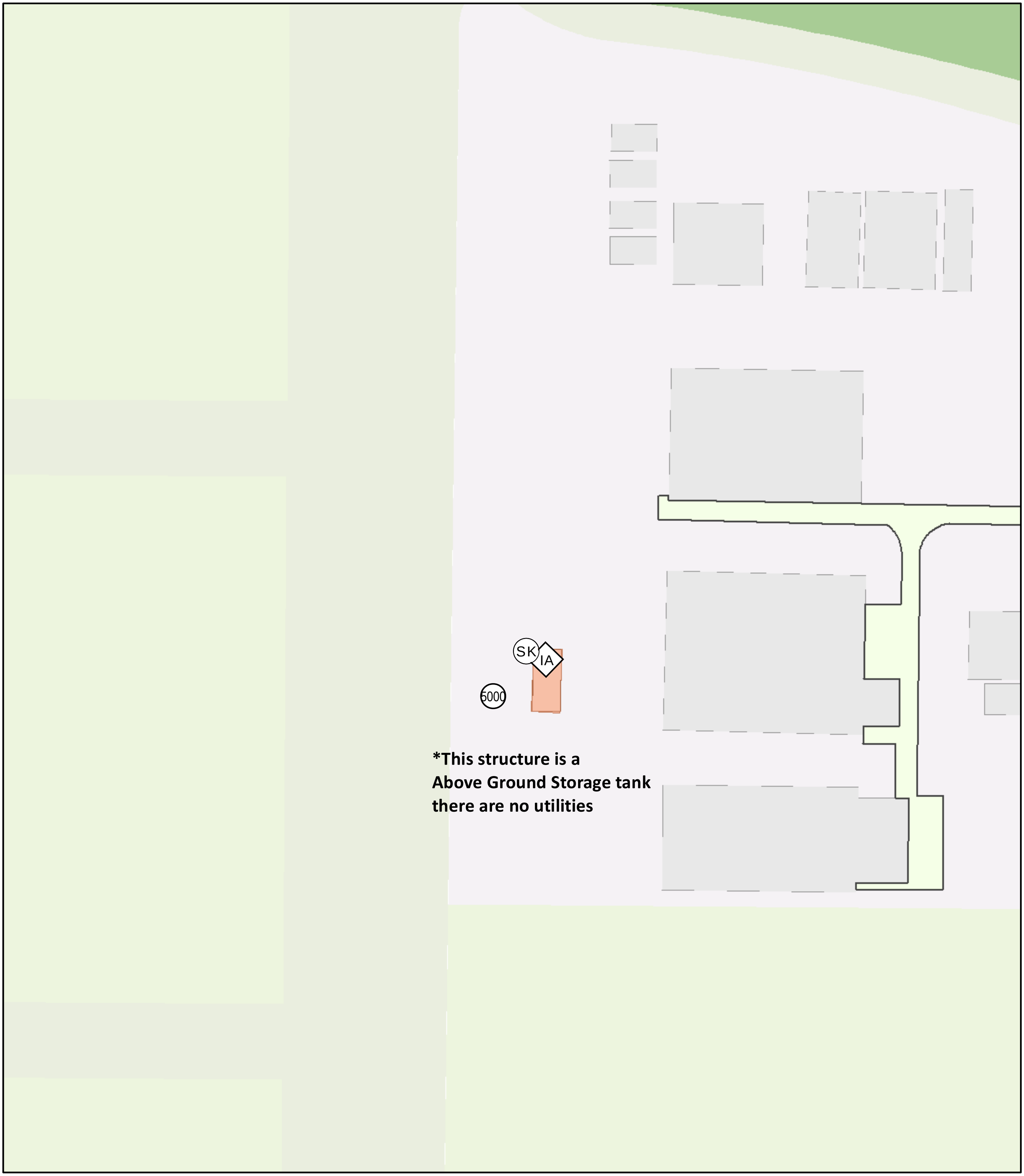
▨ High Priority Structures

☐ Campus Boundary

**UCR
Hazardous Chemical Inventory
Verley Barn - Tank Storage
Area Map**

Verley Barn - Tank Storage

Index No:
Z1104



*This structure is a
Above Ground Storage tank
there are no utilities

Verley Barn - Tank Storage
Floor 1

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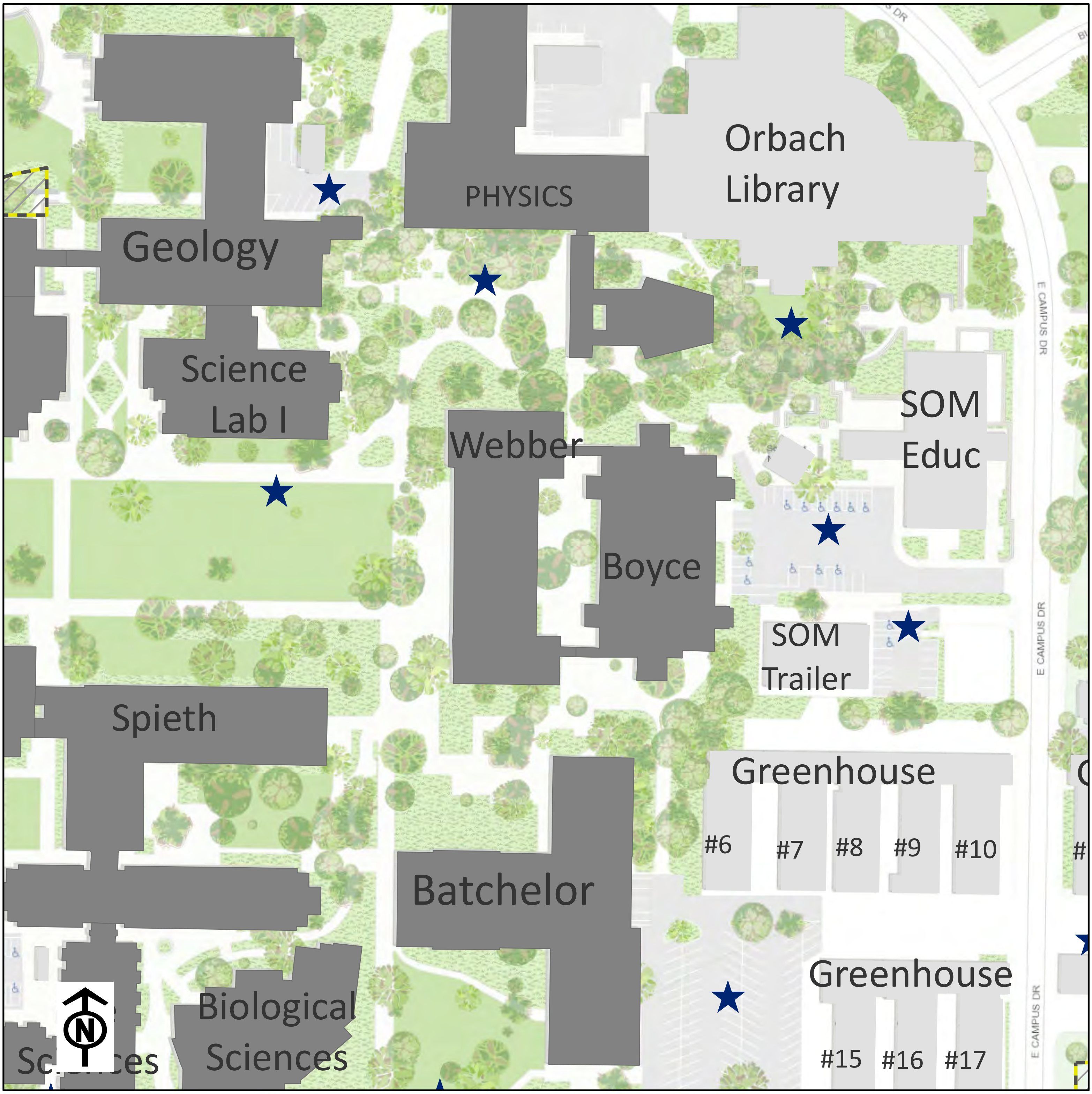
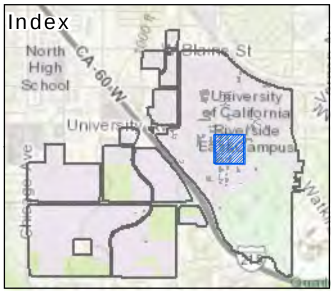
Webber Hall

Index No: P5342





★ Emergency Assembly Areas

● Campus Entrance

■ High Priority Structures

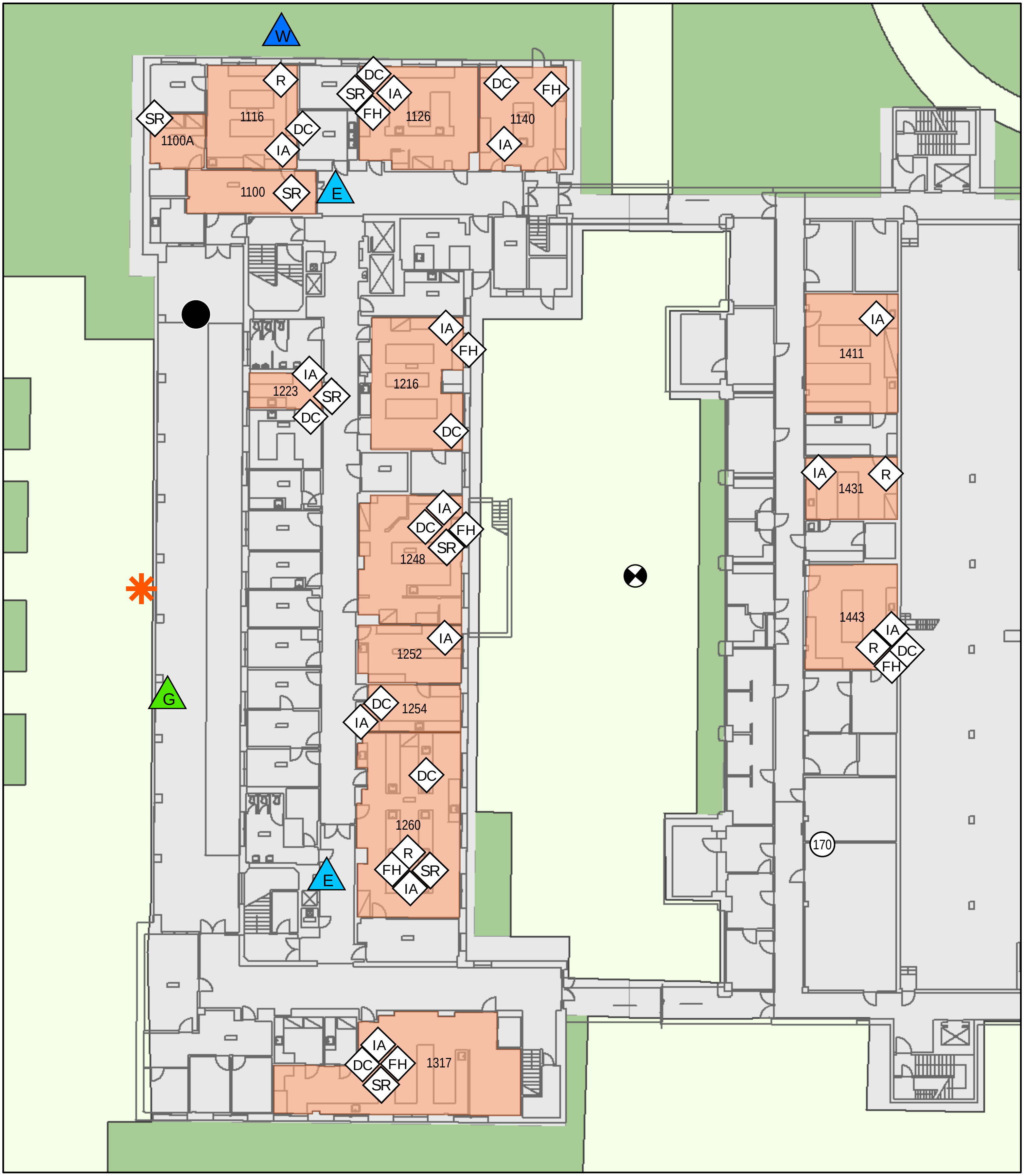
☐ Campus Boundary

Map not to scale

UCR
Hazardous Chemical Inventory
Webber Hall
Area Map

Webber Hall

Index No:
P5342



Webber Hall

Floor 1

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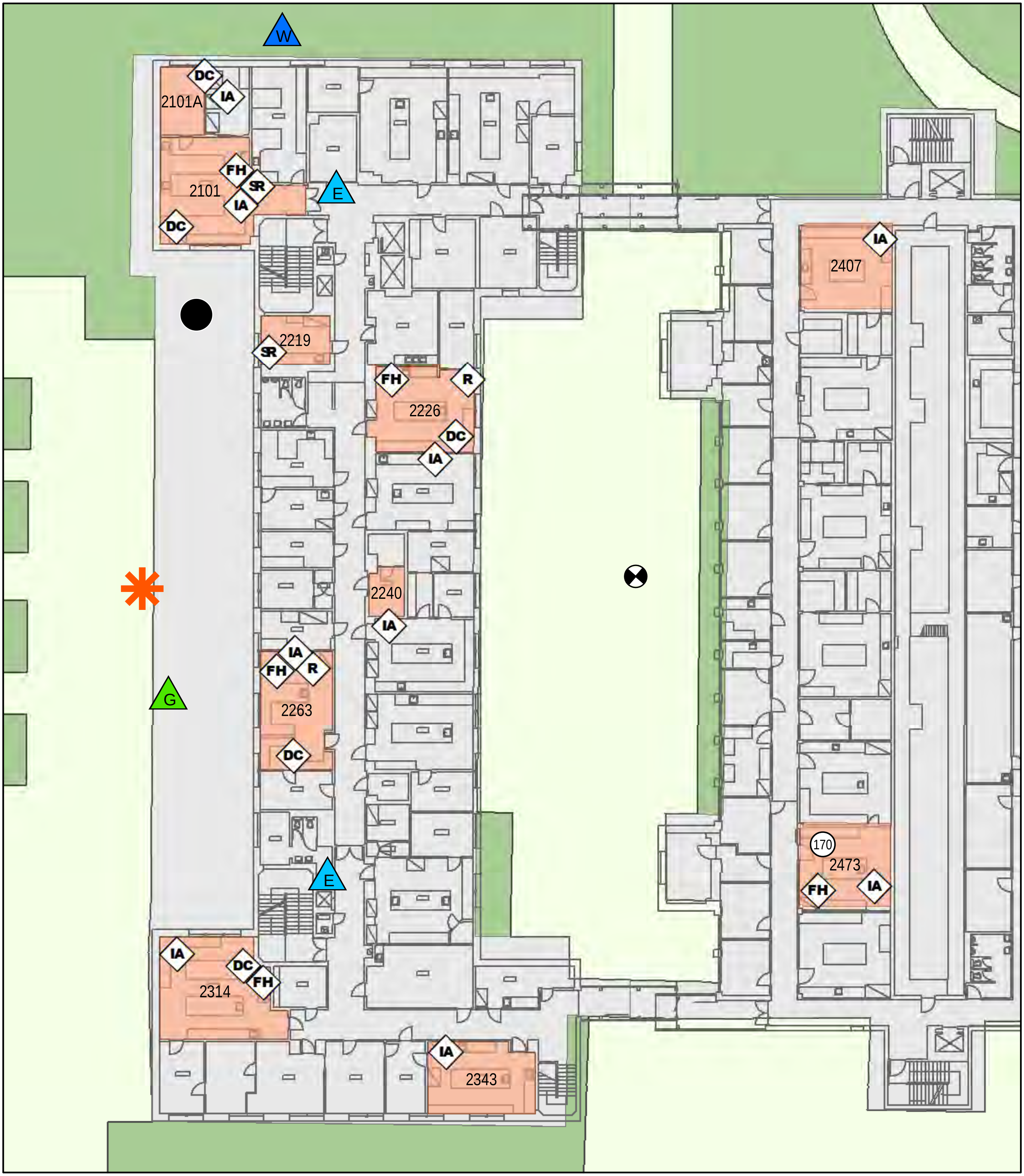
Webber Hall



Webber Hall

Floor 2

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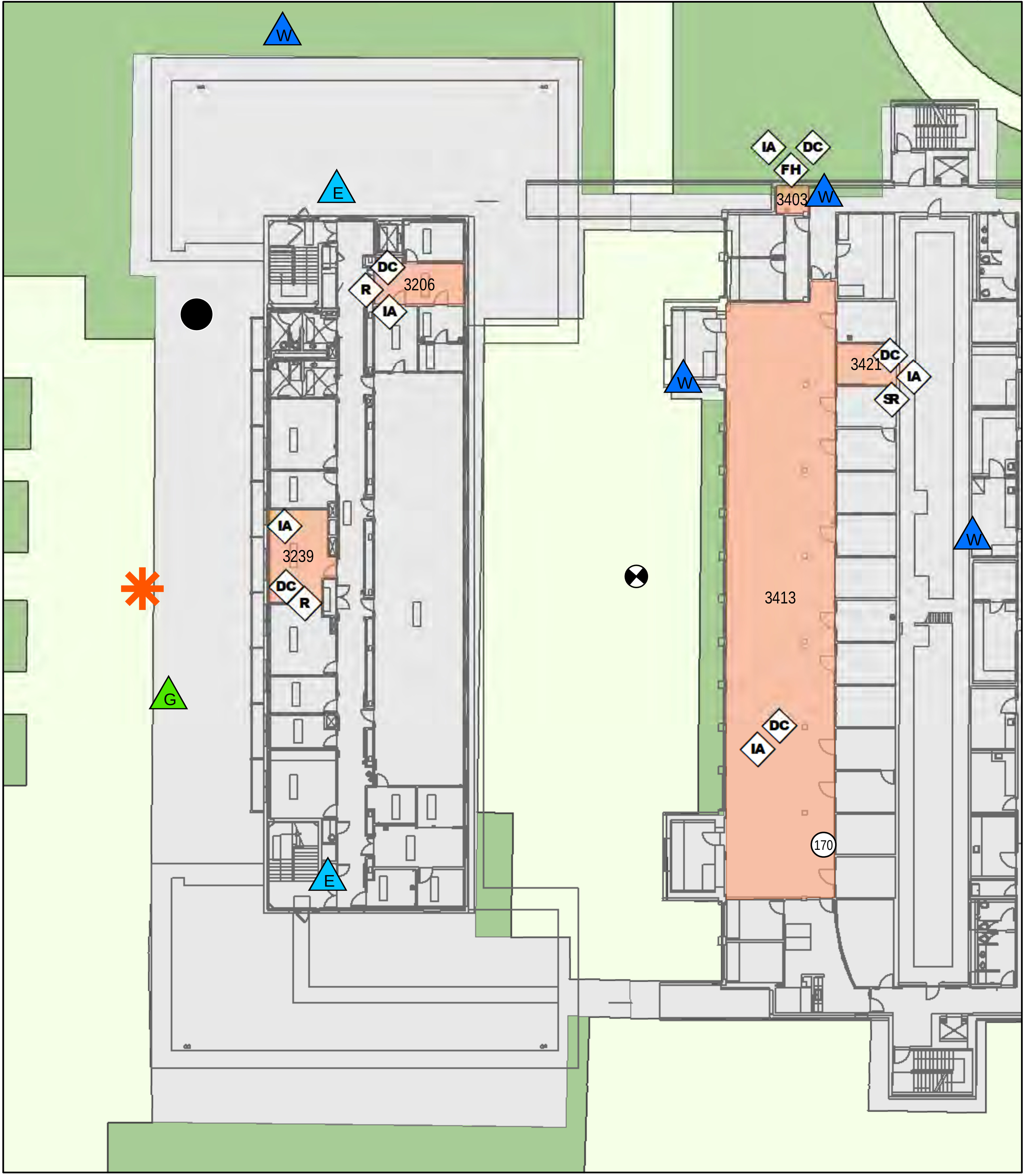
Index No: P5342

Webber Hall



UCR

Webber Hall

Floor 3

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Appendix I

Noise Supporting Information

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Appendix I1

RCNM Calculations

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Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/15/2021
Case Description: UCR LRDP General Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dump Truck	No	40		76.5	50	0
Excavator	No	40		80.7	50	0
Front End Loader	No	40		79.1	50	0

Results

		Calculated (dBA)	
Equipment		*Lmax	Leq
Dump Truck		76.5	72.5
Excavator		80.7	76.7
Front End Loader		79.1	75.1
	Total	80.7	79.9

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/25/2021
Case Description: UCR LRDP General Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dump Truck	No	40		76.5	75	0
Excavator	No	40		80.7	75	0
Front End Loader	No	40		79.1	75	0

Results

		Calculated (dBA)	
Equipment		*Lmax	Leq
Dump Truck		72.9	68.9
Excavator		77.2	73.2
Front End Loader		75.6	71.6
	Total	77.2	76.4

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 1/25/2021
Case Description: UCR LRDP General Construction

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residential	Residential	80	80	80

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dump Truck	No	40		76.5	100	0
Excavator	No	40		80.7	100	0
Front End Loader	No	40		79.1	100	0

Results

		Calculated (dBA)	
Equipment		*Lmax	Leq
Dump Truck		70.4	66.5
Excavator		74.7	70.7
Front End Loader		73.1	69.1
	Total	74.7	73.9

*Calculated Lmax is the Loudest value.

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Appendix I2

HVAC Analysis

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QuietCurb™

What is QuietCurb™ ?

An innovative "Quiet Comfort" option

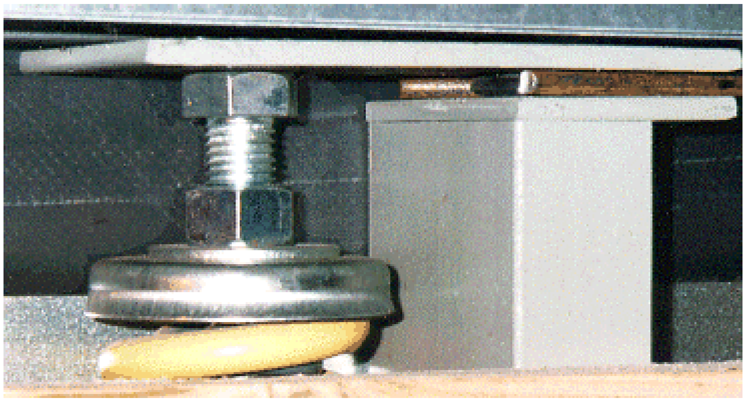
The **QuietCurb**™ is an acoustically-engineered roof curb product which further enhances the Trane IntelliPak by **reducing operating sound power levels**. In some sizes, the Trane rooftop, with the **QuietCurb** accessory, is as much as 18 NC lower than the equivalent size competitive model! Read on and COMPARE.

QuietCurb™

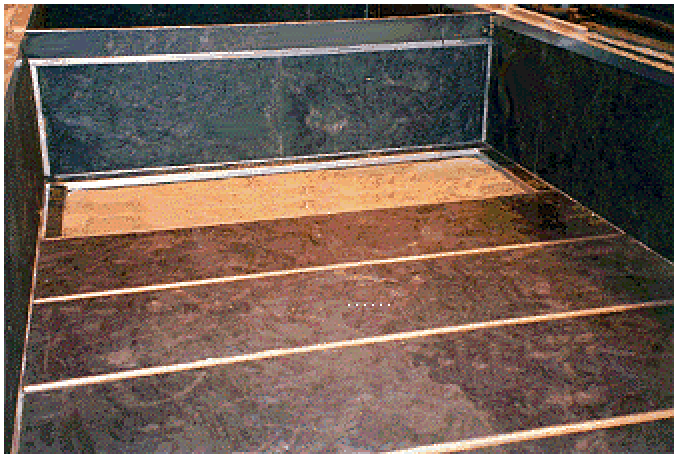
How Does it Work?

Addresses the Three Major Components of Rooftop Generated Sound

The curb prevents regenerated noise (vibratory noise resulting from the transmission of sound from a turbulent fluid or mechanical source) through the use of an integral spring-vibration isolation rail. **Installer's Guide**

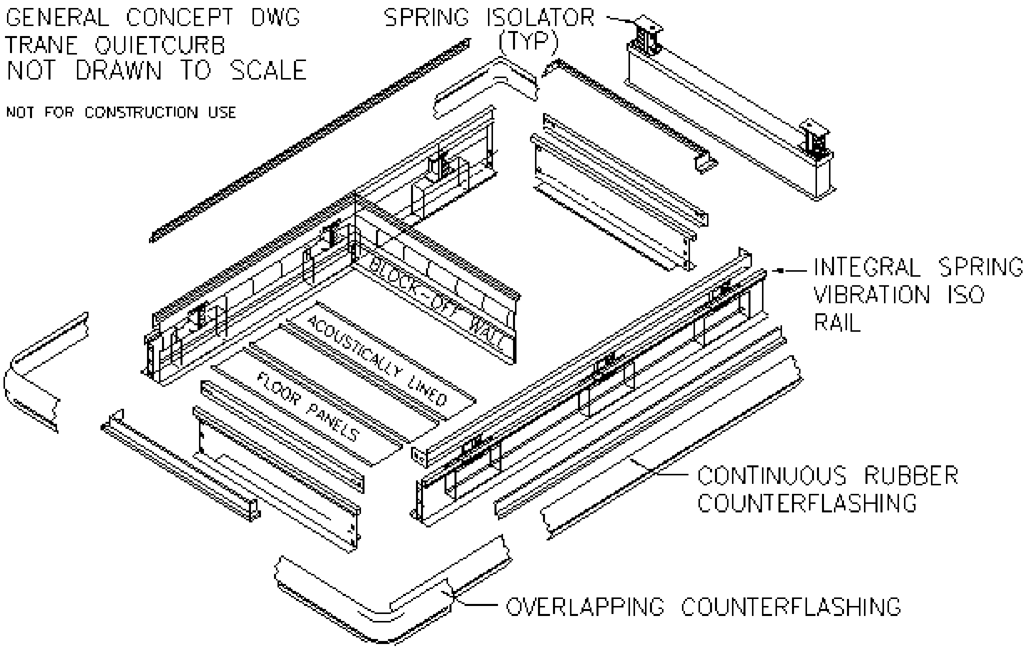


High frequency components of rooftop noise are absorbed by the High density insulation lining the interior of the curb.



QuietCurb™

Low frequency noise is reduced / eliminated through the use of a unique air flow path-plenum design which reduces air turbulence and permits the low frequency noise to "break out" above the roof line before entering the building.



What products can QuietCurb™ be applied to?

IntelliPak™ Packaged Rooftops

The entire line of 20 - 130 ton IntelliPak packaged rooftops and roof-mounted air handling products which have the extended ("X-casing") design, i.e. all SX (extended casing-cooling only), SF (cooling with gas heat), SS (cooling with steam heat), SL (cooling with hot water heat), and SE (cooling with electric heat) models. The curb is not available for SA models (this is because the SA model rooftops should never be chosen for applications where noise is a concern - they are typically up to 6 dB louder than the equivalent extended-casing model)

QuietCurb™

Features & Benefits

Up to 18 NC quieter than competitive offerings.

Easy and quick to install curb ships fully assembled.

Spring isolated curb with special air flow plenum design addresses all major compnenets of rooftop generated noise.

Seismic option available to meet seismic criteria in most regions of the U.S.

Applicable to IntelliPak packaged rooftops and air handlers and, C & E-style units which are design sequence "P" and "H" or higher respectively.

Quick production cycle curb cycle is 2 - 4 weeks.

Product Positioning

Sound Sensitive Applications - always apply QuietCurb.

Potentially Sound Sensitive Applications - QuietCurb is strongly recommended with extended casing models (SE,SF, SL, SS & SX) should be utilized.

Sound is Not a Concern - the lower cost SA model may be bid in lieu of an SX. Keep in mind that utilization of the SA usually results in about 6 dB sound penalty - versus an SX.

Selling Strategy

Actual Test Results - confirm that QuietCurb is a real solution producing real quiet comfort results.

Octave Band Sound Power Level Data - is provided to document the acoustical performance of QuietCurb.

Factory Assembly - minimizes field labor time and expense and assures the customer that he/she will get consistent, repeatable results each time QuietCurb is applied.

Patent Pending Design - QuietCurb is a unique development in quiet comfort technology which is easily differentiable from field-fabricated/other competitive solutions.

QuietCurb™

How Do I Order the QuietCurb

QuietCurb model numbers and pricing are available through the LYNX™ Productivity Suite. The curbs are build-to-order and have a 2-4 week production cycle

WHEN ENTERING THE ORDER YOU MUST INCLUDE THE **PRODUCT CODE (394)**, **QUANTITY**, AND **ASSOCIATED SPECIFIC CURB MODEL NUMBER(S)**.

The QuietCurb model number nomenclature is shown on the following page.

Stock or Build-to-order (BTO)?

Note: Curbs are **build-to-order** items only, just as the large rooftop products are. However, the curbs will be available on a shorter 2-4 week production cycle.

Call the Customer Service-Order Entry team at 1-800-235-9226 for assistance.

QuietCurb™

Q C U R B 2 0 3 0 P E Z2

SOUND ATTENUATION ROOFCURB (Product Code 394) * — QCURB

UNIT BASE SIZE — 2030

2030 - 20 - 30 TON UNIT
4055 - 40 - 55 TON UNIT
6075 - 60 - 75 TON UNIT
9013 - 90 - 130 TON UNIT

UNIT TYPE — P

P - PACKAGED ROOFTOP WITH CONDENSING SECTION
A - ROOFTOP AIR HANDLER ***

HEATING OPTION — E

E - ELECTRIC HEAT UNIT
F - NATURAL GAS HEAT
L - HOT WATER HEAT
S - STEAM HEAT
X - EXTENDED CASING DX COOLING ONLY
D - SPECIAL (CHILLED WATER OR OTHER)

RESTRAINT TYPE — Z2

C – CONVENTIONAL
Z2 – SEISMIC ZONE 1,2**
Z3 – SEISMIC ZONE 3**
Z4 – SEISMIC ZONE 4**

** A full set of stamped calculations that are prepared by professional engineers for a specific project, in its specific seismic region, may be obtained by adding a “J” as the last digit of the ordering number. (Example: QCURB2030ADZ2J for a zone 2 seismic curb with job specific calculations). For more information, contact ThyBar Corp. at 1-800-666-CURB.

*** If a chilled water air handler is ordered the complete model number must be provided to identify coil type chosen / coordinate thru-the-curb piping locations.

Frequency Inverters

Variable Frequency Drives (VFD) or frequency inverters are recommended for air flow modulation (versus inlet guide vanes or discharge dampers) where noise is a concern. Testing on the 40 ton unit has shown that inverters modulate air flow more quietly than damper controls. On the 40 ton unit, NC levels dropped as low as NC-26 - well below normal background noise when an inverter was applied.

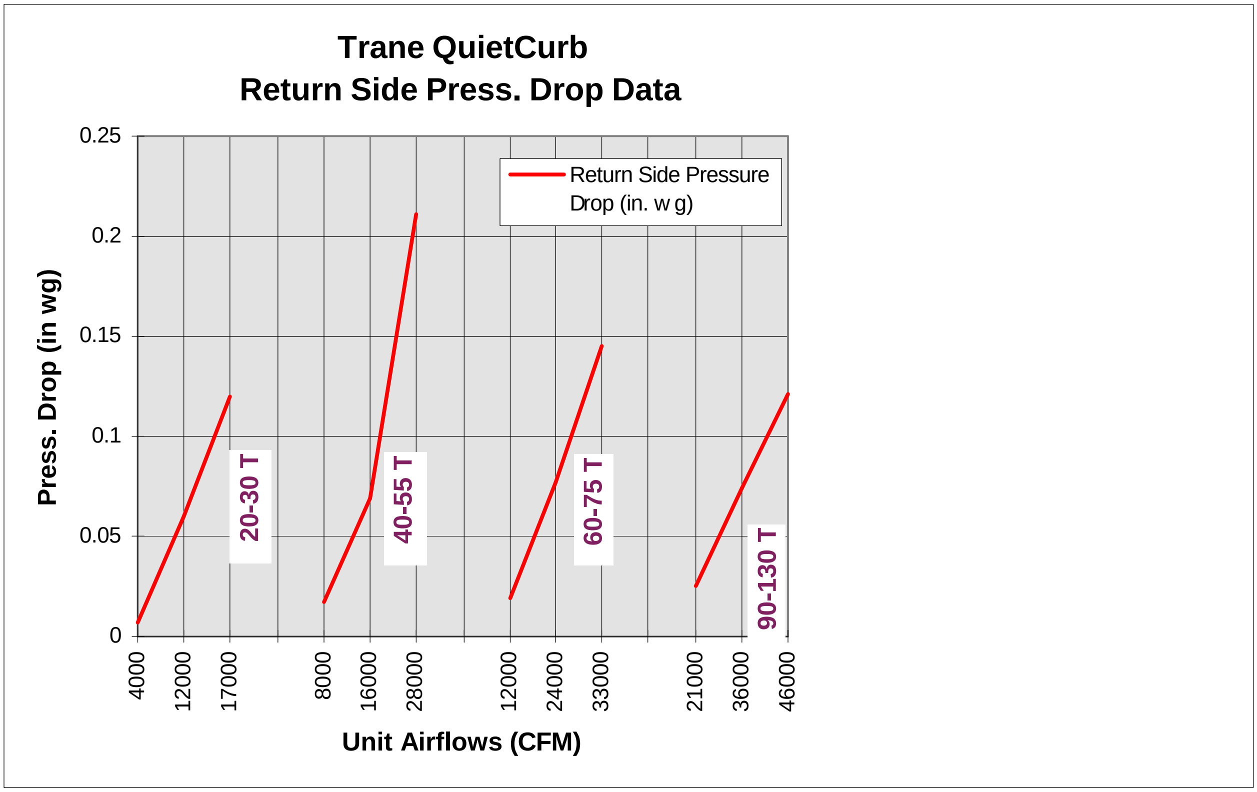
Flexible Connections

When applying the **QuietCurb™** it is of **utmost importance** that all rigid connections to the unit (i.e hot water piping, chilled water piping, steam piping, natural gas piping, electrical conduit...etc.) integrate a flexible loop or coupling connector to allow the spring isolators in the curb to "free float". Any rigid connections to the unit will negate the benefit of the spring curb causing it to "short circuit" transmitting vibration through the rigid connections to the building structure.

USE FLEXIBLE TRANSITIONS OR COUPLINGS AT THE ROOFTOP TO AVOID REGENERATED NOISE PROBLEMS.

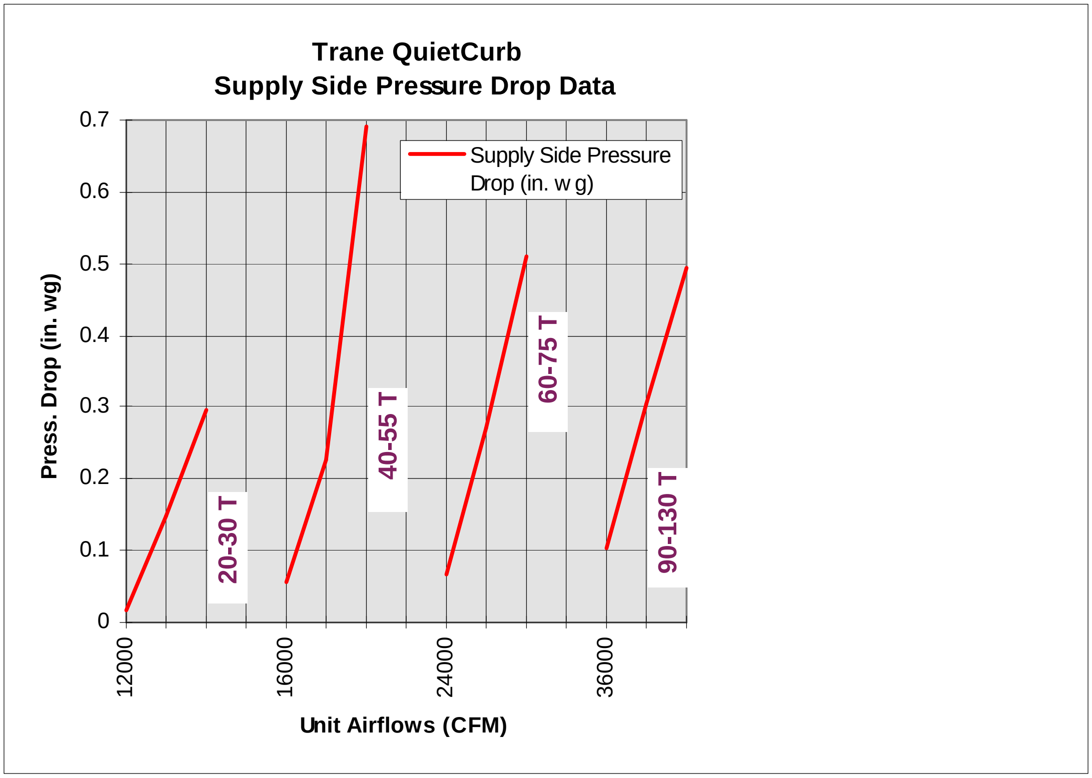
Trane Quiet Curb
Return Side Pressure Drop Data

	Unit Airflow CFM	Return Side Pressure Drop (in. wg)	Supply Side Pressure Drop (in. wg)	Total Curb Pressure Drop (in. Wg)
20 - 25 - 30	4000	0.007	0.016	0.023
	12000	0.06	0.147	0.207
	17000	0.12	0.295	0.415
40 - 50 - 55	8000	0.017	0.057	0.074
	16000	0.069	0.226	0.295
	28000	0.211	0.693	0.904
60 - 70 - 75	12000	0.019	0.068	0.087
	24000	0.077	0.27	0.347
	33000	0.145	0.511	0.656
90 - 105 - 115 - 130	21000	0.025	0.103	0.128
	36000	0.074	0.303	0.377
	46000	0.121	0.494	0.616



Trane QuietCurb
Supply Side Pressure Drop

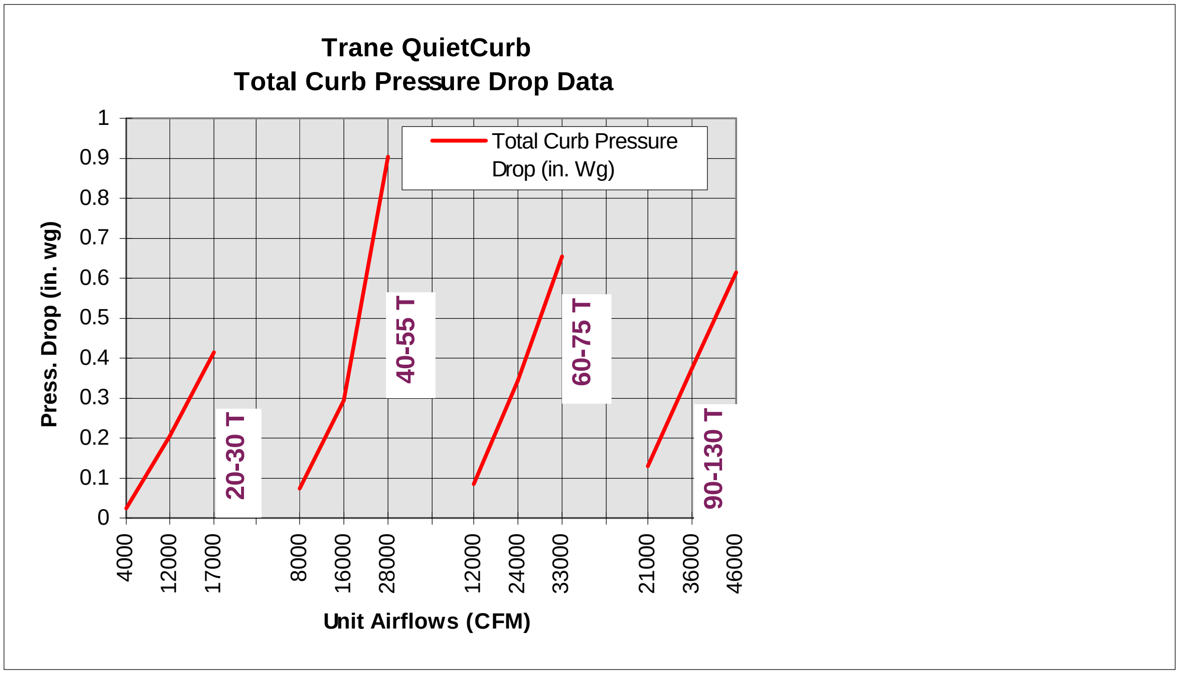
	Unit Airflow CFM	Supply Side Pressure Drop (in. wg)
20 - 25 - 30	4000	0.016
	12000	0.147
	17000	0.295
40 - 50 - 55	8000	0.057
	16000	0.226
	28000	0.693
60 - 70 - 75	12000	0.068
	24000	0.27
	33000	0.511
90 - 105 - 115 - 130	21000	0.103
	36000	0.303
	46000	0.494



Trane QuietCurb

Total Curb Pressure Drop

	Unit Airflow CFM	Total Curb Pressure Drop (in. Wg)
20 - 25 - 30	4000	0.023
	12000	0.207
	17000	0.415
40 - 50 - 55	8000	0.074
	16000	0.295
	28000	0.904
60 - 70 - 75	12000	0.087
	24000	0.347
	33000	0.656
90 - 105 - 115 - 130	21000	0.128
	36000	0.377
	46000	0.616



For standard curb sound data, see RT-EB-80.

COMMERCIAL PACKAGED ROOFTOP WITH QUIETCURB
SX, SF, SE, SL, SS 20 & 25 Ton Supply Fan - Sound Power Levels

			Discharge Lw, dB									Return Lw, dB							
CFM	TSP	RPM	63	125	250	500	1K	2K	4K	8K		63	125	250	500	1K	2K	4K	8K
5000	1.5	872	80	71	58	54	51	48	44	42		73	68	61	58	55	54	47	43
5000	2	1000	82	74	61	56	54	50	47	46		76	71	64	60	58	57	50	47
5000	2.5	1109	84	76	63	58	56	52	49	48		77	73	65	62	61	60	53	50
5000	3	1206	85	77	65	58	57	53	51	50		79	74	67	63	62	61	55	52
5000	3.5	1293	87	79	66	60	58	54	52	51		81	76	69	64	64	63	56	54
5000	4	1374	88	80	68	61	59	55	53	52		82	77	70	65	65	64	58	55
5000	4.5	1449	90	81	69	62	60	56	54	53		83	78	71	67	66	65	59	57
5000	5	1519	91	82	69	62	61	57	55	54		85	79	72	67	67	66	60	58
5000	5.5	1585	91	83	70	63	62	57	56	55		86	80	73	68	68	67	61	59
5000	6	1648	92	84	71	64	62	58	56	56		86	81	74	69	68	68	62	60
7000	1.5	892	80	72	59	55	53	49	46	43		73	68	62	59	57	56	47	43
7000	2	1018	82	75	62	57	55	52	49	47		75	71	64	61	60	59	50	47
7000	2.5	1131	84	77	64	58	57	53	51	49		77	73	66	63	62	61	53	50
7000	3	1233	86	79	66	60	59	54	53	51		79	75	68	64	64	63	55	52
7000	3.5	1327	87	80	67	61	60	56	54	52		81	76	69	66	65	64	57	54
7000	4	1413	89	81	69	62	61	57	55	54		82	78	71	67	66	65	58	55
7000	4.5	1493	90	82	70	63	62	58	56	55		84	79	72	68	67	66	59	56
7000	5	1567	91	83	71	64	63	59	57	56		85	80	73	69	68	67	60	58
7000	5.5	1638	92	84	72	65	64	60	58	57		86	81	74	70	69	68	61	59
9000	1.5	928	81	73	61	57	54	51	49	45		74	69	63	60	58	57	48	44
9000	2	1038	82	75	63	58	57	53	51	48		75	71	65	62	61	59	51	47
9000	2.5	1151	84	78	65	60	59	54	53	50		77	73	66	64	63	62	53	50
9000	3	1252	86	79	67	61	60	56	54	52		79	75	68	65	65	63	55	52
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11000	2	1088	83	77	65	60	58	54	53	49		76	72	65	63	62	61	52	48
11000	2.5	1181	85	79	66	61	60	56	54	51		77	74	67	65	64	62	54	50
11000	3	1271	86	80	67	62	61	57	55	52		79	76	69	66	65	64	55	52
11000	3.5	1364	88	81	69	63	62	58	56	54		81	77	70	67	67	65	57	53
11000	4	1452	89	83	70	64	63	59	57	55		82	78	71	68	68	67	58	55
11000	4.5	1533	90	84	71	65	64	60	58	56		83	80	73	70	69	68	60	56
11000	5	1609	92	85	72	66	65	61	59	57		84	81	74	70	70	69	61	57

EXHAUST FAN -------- Sound Power Levels

			Return Lw, dB							
CFM	TSP	RPM	63	125	250	500	1K	2K	4K	8K
4000	0.5	538	71	63	59	54	51	45	42	38
4000	1	730	74	67	64	60	57	54	51	46
4000	1.5	882	76	70	67	63	61	60	57	51
6000	0.5	570	71	64	61	57	53	48	44	40
6000	1	765	74	68	66	62	60	56	53	48
6000	1.5	912	76	71	69	65	63	62	59	53
8000	0.5	619	72	65	63	59	56	51	48	43
8000	1	797	74	69	67	64	61	58	56	50
8000	1.5	947	77	72	70	68	65	63	61	55
10000	0.5	712	73	68	66	63	60	56	53	48
10000	1	837	75	70	68	66	63	60	58	52
10000	1.25	911	76	72	70	67	65	63	60	55

COMMERCIAL PACKAGED ROOFTOP WITH QUIET ROOFCURB
SX, SF, SE, SL, SS 30 Ton Supply Fan - Sound Power Levels

			Discharge Lw, dB									Return Lw, dB							
CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**		**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
8000	1.5	744	82	73	60	56	53	51	47	44		76	70	64	61	57	56	49	45
8000	2	857	85	76	63	59	55	53	50	47		79	73	67	63	60	59	52	48
8000	2.5	955	87	78	66	60	58	55	52	50		81	75	68	65	63	62	55	51
8000	3	1041	88	80	68	61	59	56	54	52		82	77	70	66	65	64	57	54
8000	3.5	1117	90	82	69	63	61	57	55	54		84	78	71	67	66	65	59	56
8000	4	1186	91	83	70	64	62	58	56	55		85	79	72	68	67	66	60	57
8000	4.5	1251	92	84	71	65	63	59	57	56		86	81	73	69	68	67	61	59
8000	5	1311	93	85	72	66	64	60	58	57		87	82	74	70	69	68	62	60
8000	5.5	1368	94	86	73	66	65	61	59	58		88	83	75	71	70	69	63	61
12000	1.5	760	83	74	61	57	55	52	49	45		76	71	65	62	59	58	49	44
12000	2	866	85	77	64	60	57	54	51	48		78	73	67	64	62	60	52	48
12000	2.5	964	87	79	66	61	59	55	54	51		80	76	69	66	64	63	55	51
12000	3	1053	88	81	68	63	61	57	55	53		82	77	70	67	66	65	57	53
12000	3.5	1136	90	83	70	64	63	59	57	55		83	79	72	68	68	66	59	55
12000	4	1213	91	84	71	66	64	60	58	56		85	80	73	69	69	68	60	57
12000	4.5	1286	92	85	73	67	65	61	59	58		86	81	74	71	70	69	62	58
12000	5	1354	94	86	74	68	66	62	60	59		87	82	75	72	71	70	63	60
13500	1.5	779	83	75	62	59	55	53	50	46		76	71	65	63	60	58	49	45
13500	2	875	85	77	64	60	57	55	52	49		78	74	67	65	62	61	52	48
13500	2.5	969	87	79	67	61	59	56	54	51		80	76	69	66	64	63	55	51
13500	3	1057	88	81	69	63	61	58	56	53		81	77	70	67	66	65	57	53
13500	3.5	1138	90	83	70	65	63	59	57	55		83	79	72	69	68	67	59	55
13500	4	1215	91	84	72	66	65	60	59	57		84	80	73	70	69	68	60	57
13500	4.5	1288	92	85	73	67	66	61	60	58		86	81	74	71	70	69	62	58
13500	5	1357	94	86	74	68	67	62	61	59		87	83	75	72	71	70	63	59

EXHAUST FAN -------- Sound Power Levels

			Return Lw, dB							
CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
6000	0.5	570	71	64	61	57	53	48	44	40
6000	1	765	74	68	66	62	60	56	53	48
6000	1.75	975	78	73	70	67	65	64	61	55
8000	0.5	619	72	65	63	59	56	51	48	43
8000	1	797	74	69	67	64	61	58	56	50
8000	1.75	1013	78	74	72	69	67	65	63	57
10000	0.5	712	73	68	66	63	60	56	53	48
10000	1	837	75	70	68	66	63	60	58	52
10000	1.75	1045	79	74	73	71	69	67	64	58
12000	0.5	806	74	70	68	66	63	61	58	53
12000	1	905	75	72	70	68	65	64	61	55
12000	1.25	956	76	73	71	69	67	65	62	57

COMMERCIAL PACKAGED ROOFTOP WITH QUIETCURB
SX, SF, SE, SL, SS 40, 50, & 55 Ton Supply Fan - Sound Power Levels

			Discharge Lw, dB									Return Lw, dB							
CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**		**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
12000	2	787	86	77	64	60	56	54	50	48		81	75	68	64	60	59	54	50
12000	2.5	876	88	80	67	62	58	55	53	51		83	77	70	66	63	62	56	53
12000	3	956	89	81	69	63	60	57	54	53		84	79	71	67	65	64	59	55
12000	3.5	1030	91	83	71	64	62	58	56	55		85	80	72	68	66	65	60	57
12000	4	1098	92	84	72	66	62	59	57	56		87	81	73	69	67	67	62	59
12000	4.5	1160	93	85	73	67	63	60	58	57		88	82	75	71	68	68	63	60
18000	1.5	725	85	77	64	60	56	54	50	47		79	73	66	64	59	58	52	47
18000	2	812	87	79	66	62	58	55	52	50		81	75	68	66	62	61	54	50
18000	2.5	893	88	80	68	63	59	57	54	52		82	77	70	67	64	63	57	53
18000	3	969	89	82	70	64	61	58	56	54		84	79	71	68	66	64	59	55
18000	3.5	1042	91	84	71	65	62	59	57	55		85	80	73	69	67	66	60	57
18000	4	1110	92	85	72	67	63	60	58	57		86	82	74	70	68	67	62	59
20000	2	857	88	81	68	64	59	58	55	52		82	77	69	67	63	62	56	51
20000	2.5	929	89	82	69	65	61	58	56	53		83	78	71	68	65	64	58	53
20000	3	998	90	83	71	66	62	59	58	55		84	80	72	69	67	65	59	55
20000	3.5	1064	91	85	72	67	64	60	59	56		85	81	73	70	68	67	61	57
20000	4	1128	92	86	73	68	65	61	60	58		86	82	74	71	69	68	62	59
24000	2	926	89	83	71	67	62	60	58	55		84	78	70	69	65	63	58	53
24000	2.5	983	90	84	72	67	63	61	59	56		84	79	72	69	67	65	59	55
24000	3	1043	91	85	73	68	64	61	60	57		85	80	73	70	68	67	60	56
24000	3.5	1102	92	86	73	69	65	62	60	58		86	82	74	71	69	68	61	58
24000	4	1161	93	87	74	69	66	63	61	59		87	83	75	72	70	69	63	59

EXHAUST FAN -------- Sound Power Levels

CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
9000	0.5	499	76	67	63	61	57	51	47	43
9000	1	618	78	70	67	65	62	57	53	49
9000	1.75	812	80	75	72	70	67	65	62	57
12000	0.5	496	75	67	64	62	58	51	48	44
12000	1	628	78	71	68	66	63	58	55	50
12000	1.75	817	80	75	73	71	68	66	63	58
15000	0.5	567	76	70	67	65	62	56	53	49
15000	1	667	78	72	70	68	65	60	57	53
15000	1.75	824	80	75	73	72	69	66	64	58
18000	0.5	642	78	72	69	68	65	61	58	53
18000	1	724	79	74	71	70	67	63	61	56
18000	1.75	856	80	76	74	73	71	68	65	60

COMMERCIAL PACKAGED ROOFTOP WITH QUIETCURB
SX, SF, SE, SL, SS 60, 70, & 75 Ton Supply Fan - Sound Power Levels

			Discharge Lw, dB									Return Lw, dB							
CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**		**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
18000	1.5	633	84	80	65	60	55	53	51	48		79	73	66	63	58	57	52	48
18000	2	718	87	82	67	62	56	54	53	50		82	76	69	65	60	59	55	51
18000	2.5	791	88	84	69	64	58	56	55	52		83	78	70	67	62	62	57	53
18000	3	855	90	85	71	65	59	57	56	54		84	79	72	68	64	63	59	56
18000	3.5	913	91	87	72	66	61	58	57	56		86	81	73	69	65	65	61	58
18000	4	966	92	88	73	67	62	59	58	57		86	82	74	70	67	66	62	59
18000	4.5	1016	92	89	74	67	63	59	59	58		87	83	75	71	68	67	63	61
18000	5	1063	93	90	75	68	64	60	60	59		88	84	76	72	69	68	64	62
18000	5.5	1107	94	90	76	69	64	61	61	60		89	85	77	72	69	69	65	63
24000	1.5	659	85	81	66	63	56	54	53	49		80	74	67	64	59	58	53	48
24000	2	746	87	84	69	64	57	56	55	52		82	77	69	67	62	61	55	51
24000	2.5	821	89	85	71	65	60	58	57	54		84	79	71	68	64	63	58	54
24000	3	889	90	87	72	67	62	59	58	56		85	80	72	69	65	65	60	56
24000	3.5	951	91	88	74	68	63	60	60	58		86	81	74	70	67	66	61	58
24000	4	1008	92	89	75	69	64	61	61	59		87	83	75	71	68	67	63	60
24000	4.5	1060	93	90	76	70	65	62	61	60		88	84	76	72	69	68	64	61
24000	5	1109	94	91	77	71	66	62	62	61		89	85	77	73	70	69	65	62
28000	2	763	88	84	70	65	59	58	56	53		82	77	70	67	62	61	56	51
28000	2.5	839	89	86	72	67	61	58	58	55		84	79	72	69	65	63	58	54
28000	3	907	90	88	73	68	62	60	59	57		85	81	73	70	66	65	60	56
28000	3.5	969	92	89	75	69	64	61	61	58		86	82	74	71	68	67	62	58
28000	4	1028	93	90	76	70	65	62	62	60		87	83	75	72	69	68	63	60
28000	4.5	1082	94	91	77	71	66	63	63	61		88	84	76	73	70	69	64	61
32000	2	802	89	86	72	67	61	59	58	55		84	78	71	69	64	62	57	52
32000	2.5	858	90	87	72	68	62	60	59	56		84	80	72	70	65	64	59	54
32000	3	924	91	89	74	69	63	61	61	58		85	81	73	71	67	66	60	57
32000	3.5	988	92	90	75	70	65	62	62	59		86	82	74	72	68	67	62	58
32000	4	1046	93	91	76	71	66	63	63	60		88	84	75	73	70	68	63	60
32000	4.5	1100	94	92	77	72	67	64	64	61		89	85	77	74	71	70	65	61

EXHAUST FAN -------- Sound Power Levels

			Return Lw, dB							
CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
12000	0.5	423	73	66	60	57	53	52	49	43
12000	1	572	79	73	67	65	61	60	57	51
12000	1.75	740	84	78	73	71	68	66	63	57
18000	0.5	516	78	72	66	64	60	59	57	51
18000	1	607	81	75	69	67	63	62	59	53
18000	1.75	766	85	80	74	72	69	67	64	58
21000	0.5	578	81	75	69	67	64	63	60	55
21000	1	647	82	77	71	69	65	64	61	55
21000	1.75	781	86	80	75	72	69	68	65	59
27000	0.5	711	86	81	75	73	70	69	67	62
27000	1	761	86	81	75	73	70	69	66	61
27000	1.75	844	88	83	77	74	71	70	67	62

COMMERCIAL PACKAGED ROOFTOP WITH QUIETCURB
SX, SF, SE, SL, SS 90 Ton Supply Fan - Sound Power Levels

			Discharge Lw, dB									Return Lw, dB							
CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**		**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
27000	2.5	992	85	80	71	66	61	55	51	46		79	73	72	64	58	58	58	47
27000	3	1053	86	80	73	68	61	56	53	48		79	74	74	65	59	59	59	48
27000	3.5	1111	87	81	74	68	62	56	54	49		80	74	75	66	60	60	59	49
27000	4	1167	87	82	76	69	64	57	55	50		80	75	77	67	62	61	60	50
27000	4.5	1223	88	83	77	70	65	58	56	52		81	76	78	68	63	62	60	50
27000	5	1277	89	84	78	71	66	59	57	53		82	77	79	69	64	63	61	51
27000	5.5	1330	91	85	79	72	66	60	58	54		83	78	81	71	65	64	61	52
27000	6	1382	92	86	81	73	67	61	59	55		84	79	82	72	66	64	62	53
27000	6.5	1434	93	87	82	74	68	62	60	56		84	80	83	73	67	65	62	54
37000	2.5	1156	87	83	77	71	65	57	55	50		80	75	77	67	62	60	59	49
37000	3	1204	87	83	78	72	66	58	56	51		80	76	78	68	63	61	60	49
37000	3.5	1253	88	83	79	73	66	59	57	52		81	76	79	69	63	62	60	50
37000	4	1300	88	84	80	73	67	60	58	53		81	77	80	70	64	63	60	51
37000	4.5	1343	89	84	80	74	68	61	58	54		82	77	81	70	65	63	61	51
37000	5	1386	90	85	81	74	68	61	59	55		82	78	82	71	66	64	61	52
37000	5.5	1431	90	85	82	75	69	62	60	56		83	78	82	72	67	64	61	53
37000	6	1475	91	86	83	76	70	62	61	57		83	79	83	73	67	65	61	54
37000	6.5	1517	92	87	84	76	71	63	61	58		84	79	84	73	68	65	62	54
45000	2.5	1302	88	85	81	75	69	61	58	54		81	77	80	70	65	63	60	51
45000	3	1348	89	85	82	76	70	62	59	55		82	77	81	71	66	63	61	51
45000	3.5	1390	89	86	83	76	70	62	60	56		82	78	82	72	66	64	61	52
45000	4	1430	90	86	83	77	71	62	60	56		82	78	83	72	67	64	61	53
45000	4.5	1470	90	86	84	77	71	63	61	57		83	79	83	73	67	65	61	53
45000	5	1509	91	87	85	78	72	63	61	58		83	79	84	73	68	65	61	54
45000	5.5	1549	91	87	86	78	73	64	62	59		84	80	85	74	69	65	61	54
45000	6	1587	92	87	87	79	73	64	63	59		84	80	86	74	69	66	62	55

EXHAUST FAN -------- Sound Power Levels

Return Lw, dB

CFM	**TSP**	**RPM**	**63**	**125**	**250**	**500**	**1K**	**2K**	**4K**	**8K**
27900	0.25	520	83	76	73	70	68	71	68	61
27900	0.75	580	84	76	73	71	69	69	65	59
27900	1.5	690	87	79	76	74	72	70	65	59
27900	2.5	800	91	82	78	76	75	73	68	62
35100	0.25	630	88	81	78	77	75	75	71	63
35100	0.75	690	88	81	78	77	75	73	69	61
35100	1.5	770	91	82	79	78	77	74	69	62
35100	2.5	880	94	85	81	80	79	76	71	64
41400	0.25	745	93	85	83	82	80	80	76	67
41400	0.75	780	92	84	82	81	79	77	73	65
41400	1.5	860	94	85	83	82	81	78	73	66
41400	2.5	950	96	87	84	84	82	78	72	65

COMMERCIAL PACKAGED ROOFTOP WITH QUIETCURB

SX, SF, SE, SL, SS 105, 115, & 130 Ton Supply Fan - Sound Power Levels

			Discharge Lw, dB									Return Lw, dB							
CFM	TSP	RPM	63	125	250	500	1K	2K	4K	8K		63	125	250	500	1K	2K	4K	8K
31000	2.5	1054	85	81	74	69	63	57	53	48		79	74	74	65	60	59	59	48
31000	3	1109	86	82	75	70	64	58	54	49		80	74	75	66	61	60	59	48
31000	3.5	1160	87	82	76	70	64	58	55	50		80	75	77	67	61	61	60	49
31000	4	1213	88	82	77	71	65	59	56	52		81	76	78	68	62	62	60	50
31000	4.5	1265	89	83	78	72	66	60	57	53		81	76	79	69	63	62	60	51
31000	5	1314	89	84	79	72	67	60	58	54		82	77	80	70	64	63	61	51
31000	5.5	1362	90	85	80	73	68	60	58	55		82	78	81	71	65	64	61	52
31000	6	1410	91	86	81	74	68	61	59	56		83	78	82	72	66	64	62	53
31000	6.5	1457	92	86	82	75	69	62	60	57		84	79	83	72	67	65	62	54
39000	2.5	1192	88	84	78	72	67	59	56	51		80	76	78	68	63	61	60	49
39000	3	1239	88	84	79	73	67	60	57	52		81	76	79	69	63	62	60	50
39000	3.5	1284	89	84	80	74	68	60	57	53		81	76	80	70	64	62	60	50
39000	4	1330	89	84	80	74	68	61	58	54		81	77	80	70	65	63	61	51
39000	4.5	1374	89	85	81	75	69	61	59	55		82	77	81	71	66	64	61	52
39000	5	1416	90	85	82	75	69	62	60	56		82	78	82	72	66	64	61	52
39000	5.5	1456	90	86	83	76	70	63	60	57		83	78	83	72	67	65	61	53
39000	6	1499	91	86	84	76	71	63	61	58		83	79	84	73	68	65	61	54
39000	6.5	1541	92	87	85	77	71	64	62	58		84	80	85	74	68	66	62	55
46000	3	1366	89	86	82	76	70	62	59	55		82	77	81	71	66	63	61	52
46000	3.5	1408	90	86	83	77	71	63	60	56		82	78	82	72	66	64	61	52
46000	4	1448	90	86	84	77	71	64	61	57		83	78	83	73	67	64	61	53
46000	4.5	1487	91	86	85	78	72	64	61	57		83	79	84	73	68	65	61	53
46000	5	1525	91	87	86	78	72	64	62	58		84	79	85	74	68	65	61	54
46000	5.5	1564	92	87	87	79	73	64	62	59		84	80	86	74	69	66	61	55
46000	6	1602	92	88	88	79	73	65	63	60		85	80	86	75	70	66	62	55

EXHAUST FAN -------- Sound Power Levels

			Return Lw, dB							
CFM	TSP	RPM	63	125	250	500	1K	2K	4K	8K
24300	0.25	460	80	73	69	66	64	68	66	60
24300	0.75	540	82	74	71	68	66	67	64	58
24300	1.5	650	85	77	73	71	69	68	64	58
24300	2.5	800	90	81	77	75	74	73	68	62
33300	0.25	610	87	80	77	75	73	74	71	63
33300	0.75	660	87	80	77	75	73	72	67	60
33300	1.5	750	90	81	78	77	75	73	68	61
33300	2.5	865	93	84	81	79	78	76	71	64
40500	0.25	730	92	84	82	82	80	79	75	67
40500	0.75	770	92	84	81	81	79	77	72	65
40500	1.5	845	94	85	82	81	80	78	73	65
40500	2.5	940	96	86	84	83	82	78	72	65

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The following file is for the competitive specifying of the
Trane ***QuietCurb***™ Rooftop Accessory
"F" and "G" Development Sequence ***IntelliPak***™ Packaged Rooftops
and / or
the ***IntelliPak***™ Rooftop Air Handler

Edit this specification to fit the project requirements. This spec contains notes to the SPECIFIER and offers alternative word selections. (#) and (*) symbols designate VALUE ADDED and PROPRIETARY requirements. A spec brief follows this specification describing the value of value added and proprietary paragraphs.

>>>>>>>>>DELETE SPEC BRIEF FROM FINAL DOCUMENT<<<<<<<<<<<

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10/94

SECTION 15050
ROOF SUPPORT FOR MECHANICAL EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Rooftop unit acoustical curb with integral spring-vibration isolation rail and offset-outlet, low velocity air flow plenum path.

1.02 RELATED SECTIONS

A. Section 15010 - General Provisions

B. Section 15240 - Vibration Isolation

1.03 SUBMITTALS

A. Submit drawings indicating dimensions of curb and locations and sizes of supply air discharge and return air openings.

B. Submit manufacturer's product data, including supply discharge and return side octave band sound power levels, measured in accordance with AMCA 300-85, indicating sound power level performance for the roofcurb-rooftop unit as a combined system. Duct end reflection loss corrections shall be made per AMCA 300-85. Octave band sound power levels shall not exceed those specified on the contract documents.

C. Submit manufacturer's installation instructions.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Provide Trane QuietCurb ™ or approved alternate by Custom Curb Inc. or Micro Metl. Alternates must include high density sheathing in the base of the curb, spring-vibration isolation rail, low velocity air flow patterning, and be lined internally with minimum 4" insulation containing a perforated liner backing. The curb must comply with the sound power level performance and features specified herein and as indicated on the contract documents.

****

OR

****

A. Manufacturer of rooftop units [rooftop air handlers] shall provide acoustical curbs to form a complete and matched rooftop system with documented octave band sound power performance.

****

OR

****

* A. Provide Trane QuietCurb ™.

2.02 ROOFCURBS

A. Roofcurb shall be prefabricated, non-combustible construction with sealing gasket around perimeter members to insure air/water tight integrity. The curb shall be constructed of minimum 14 ga. galvanized steel structural members with minimum 20 ga. galvanized steel flashing with overlapping continuous rubber counterflashing. Curb shall be furnished with a 2" X 2" nailer strip for attaching roofing felts. The base of the curb shall contain acoustically non-conductive floor pans with the supply and return air openings framed for duct attachment (duct must be supported independent of curb and flex connected).

B. Curb shall incorporate integral spring-vibration isolation rail with adjustable 1" deflection isolators, properly sized and selected for unit point loading. Spring isolators shall have a minimum of 90% isolation efficiency.

C. Roofcurb shall be shipped [fully assembled from the manufacturing site] [and] seismically isolated with [vertically stabalized] spring isolators [incorporating vertical limit stops].

****

The following paragraph applies to packaged rooftops only - not roof mounted air handling units

****

D. The curb shall be designed to provide pedestal support for an open (no base pan constructed) condensing section. Full perimeter supported condensing sections shall not be permitted.

PART 3 - EXECUTION

3.01 INSTALLATION

A. Install the roofcurb in accordance with manufacturer's recommendations and as shown on the construction documents.

B. Coordinate piping and power entry locations with other trades. Supporting structural framing shall be sized and installed as indicated on the construction documents. Submit shop drawings to the Architect, with point loadings and curb layout, for approval, prior to beginning work.

END OF SECTION

****

+++++ SPEC BRIEF +++++ >>>>>DELETE FROM DOCUMENT <<<<<

****

1.03, B.
2.01, A.
Requiring published sound data to document performance of the roofcurb-rooftop "system" eliminates the guesswork involved to engineer a quiet job for the customer. Vendor products which cannot provide documentation for the real world performance of the combination curb-unit should not be allowed.

2.01, A.
"QuietCurb" is a proprietary feature THAT WORKS producing up to 18 NC reductions in sound power levels (depending on size). Let the OWNER make the buying decision based upon unprecedented performance in quiet comfort!

2.02, C.
QuietCurb™ is unique in that the product is shipped fully assembled from the manufacturing point directly to the job site. This feature is beneficial for jobs with tight schedules or replacement opportunities that have been plagued with poor acoustic performance.

2.02, D.
Manufacturer's which do not have open (no base pan constructed) condensing sections should not be allowed to bid. If allowed, the base pan in the condensing section can resonate, amplifying compressor noise. Designs without the base pan eliminate the "drum head" potential and allow compressor noise to break out above the roof line. Whereas, full perimeter base pan designs radiate and reflect the noise directly into the ceiling space below.

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Appendix I3

Construction Site Sound Blanket Model

Model CSSB-2
Construction Site Sound Blankets

eNoise Control
129 Penn St, Westfield, IN 46074
Phone 888.213.4711 Fax 317-774-1911

Product Features:

- Weatherproof
- Outdoor use/Sheds water
- 2” thick, quilted exterior rated facing
- Grommets for easy attachment to a fence
- STC-21, estimated 10-20 decibel reduction
- In-stock option for quick ship

eNoise Control’s Construction Site Sound Blankets are used to block noise on construction sites, drilling sites, compressor stations, and other outdoor noise sources. Our Model CSSB-2 consists of a UV resistant, heavy duty 10 ounce per square yard vinyl coated polyester (VCP) facing on both sides of a nominal 2” thick quilted fiberglass. Sound Blankets are constructed with grommets and sewn with Gore Tenara exterior grade thread for maximum longevity. The sound blankets can simply be zip-tied to your existing chain link perimeter fence, wood fence, jersey barrier fencing, or support framing.

Specification:

Supply weatherproof, exterior-rated quilted sound blankets for sound barrier and visual barrier at construction site perimeter. Material shall be nominal 2” thick, diamond stitched UV resistant 10 ounce per square yard vinyl coated polyester (VCP) faced both sides. Sewn using exterior-rated Gore Tenara thread. Grommets integrated into blankets for securing to job site fencing. Minimum STC-21 rating. Minimum NRC-0.75 rating. Secure blankets with no visual gaps at joints and tight to ground level, complying to manufacturers installation guidelines. Use Model CSSB-2, Construction Site Sound Blanket manufactured by eNoise Control, 129 Penn St, Westfield, IN 46074, 888.213.4711, info@enoisecontrol.com.

Technical Data:

Facing	UV resistant, weather proof VCP both sides
Thickness	Nominal 2.00” [1.5” post fabrication]
Standard Width	48”
Weight	0.50 lb-psf
Temperature Range	-40° to +180°F
Sound Data Summary	STC-21, NRC-0.75

SOUND ABSORPTION (ASTM C-423)

125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	NRC
.46	.94	.85	.64	.47	.33	.75

SOUND TRANSMISSION LOSS (ASTM E-90 & E-413)

125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	STC
9	14	19	21	27	34	21

Appendix J

Transportation Impact Analysis

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Prepared by
FEHR PEERS

101 Pacifica
Suite 300
Irvine, CA 92618
949.308.6300

Prepared for
University of California, Riverside

UC Riverside 2021 Long Range Development Plan

CEQA Transportation Impact Analysis

June 2021

UC Riverside

2021 Long Range Development Plan

CEQA Transportation Impact Analysis

Prepared for:
University of California, Riverside

June 2021

OC19-0701

FEHR & PEERS

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Appendix A: Related Projects
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1.0 EXECUTIVE SUMMARY

Fehr & Peers has completed a transportation impact analysis (TIA) for the proposed University of California Riverside (UC Riverside) 2021 Long Range Development Plan (LRDP) [Project] in Riverside, California. The Project results in an increase in facilities, enrollment, housing, and employment at the UC Riverside main campus (herein referred to as UC Riverside campus).

As part of the TIA, and consistent with the California Environmental Quality Act (CEQA) requirements, the following scenarios were analyzed:

- Baseline (2018) – A Fall 2018 baseline was selected for the transportation analysis. Campus population (student enrollment, on-campus residents, and faculty/staff employment) was incorporated in the Base Year Riverside Traffic Analysis Model (RivTAM) to establish the Baseline conditions for the transportation assessment. AM and PM peak hour intersection counts conducted in 2018 were used for the transportation assessment.
- Baseline Plus Project – The net new increases in campus population associated with the 2021 LRDP were added to the Baseline conditions to develop Baseline Plus Project conditions.
- Cumulative (2035) Without Project – The Cumulative (2035) Without Project conditions were developed by including the 2018 Baseline campus conditions in combination with future cumulative growth outside of UCR using the Future Year RivTAM model.
- Cumulative Plus Project– The net new increases in campus development and population associated with the LRDP were added to the Future Year RivTAM to develop Cumulative Plus Project conditions.

ANALYSIS

This study considered the effect of the LRDP as it relates to Vehicle Miles Traveled (VMT) and off-ramp queuing. As a result of Senate Bill 743 (SB 743) and the new CEQA guidelines for determining transportation impacts, this study considered VMT as the metric for evaluating the Project's environmental impacts on the transportation system.

FINDINGS

Project impacts resulting from the LRDP at the UC Riverside campus were analyzed under Baseline (2018) and Cumulative (2035) conditions. The baseline Project generated VMT per Service Population does not exceed the threshold of 15% below Western Riverside Council of Governments (WRCOG) VMT per Service

Population; therefore, the Project impact is considered less than significant. The cumulative Project generated VMT per Service Population also does not exceed the threshold of 15% below WRCOG VMT per Service Population; therefore, the cumulative Project impact is considered less than significant. Furthermore, the Project effect on VMT per Service Population does not cause total VMT for the WRCOG region to exceed the future forecast from the Southern California Association of Governments Regional Transportation Plan/Sustainable Communities Strategy (SCAG RTP/SCS); therefore, the Project impact is considered less than significant.

Under Baseline Plus Project conditions, freeway off-ramp queueing was not found to exceed 85% of the storage length for any of the freeway off-ramps.

Under Cumulative Plus Project conditions, freeway off-ramp queueing was found to exceed 85% of the storage length at the I-215/SR-60 Southbound Ramps at Martin Luther King Boulevard with inclusion of Project traffic.

2.0 INTRODUCTION

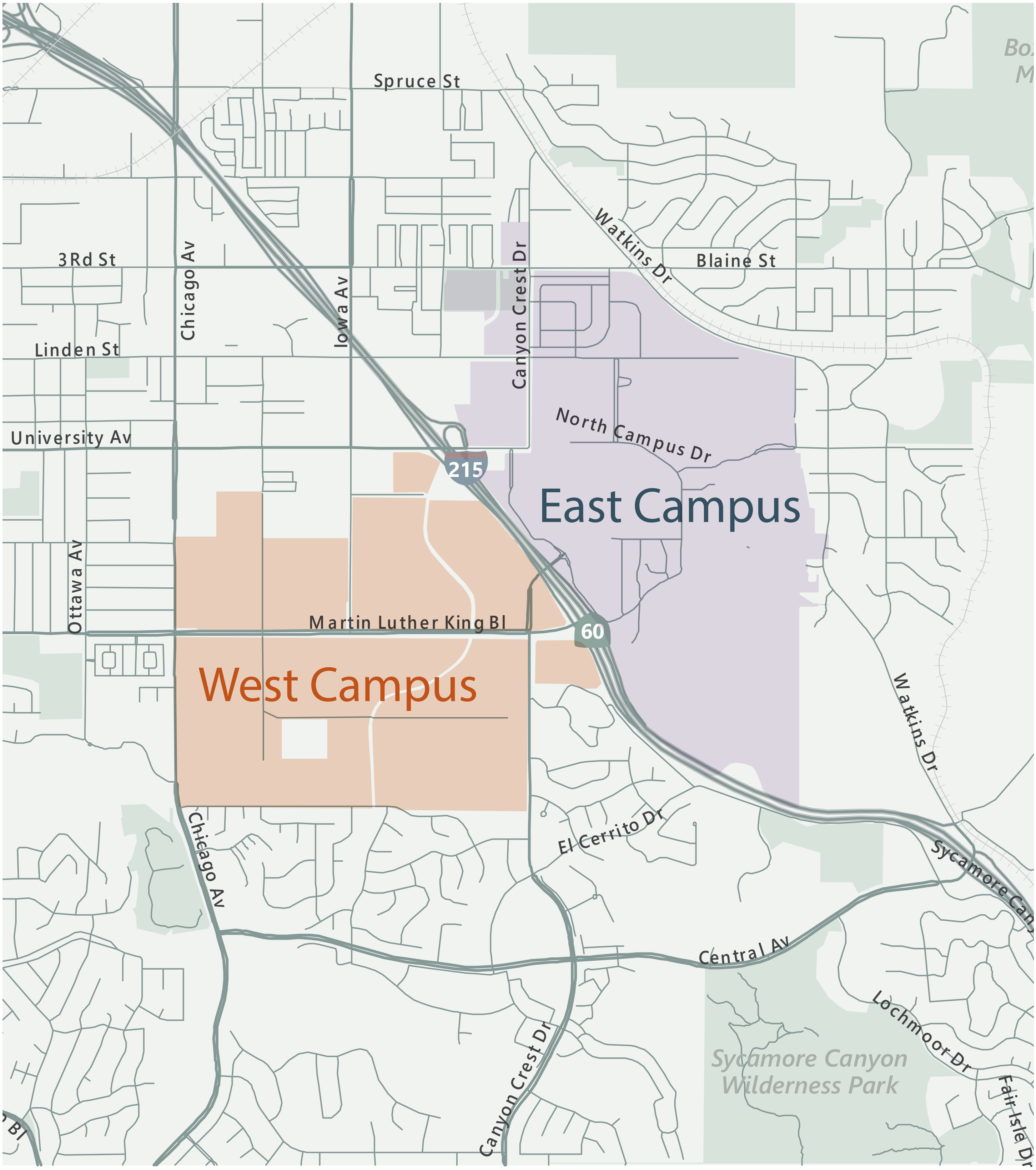
Fehr & Peers has completed a transportation impact analysis (TIA) for the University of California Riverside (UC Riverside) 2021 Long Range Development Plan (LRDP) [Project] in Riverside, California. This report summarizes the methodology, findings, and conclusions of the analysis, including identification of recommended mitigation measures necessary for Project impacts, where feasible. This chapter outlines the geographic scope of the transportation impact analysis, including the study area.

PROJECT DESCRIPTION

The UC Riverside 2021 LRDP encompasses the UC Riverside campus, approximately three miles east of downtown Riverside and just west of the Box Springs Mountains. The campus is generally bounded by University Avenue and Blaine Street on the north, Watkins Drive on the east, Chicago Avenue on the west, and Le Conte Drive on the south. The campus is bisected diagonally by the I-215/SR-60 freeway. The area to the east of the I-215/SR-60 freeway is referred to as the East Campus and the area to the west of the I-215/SR-60 freeway is referred to as the West Campus. The UC Riverside campus location is presented in **Figure 1**.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet (asf) [approximately 6 million gross square feet (gsf)] of additional academic buildings and support facilities, including student housing. Therefore, the LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf) of total academic and support space development by the academic year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for approximately 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (Fall quarter headcount) by the academic year 2035/2036. It is anticipated that approximately 7,600 total faculty and staff would be needed to support the student enrollment. A comparison of the projected population and beds between the 2018/2019 academic year and LRDP projections are provided in **Table 1**.

The proposed LRDP provides long-term planning for the land uses, activities, and facilities on the main UC Riverside campus. Predominant uses can be described by the primary facilities, programs, and/or activities within a geographic area on campus to achieve specific planning objectives. This is not intended to be an exclusive list of uses, and in many instances, additional associated or compatible uses are also allowed within the land use categories. The proposed LRDP land uses are shown on **Figure 2**.



Legend

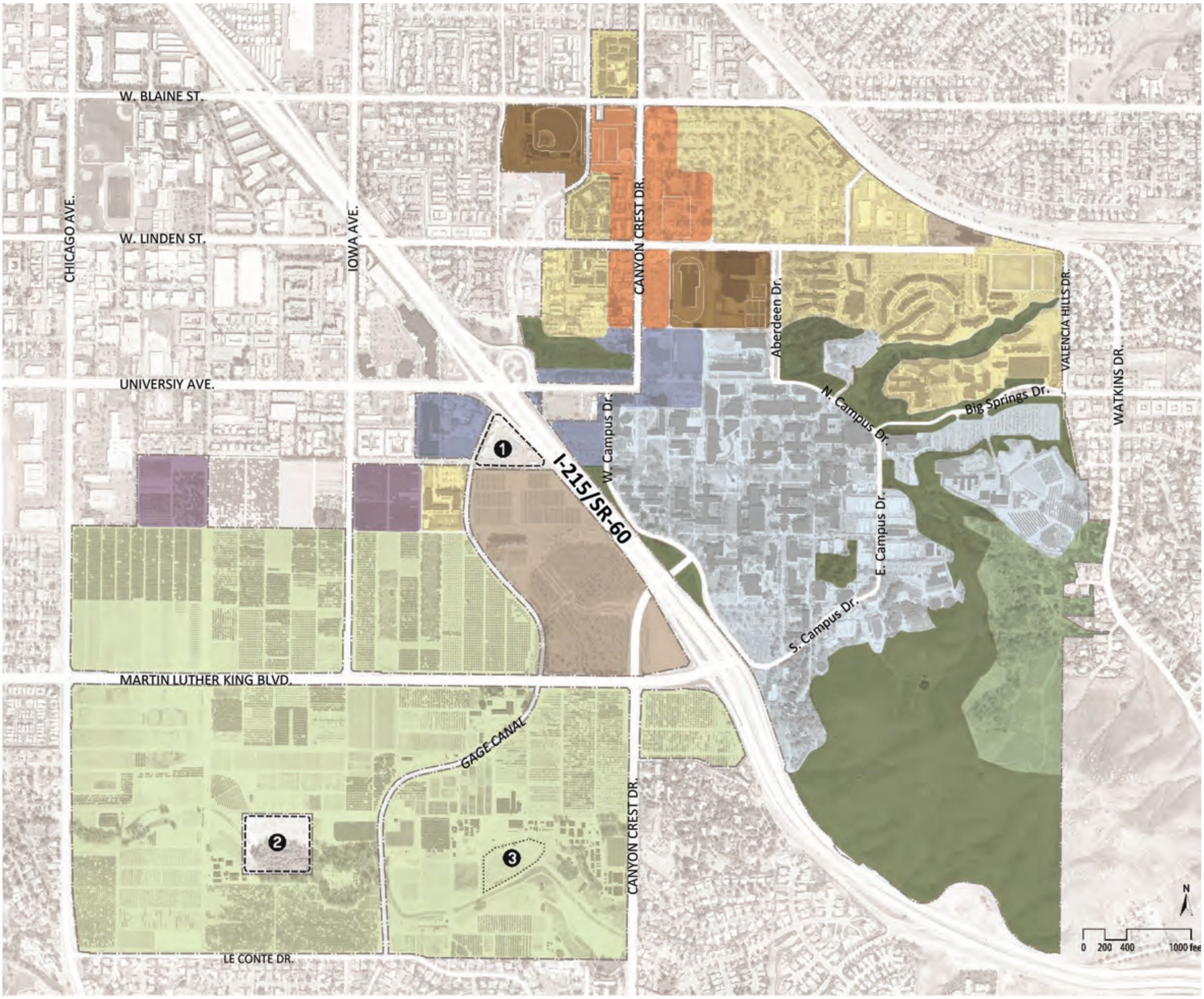
▨ UC Riverside Campus

Figure 1
Study Area

TABLE 1 – BASELINE (2018/2019) AND 2021 LRDP (2035/2036) POPULATION AND ON-CAMPUS HOUSING BEDS

Category	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Campus Population			
Undergraduate Student Population (Fall quarter headcount)	20,581	28,000	7,419
Graduate Student Population (Fall quarter headcount)	3,341	7,000	3,659
Total Student Population (Fall quarter headcount)	*23,922*	*35,000*	*11,078*
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	*4,739*	*7,545*	*2,806*
On-Campus Housing Beds			
Residential (beds) (includes Freshman, Triples, Upperclass, and Family housing)	6,511	14,000	7,489

Source: *UCR 2021 LRDP Program Model*



Legend

🟦 Academic & Research

🟪 Agricultural/Campus Research

🟩 Land-Based Research

🟫 Campus Support

🟩 Open Space Reserve

🟩 UCR Botanic Gardens

🟫 Recreation & Athletics

🟨 Student Neighborhood

🟧 Canyon Crest Gateway

🟦 University Avenue Gateway

⬚ NON-UCR Land of Interest

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

Figure 2

LRDP Land Use Map

GEOGRAPHIC SCOPE

The geographic scope of the VMT analysis utilized the geographic boundaries provided in the RivTAM model. The RivTAM model includes the geographic area of Riverside County and the SCAG area (Ventura, Los Angeles, Orange, San Bernardino, Riverside, and Imperial Counties) in the traffic modeling analysis. While the RivTAM model is used for projects located in the WRCOG region, the VMT analysis accounts for trips in the larger SCAG area.

ANALYSIS SCENARIOS

To identify potential significant Project impacts, the following four scenarios were analyzed:

- Baseline (2018): A Fall 2018 baseline was selected for the transportation analysis. Campus population (student enrollment, on-campus residents, and faculty/staff employment) identified in Table 1 was incorporated in the Base Year RivTAM model to establish the Baseline conditions for the transportation assessment. AM and PM peak hour intersection counts conducted in 2018 were used for the off-ramp queuing analysis.
- Baseline Plus Project – The net new increases in campus population associated with the 2021 LRDP were added to the Baseline conditions to develop Baseline Plus Project conditions. Changes to campus population are identified in **Table 1**.
- Cumulative (2035) Without Project – The Cumulative (2035) Without Project conditions were developed by including the 2018 Baseline campus conditions in combination with future cumulative growth outside of UCR using the Future Year RivTAM model.
- Cumulative Plus Project – The net new increases in campus development and population associated with the LRDP were added to the Future Year RivTAM to develop Cumulative Plus Project conditions.

The transportation impact analysis considers VMT on a daily basis.

3.0 ANALYSIS METHODOLOGY

This chapter discusses the analysis methodology and assumptions in this analysis.

VEHICLE MILES TRAVELED

On September 27, 2013, Governor Jerry Brown signed Senate Bill 743 (SB 743) into law and started a process to fundamentally change transportation impact analysis conducted as part of CEQA compliance. The Governor's Office of Planning and Research (OPR) was charged with developing new guidelines for evaluating transportation impacts under CEQA using methods that no longer focus on measuring automobile delay and level of service (LOS). This change at the state level recognizes the unintended consequences of using LOS as an impact metric, which results in understating potential transportation impacts in greenfield areas and discouraging more sustainable infill projects and active transportation projects. SB 743 directed the state Office of Planning and Research (OPR) to develop new guidelines that use a transportation performance metric which will help promote: the reduction of greenhouse gas emissions, the development of multimodal networks, and a more sustainable diversity of land uses.

OPR issued proposed updates to the CEQA guidelines in support of these goals in November 2017[1] and a supporting Technical Advisory in December 2018[2]. The updates establish vehicle miles traveled (VMT) as the primary metric for evaluating a project's environmental impacts on the transportation system. The changes to CEQA guidelines Section 15064.3 to implement SB 743 were certified by the State in December of 2018.

The VMT analysis reflects the number of vehicle-trips generated by the campus and the expected distance that drivers will travel to/from UC Riverside for their work/school trips as well as other trips generated by campus visitors and on-campus housing. UC Riverside campus wide VMT was calculated for each scenario based on the outputs of the current version of RivTAM. The metric identified for the transportation analysis is Total VMT per Service Population. This represents the daily VMT generated by UC Riverside divided by the number of employees, residential students, and commuter (nonresidential) students on the campus. The Baseline Plus Project and Cumulative Plus Project VMT per Service Population calculations were determined by measuring the UC Riverside campus wide VMT with the inclusion of the LRDP population growth. These VMT measurements and associated calculations of VMT per Service Population were used to

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[1] State of California, Governor's Office of Planning and Research, *Proposed Updates to the CEQA Guidelines, Final,* November 2017.

[2] State of California, Governor's Office of Planning and Research, *Technical Advisory on Evaluating Transportation Impacts in CEQA,* December 2018.

evaluate the VMT impact of the UC Riverside campus with the addition of the LRDP. This calculation methodology is reflective of the VMT generation characteristics of the UC Riverside campus with the inclusion of more faculty/staff, student housing, and commuter students proposed with the LRDP.

THRESHOLDS OF SIGNIFICANCE

The following thresholds of significance were used to determine VMT impacts associated with the Project.

- A project would result in a significant project generated VMT impact if either of the following conditions are satisfied:
    - The Baseline Plus Project generated VMT per Service Population exceeds 15% below the WRCOG baseline VMT per Service Population
    - The Cumulative Plus Project generated VMT per Service Population exceeds 15% below the WRCOG baseline VMT per Service Population
- The project's effect[3] on VMT would be considered significant if it resulted in the following condition being satisfied:
    - The cumulative link-level boundary WRCOG region VMT per Service Population increases under the Cumulative Plus Project condition compared to Cumulative (2035) conditions

OPR provided VMT threshold guidance in its Technical Advisory for implementing SB 743. Consistent with that guidance, one of the thresholds for project generated VMT, is whether the project would result in a VMT per Service Population which is 15 percent below the Existing Conditions VMT per Service Population for the WRCOG region. As explained in the Technical Advisory prepared for Implementing SB 743:

> Based on OPR's extensive review of the applicable research, and in light of an assessment by the California Air Resources Board (CARB) quantifying the need for VMT reduction in order to meet the State's long-term climate goals, OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development may be a reasonable threshold. [¶] Fifteen percent reductions in VMT are achievable at the project level in a variety of place types.[4] [¶]

---

[3] This methodology is also described by OPR as an "Absolute" VMT metric. More specifically OPR's Technical Advisory, suggests that (1) "Projects that decrease [total] vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact." (CEQA Guidelines § 15064.3(b)(1).) (2) "Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact." ((CEQA Guidelines § 15064.3(b)(2).) (3) "Where development decreases [total] VMT, lead agencies should consider the impact to be less than significant," (OPR Technical Advisory, p. 16.), (4) "Where a project replaces existing VMT-generating land uses, if the replacement leads to a net overall decrease in VMT, the project would lead to a less-than-significant transportation impact." (OPR Technical Advisory, p. 17.)

[4] CAPCOA (2010) Quantifying Greenhouse Gas Mitigation Measures, p. 55, available at http://www.capcoa.org/wpcontent/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf.

> Moreover, a fifteen percent reduction is consistent with SB 743's direction to OPR to select a threshold that will help the State achieve its climate goals. As described above, section 21099 states that the criteria for determining significance must "promote the reduction in greenhouse gas emissions." In its document California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals,[5] CARB assesses VMT reduction per capita consistent with its evidence-based modeling scenario that would achieve State climate goals of 40 percent GHG emissions reduction from 1990 levels by 2030 and 80 percent GHG emissions reduction levels from 1990 by 2050. Applying California Department of Finance population forecasts, CARB finds per-capita light-duty vehicle travel would need to be approximately 16.8 percent lower than existing, and overall per-capita vehicle travel would need to be approximately 14.3 percent lower than existing levels under that scenario. Below these levels, a project could be considered low VMT and would, on that metric, be consistent with 2017 Scoping Plan Update assumptions that achieve climate state climate goals… [¶] In summary, achieving 15 percent lower per capita (residential) or per employee (office) VMT than existing development is both generally achievable and is supported by evidence that connects this level of reduction to the State's emissions goals.

The Project proposes to increase the population of the campus with increases in students, faculty, staff, and residential beds. While all of these population components are responsible for an increase in trips and VMT generated by the UC Riverside campus, management of residential and employment VMT has been found to help the State reach emissions goals. The methodology utilized in the VMT analysis accounts for residential and employment VMT as well as additional VMT generated by nonresidential students who commute to the campus each day. The VMT threshold used in this study of 15% below the WRCOG baseline demonstrates that the UC Riverside is balancing its increase in campus population while managing VMT and helping the State achieve emission goals.

RIVERSIDE TRAFFIC ANALYSIS MODEL (RIVTAM)

The Riverside Traffic Analysis Model (RivTAM) was used to develop traffic volume and VMT forecasts for this study.[6] The current RivTAM uses a 2008 base year, a 2035 future year, and Socioeconomic Data (SED) consistent with the Southern California Association of Governments (SCAG) 2008 Regional Transportation

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[5] California Air Resources Board (Jan. 2019) California Air Resources Board 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals, available at https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate.

[6] The RivTAM model was developed by the Riverside County Transportation Department in 2009. The *RivTAM Model Development & Validation Report and Users Guide* was prepared in February 2009 as a reference to using the RivTAM model. WRCOG updated the RivTAM model to be consistent with the 2016 SCAG RTP/SCS. WRCOG is the current manager of the RivTAM model and requests for a copy of the RivTAM model can be submitted to WRCOG staff.

Plan (RTP) model. As the RIVTAM model was prepared before the 2016 SCAG Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS),[7] the roadway networks and SED were reviewed for consistency with the 2016 RTP/SCS in the study area as described below.

Socio-Economic Data (SED)

WRCOG has completed an SED update within the WRCOG boundaries to maintain consistency with the 2016 SCAG RTP/SCS. Consistent with the SCAG model, this SED has a 2012 base year and a 2040 future year. This WRCOG SED information was utilized in the RivTAM for both the base year and future year modeling efforts.

As part of SED review of future year projections in the WRCOG model, a list of approved and pending developments was also requested from the City of Riverside, County of Riverside, and City of Moreno Valley. These lists were then reviewed with land use assumptions in the future year model to ensure that all reasonably foreseeable projects within a fifteen-mile radius of UC Riverside were accounted for in the land uses assumed in the model under cumulative conditions. A list of all approved and pending developments in the City of Riverside, County of Riverside, and City of Moreno Valley is provided in **Appendix A**.

Baseline 2018 campus population (students, residents, faculty, and staff) and projected LRDP growth information was provided by UC Riverside for use in this analysis. The RivTAM base and future year UC Riverside land uses were adjusted to reflect the 2018 campus population conditions. Both of these adjusted models were then updated to reflect growth consistent with the expectations provided by UC Riverside for both the "Plus Project" scenarios.

Roadway Network

As part of the RivTAM review, both the base year and future year roadway networks were examined for consistency with existing conditions and planned roadway improvements. The future year roadway network was compared to the 2016 SCAG RTP/SCS to verify that only projects planned to be in place before 2035 were assumed in the network under cumulative conditions. One project listed in the Constrained RTP Project List that is planned to be complete prior to 2035 is the widening of Iowa Avenue from four lanes to six lanes from Blaine Street to the north City Limit (Opening Year (2021) to the north of the Project study area.

VMT Estimates

VMT was estimated using the Origin/Destination (OD) method. The OD method for calculating VMT sums all weekday VMT generated by trips with at least one trip end in the study area. The OD Method is

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[7] The 2016 SCAG Regional Transportation Plan/Sustainable Communities Strategy is available online at: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx

completed after the fifth and final loops of assignment in the travel demand model. Origins are all vehicle trips that start in a specific traffic analysis zone, and destinations are all vehicle trips that end in a specific traffic analysis zone. The OD Method does account for external trips that have one trip end outside of the model boundary (IX-XI trips).

This was completed by multiplying the OD trip tables and the final assignment skim matrices. The OD tables provided the number of trips between each Traffic Analysis Zone (TAZ), and the skim matrices provided the distance on the roadway network, or trip length, between each TAZ. The full length of all trips with an origin or destination in the TAZ representing the UC Riverside campus were used to estimate the campus VMT, and likewise the full length of all trips with an origin or destination in any of the TAZs representing the WRCOG region were used to estimate the WRCOG VMT. RivTAM input and output files are available upon request.

Intersection Forecasts

For this study, link level volume growth factors were applied to develop Cumulative (2035) Without Project traffic forecasts. Using this method, growth between the future year and base year model was determined. As the Buildout for the Project is 2035, interpolation was then used to develop growth representing seventeen years (2018 to 2035). This growth was then applied to existing peak hour traffic counts collected in 2018 to develop Cumulative (2035) Without Project traffic volumes.

PROJECT TRAFFIC VOLUMES

The methodology used to estimate changes in VMT and traffic volumes associated with the LRDP is described below.

Project Trip Generation (Vehicular Peak Hour Trip Generation for Off-Ramp Queuing Analysis)

RivTAM was applied to estimate the peak hour trip generation for LRDP buildout conditions in 2035. A validation check was performed of the model's baseline peak hour trip generation estimates for the UC Riverside campus. The peak hour trip generation estimates from the UC Riverside TAZs was compared to Fall 2018 intersection turning movement counts. The RivTAM peak hour trip generation estimates were found to be 2.3% higher for the AM peak hour and 5.5% lower for the PM peak hour. These estimates were determined to be acceptable as the intersection counts only reflect one day of travel and can fluctuate by more than 5% to 10% within a given time period.

The population growth associated with the LRDP is expected to generate an estimated net new external 1,726 trips (1,194 inbound/532 outbound) during the AM peak hour and 2,388 trips (1,044 inbound/1,344 outbound) during the PM peak hour

The trip generation estimates are summarized in **Table 2** below. The trip generation estimates reflect the addition of students, residents, faculty, and staff associated with full build-out of the LRDP.

TABLE 2 – UC RIVERSIDE LRDP TRIP GENERATION

Use	Daily Trips	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Net New Trips Associated with LRDP	27,444	1,194	532	1,726	1,044	1,344	2,388

Project Trip Distribution

The UC Riverside campus trip distribution reflects the regional distribution of trips traveling to and from the Project site. To determine where trips traveling to and from the UC Riverside campus would originate and end, a variety of data sources were reviewed.

- A select zone analysis from RivTAM was performed for a traffic analysis zones (TAZ) that account for the UC Riverside campus.
- Anonymous cell phone data from the existing UC Riverside campus for the 2018 academic year was reviewed. The anonymous cell phone and GPS data estimates and aggregates the home zip code data into probability distributions. These distributions were used to develop the distribution of Project traffic to the UC Riverside campus. Although the data included cell phone and GPS records for trip origins and destinations on weekdays and weekend days throughout Southern California, this effort focused specifically on trip origins and destinations for weekdays.
- Anonymous zip code data for students, faculty, and staff from the existing UC Riverside campus for the 2018 academic year was reviewed.

The information from these sources and local knowledge were combined to develop the regional distribution. The trip distribution of the new trips is shown on **Figure 3**.

OFF-RAMP QUEUING

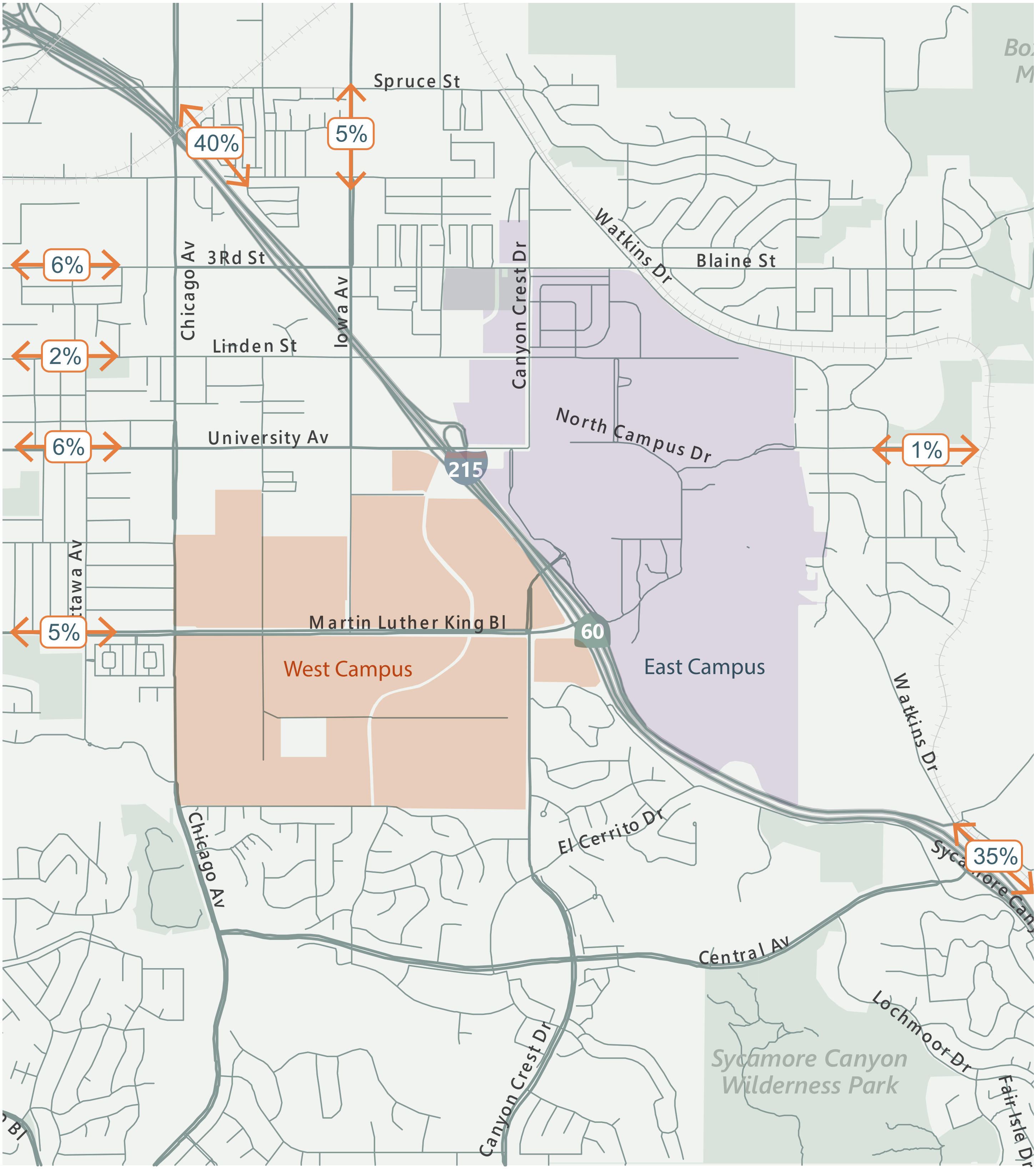
A freeway off-ramp queuing analysis was conducted at eight freeway off-ramp locations near the UC Riverside campus to determine queuing conditions at the off-ramps as a result of traffic from the Project. Queue lengths were estimated using the Trafficware Synchro 10 software package. Each intersection was configured according to its existing (and future, if applicable) arrival conditions, including signal timing and physical geometry. The focus of the queuing analysis is to specifically determine if there is adequate storage capacity at the off-ramps. Off-ramp queue storage would be considered deficient if the Project increases the calculated 95th percentile queue length by movement and it exceeds 85% of the available storage length during the AM or PM peak hours.

The following factors were applied in the queuing analysis:

- Peak Hour Factor (PHF) was based on traffic counts collected in the field for all analysis scenarios.
- Heavy vehicle percentage was set to 2% for all analysis scenarios.

VEHICULAR OFF-RAMP PROJECT TRIP ASSIGNMENT

Based on the trip generation and trip distribution estimates developed, Project trips were assigned to the roadway network. The Project only trips assigned to the at eight freeway off-ramp locations near the UC Riverside campus are shown on **Figure 4.**



Legend

<-> Trip Distribution

▨ UC Riverside Campus

Figure 3

Trip Distribution

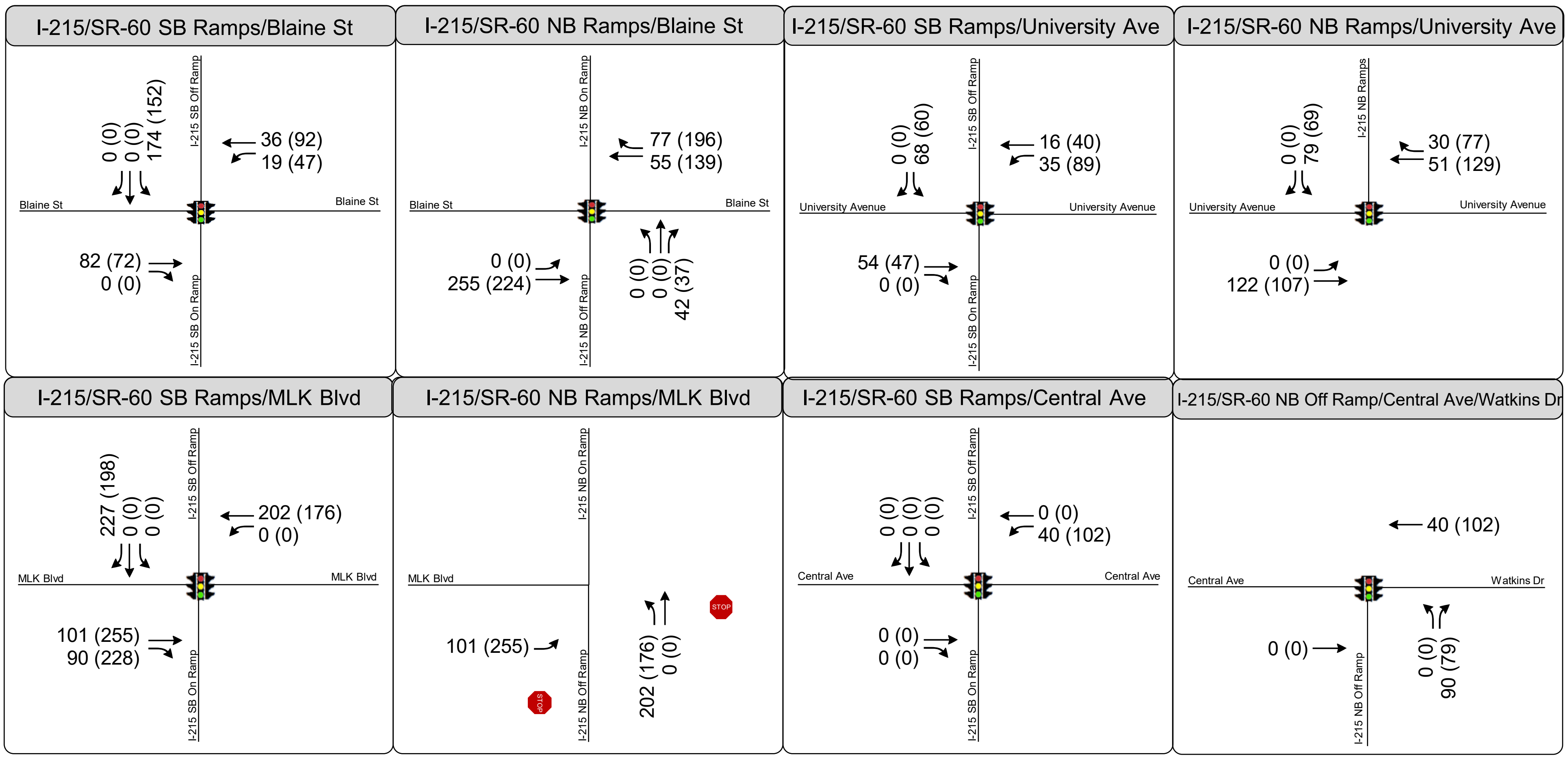


Figure 4
Project Only Trips

4.0 BASELINE CONDITIONS

This chapter summarizes the Baseline (2018) Conditions in the study area including the roadway, transit, bicycle, and pedestrian networks to document the current travel against which the Project will be assessed. The year 2018 was selected as it represents the last year of available academic data before the LRDP planning process began in 2019.

EXISTING ROADWAY FACILITIES

REGIONAL ROADS

Regional roads in the Project vicinity include:

- Interstate 215/State Route 60 Freeway (I-215/SR-60): I-215/SR-60 is an interstate highway in Southern California. As a combined route, it runs I-215/SR-60 in the north/south direction from Moreno Valley to Riverside. I-215/SR-60 diagonally bisects the UC Riverside campus. Near the Project study area, it is generally an eight-lane facility (four lanes in each direction). Access to I-215/SR-60 near the Project study area is provided at Blaine/3rd Street, University Avenue, Martin Luther King Boulevard, and Central Avenue.

LOCAL ACCESS ROADS

Local access roads in the Project vicinity include:

- Iowa Avenue: Iowa Avenue is a north-south four-lane facility that bisects portions of the West Campus. Iowa Avenue is designated as an arterial by the City of Riverside General Plan. It has a speed limit of 45 miles per hour (mph).
- Canyon Crest Drive: Canyon Crest Drive is a north-south facility that widens from a 66 foot (ft) two-lane collector into an 88 ft four-lane arterial. Canyon Crest Drive bisects portions of the East Campus and provides access to the campus core. It has a variable speed limit ranging between 25 and 40 mph.
- Watkins Drive: Watkins Drive is a north-south two-lane facility that is along the western edge of East Campus. Watkins Drive is designated as an arterial by the City of Riverside General Plan. It has a variable speed limit ranging between 35 and 40 mph.
- Blaine Street/3rd Street: This is an east-west four-lane facility that is along the northern edge of East Campus. It is designated as an arterial in the City of Riverside General Plan. It has a speed limit of 40 mph.

- West Linden Street: This is an east-west facility that bisects portions of the East Campus. It is designated as a two-lane 80 ft collector east of I-215/SR-60 in the City of Riverside General Plan. It has a speed limit of 40 mph.
- University Avenue: This is an east-west four-lane facility that provides access to the campus core. It is designated as a parkway in the City of Riverside General Plan. It has a speed limit of 35 mph.
- Martin Luther King Boulevard: This is an east-west four-lane facility that bisects the West Campus. It is designated as an arterial in the City of Riverside General Plan. It has a speed limit of 50 mph.
- Big Springs Road: This is an east-west two-lane facility that bisects the East Campus. It has a speed limit of 25 mph.
- Campus Drive: This is a two-lane facility that encompasses the Academic Center of the East Campus. It has a speed limit of 25 mph.

BICYCLE FACILITIES

Bicycle facilities in the City of Riverside are classified as follows:

CLASS I BIKEWAYS (BIKE PATHS)

Class I bicycle facilities are bicycle trails or paths that are off-street and separated from automobiles. They are a minimum of eight feet in width for two-way travel and include bike lane signage and designated street crossings where needed. A Class I Bike Path may parallel a roadway (within the parkway) or may be a separate right-of-way that meanders through a neighborhood or along a flood control channel or utility right-of-way.

CLASS II BIKEWAYS (BIKE LANES)

Class II bicycle facilities are striped lanes that provide bike travel and can be either located next to a curb or parking lane. If located next to a curb, a minimum width of five feet is recommended. However, a bike lane adjacent to a parking lane can be four feet in width. Bike lanes are exclusively for the use of bicycles and include bike lane signage, special lane lines, and pavement markings.

CLASS III BIKEWAYS (BIKE ROUTES)

Class III Bikeways are streets providing for shared use by motor vehicles and bicyclists. While bicyclists have no exclusive use or priority, signage both by the side of the street and stenciled on the roadway surface alerts motorists to bicyclists sharing the roadway space and denotes that the street is an official bike route.

CLASS IV BIKEWAYS (CYCLE TRACKS)

Class IV bicycle facilities, sometimes called cycle tracks or separated bikeways, provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic via separations (e.g. grade separation, flexible posts, inflexible physical barriers, on-street parking). California Assembly Bill 1193 (AB 1193) legalized and established design standards for Class IV bikeways in 2015.

According to the City of Riverside Bicycle Master Plan Updated: Addendum (City of Riverside, March 2012), there is a total of 101.5 miles of existing bike lanes.

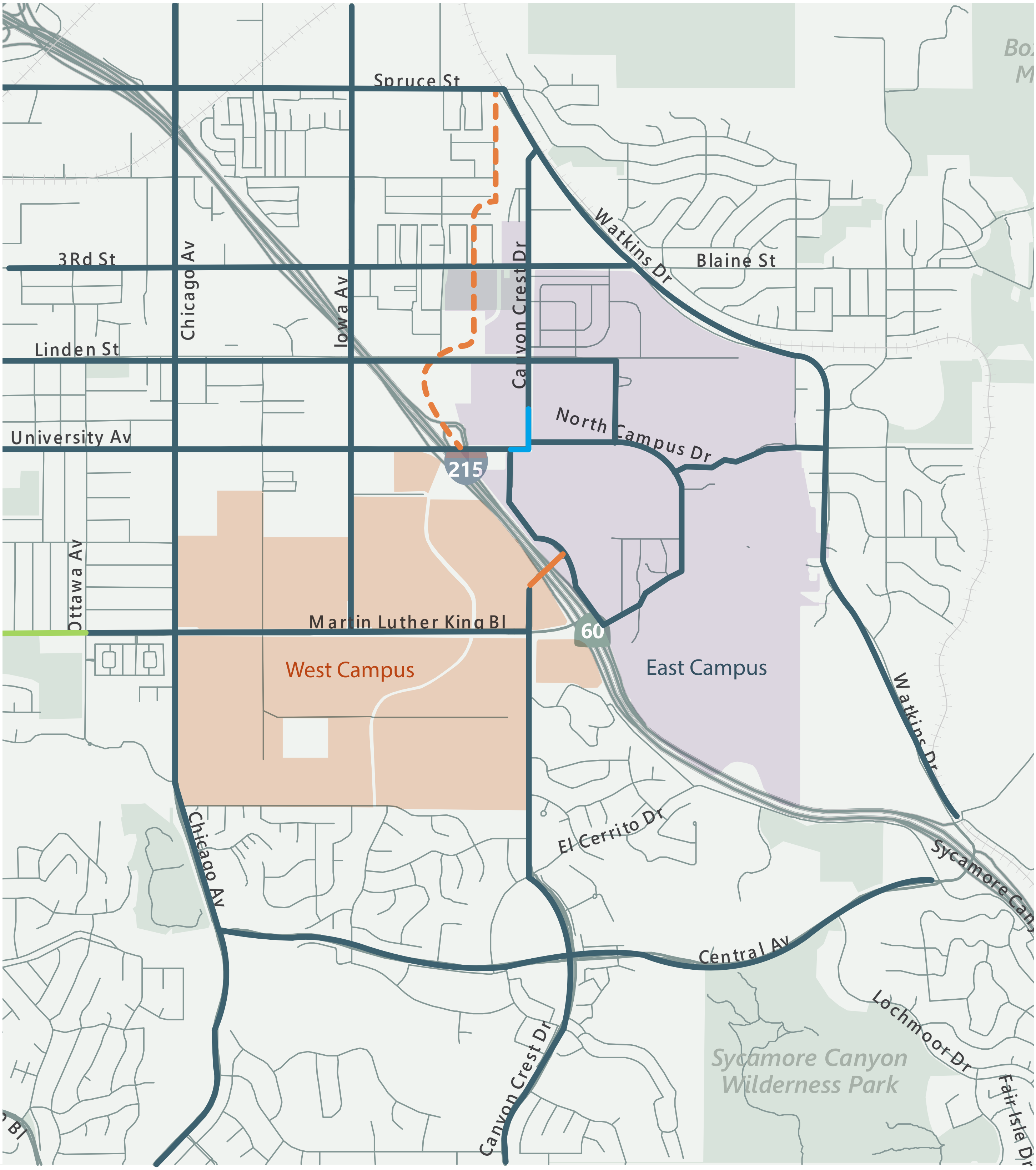
Near or within the study area, the following Class II bike facilities are provided:

- Iowa Avenue: Bike lanes are north of University Avenue on both sides of the street.
- Canyon Crest Drive: Bike lanes are provided north of University Avenue and south of I-215/SR-60 on both sides of the street.
- Watkins Drive: Bike lanes are provided between Blaine Street and I-215/SR-60 on both sides of the street.
- Blaine Street/3rd Street: Bike lanes are provided between Valencia Hills Drive and Market Street on both sides of the street.
- West Linden Street: Bike lanes are provided between Aberdeen Drive and Niki Way on both sides of the street. A bike lane is provided in the westbound direction between Chicago Avenue and Niki Way.
- University Avenue: Bike lanes are provided between Canyon Crest Drive and Lime Street on both sides of the street.
- Big Springs Road: Bike lanes are provided between Campus Drive and Mt. Vernon Avenue on both sides of the street.
- Martin Luther King Boulevard: Bike lanes are provided between Canyon Crest Drive and Chicago Avenue.
- Aberdeen Drive: Bike lanes are provided between West Linden Street and Campus Drive
- Campus Drive: Bike lanes are provided on the campus loop road between the Parking Lot 1 Driveway and Aberdeen Drive.

Within the study area, the following Class IV bike facilities are provided:

- University Avenue: A protected two-way cycle track is provided on the south side of University Avenue between Campus Drive and Canyon Crest Drive.
- Canyon Crest Drive: A two-way cycle track is provided on the east side of Canyon Crest Drive between University Avenue and the Bannockburn Village Driveway.

Figure 5 identifies the existing bicycle facilities in the study area.



Legend

- Class I
- Class II
- Class III
- Class IV
- UC Riverside Campus

- Proposed Class I
  The Campus does not have control over the development of the facility

Figure 5

Bicycle Facilities

PEDESTRIAN FACILITIES

Interconnectivity of land uses, coupled with the provision of adequate pedestrian and bicycle facilities, is an important component of Riverside's future circulation network. The City seeks to expand pedestrian and bike path network to provide connections between schools, activity centers, parks, and residential areas. A comprehensive trails system is intended to link residential areas, schools, parks, and commercial centers so that residents can travel within the community without driving (City of Riverside General Plan, 2012).

Near or within the Project study area, sidewalks are generally provided on the following streets:

- Iowa Avenue
- Canyon Crest Drive
- Watkins Drive
- Blaine Street/3rd Street
- West Linden Street
- University Avenue
- Martin Luther King Boulevard
- Big Springs Road
- Aberdeen Drive
- Campus Drive

The major streets that provide access to the UC Riverside campus include Martin Luther King Boulevard, University Avenue, West Linden Street, Blaine Street, Canyon Crest Drive and Big Springs Road. These roadways have well-connected and maintained sidewalk networks near the campus. These streets currently provide access for pedestrians to the bus stops located near and on the UC Riverside campus along Canyon Crest Drive, Blaine Street, Big Springs Road, and at Parking Lot 30.

TRANSIT FACILITIES

The transit facilities provided in the City of Riverside are described below.

METROLINK

Commuter train service in the City of Riverside is provided by Metrolink, which operates seven commuter rail lines throughout Southern California. The UC Riverside/Riverside Hunter Park Metrolink Station is located north-west of the intersection between Marlborough Avenue and Rustin Avenue, approximately 1.5

miles north of the UC Riverside campus. The UC Riverside/Riverside Hunter Park Metrolink Station is served by the 91/Perris Valley Line, which links Perris-South to LA Union Station on weekdays and weekends.

The Downtown Riverside Metrolink Station is located on Vine Street between University Avenue and 14th Street, approximately 2 miles west of the UC Riverside campus. The Downton Riverside Metrolink Station is served by the 91/Perris Valley Line, which links Perris-South to LA Union Station on weekdays and weekends; the Riverside Line, which links Riverside Downtown to LA Union Station on weekdays; and the Inland Empire-Orange County Line, which links San Bernardino Downtown to Oceanside on weekdays and weekends.

BUS TRANSIT

Riverside Transit Agency (RTA) provides fixed route, commuter and dial-a-ride bus service within western Riverside County, including the Cities of Riverside, Corona, Norco, Jurupa, Grand Terrace, Loma Linda, Moreno Valley, Perris, San Jacinto, Hemet, Lake Elsinore and Temecula. American with Disabilities Act (ADA) services within the City of Riverside are provided by the City's Riverside Special Services. All buses on fixed-routes are equipped with bike racks that hold two bicycles.

RTA routes that serve areas closest to the UC Riverside campus include the following: Routes 1, 10, 13, 14, 16, 51, 52, 204, 208, and RapidLink Gold Line. **Figure 6** shows the transit routes in the study area and schedule information from the 2018 academic year is provided below.

Route 1: (UC Riverside – Downtown Riverside – Corona) – This route runs from UC Riverside Bannockburn to the West Corona Metrolink Station. Near the UC Riverside campus, it operates on weekdays from 4:27 AM to 11:17 PM with 20-headways. It operates on weekends from 5:37 AM to 11:04 PM with 30-minute headways.

Route 10: (Big Springs & Watkins – Downtown Riverside – Galleria at Tyler) – This route runs from Galleria at Tyler to the intersection between Big Springs Road and Watkins Drive. Near the UC Riverside campus, it operates on weekdays from 5:58 AM to 9:06 PM with 60-minute headways. It operates on weekends from 8:04 AM to 7:41 PM with 90-minute headways.

Route 13: (Hunter Park/UC Riverside Metrolink Station – Downtown Riverside – Galleria at Tyler) – This route runs from Galleria at Tyler to the Hunter Park/UC Riverside Metrolink Station. Near the UC Riverside campus, it operates on weekdays from 4:47 AM to 8:17 PM with 60-minute headways. It operates on weekends from 7:26 AM to 6:10 PM with 60-minute headways.

Route 14: (Galleria at Tyler – Downtown Riverside – Loma Linda VA hospital) – This route runs from Galleria at Tyler to the VA Hospital at Loma Linda. Near the UC Riverside campus, it operates on weekdays from 5:53 AM to 8:17 PM with 75-minute headways. It operates on weekends from 7:15 AM to 5:42 PM with 60-minute headways.

Route 16: (Moreno Valley Mall – UC Riverside) – This route runs from the Moreno Valley Mall to UC Riverside Bannockburn. Near the UC Riverside campus, it operates on weekdays from 4:24 AM to 11:02 PM with 30-minute headways. It operates on weekends from 6:37 AM to 9:50 PM with 30-minute headways.

Route 51: (UC Riverside – Canyon Crest Town Center) – This route runs UC Riverside Bannockburn to Canyon Crest Town Center. Near the UC Riverside campus, it operates on weekdays from 7:00 AM to 5:40 PM with 40-minute headways.

Route 52: (Hunter Park/UC Riverside Metrolink Station – UC Riverside) – This route runs from the Hunter Park/UC Riverside Metrolink Station to UC Riverside. Near the UC Riverside campus, it operates on weekdays from 4:48 AM to 7:30 PM with 40-minute headways.

Route 204: (UC Riverside – Downtown Riverside – Ontario Mills Mall – Montclair Transit Center) – This route runs from UC Riverside Bannockburn to the Montclair Transit Center. Near the UC Riverside campus, it operates on weekdays from 6:33 AM to 8:47 PM with 60-minute headways.

Route 208: (Temecula – Moreno Valley – Downtown Riverside) – This route runs from Temecula to Downtown Riverside. Near the UC Riverside campus, it operates on weekdays from 6:15 AM to 8:49 PM with 40-minute headways.

RapidLink Gold Line: (Corona – Downtown Riverside – UC Riverside) – This route runs from Corona to UC Riverside. Near the UC Riverside campus, it operates on weekdays from 7:35 AM to 9:35 AM and from 2:45 PM to 6:45 PM with 15-minute headways.

A policy in the existing 2005 UC Riverside Long Range Development Plan requires the UC Riverside Transportation and Parking Services department will work with transit service providers on an annual basis to monitor demand for transit services, to identify needed service improvements, and encourage the implementation of any such improvements. To maintain the quality of transit options to the UC Riverside students, faculty, and staff this existing policy will be implemented as part of the Project.

Furthermore, UC Riverside has partnered with RTA in providing all students, faculty, and staff free access to public transportation. Faculty, Staff and Graduate Students who make their daily commute to and from the UC Riverside campus using public transit are eligible to participate in the U-PASS program. Faculty or staff enrolled in the U-PASS program are eligible to participate in the Regional Guaranteed Ride Home Program offered through IE Commuter. The program reimburses participants for up to two emergency rides per year when using Lyft, Taxi, or Uber to get home in an emergency.

As discussed in OPR’s Technical Advisory for implementing SB 743, the addition of new transit users is generally not treated as an adverse environmental impact.” (OPR Technical Advisory, p. 19.) As further described in Section 1, under Recent Changes to Transportation Planning and Analysis, the legislature is promoting public transit use to reduce environmental impacts. As the Project will result in a higher proportion of residential students than commuter students, it is anticipated that the Project would contribute to an increase in student commuters utilizing transit to commute to campus.

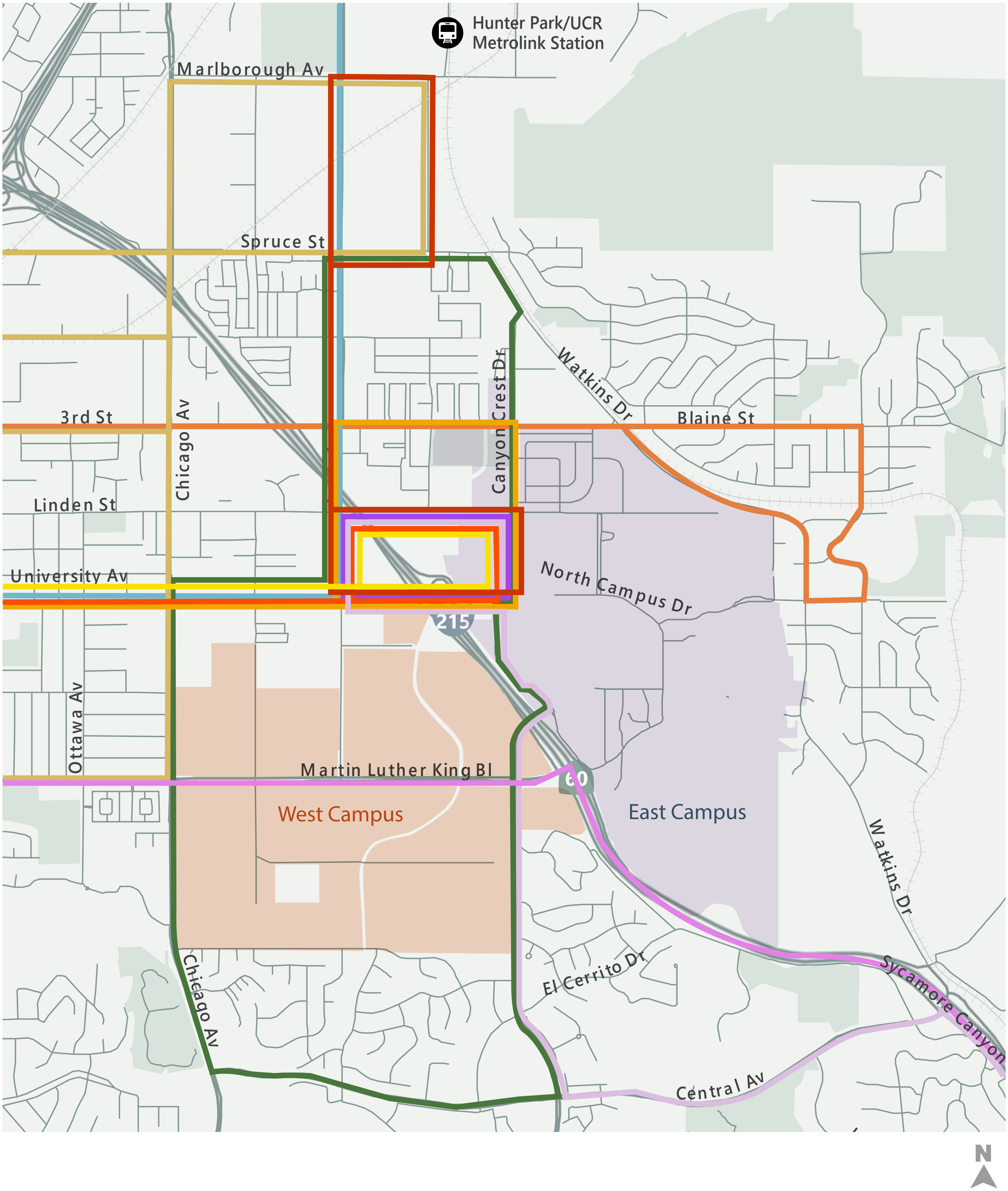


Figure 6

Transit Routes

VEHICLE MILES TRAVELED

RivTAM was used to estimate the baseline VMT per Service Population for the UC Riverside and the WRCOG region. VMT was estimated using the Origin/Destination method.

As shown in **Table 3**, the baseline UC Riverside campus produces a lower VMT per Service Population than the WRCOG region. This is likely due to the reduction in trip and trip lengths associated with students living on campus and available transit services used to access the campus.

TABLE 3 – EXISTING VEHCILE MILES TRAVELED

	VMT	Service Population	VMT Per Service Population
UC Riverside Campus	518,486	28,661	18.09
WRCOG Region	67,532,979	2,357,270	28.65

Note: Service population includes employees, residential students, and nonresidential (commuting) students.
VMT = Vehicle Miles Traveled.

TRAFFIC VOLUMES AND CONFIGURATIONS

For the queuing analysis, baseline AM peak period (7:00 to 9:00 AM) and PM peak period (4:00 to 6:00 PM) intersection counts were collected at eight off-ramp intersections located near the UC Riverside campus in November 2018. These counts were conducted as part of the UC Riverside Campus Traffic Engineering Study conducted by Kimley-Horn. Baseline (2018) peak hour traffic volumes for the off-ramp intersections are shown on **Figure 7**. Baseline traffic counts are provided in **Appendix B**.

As part of the field inventory, Fehr & Peers also collected the following information:

- Lane configurations
- Signal phasing
- Pedestrian and bicycle facilities

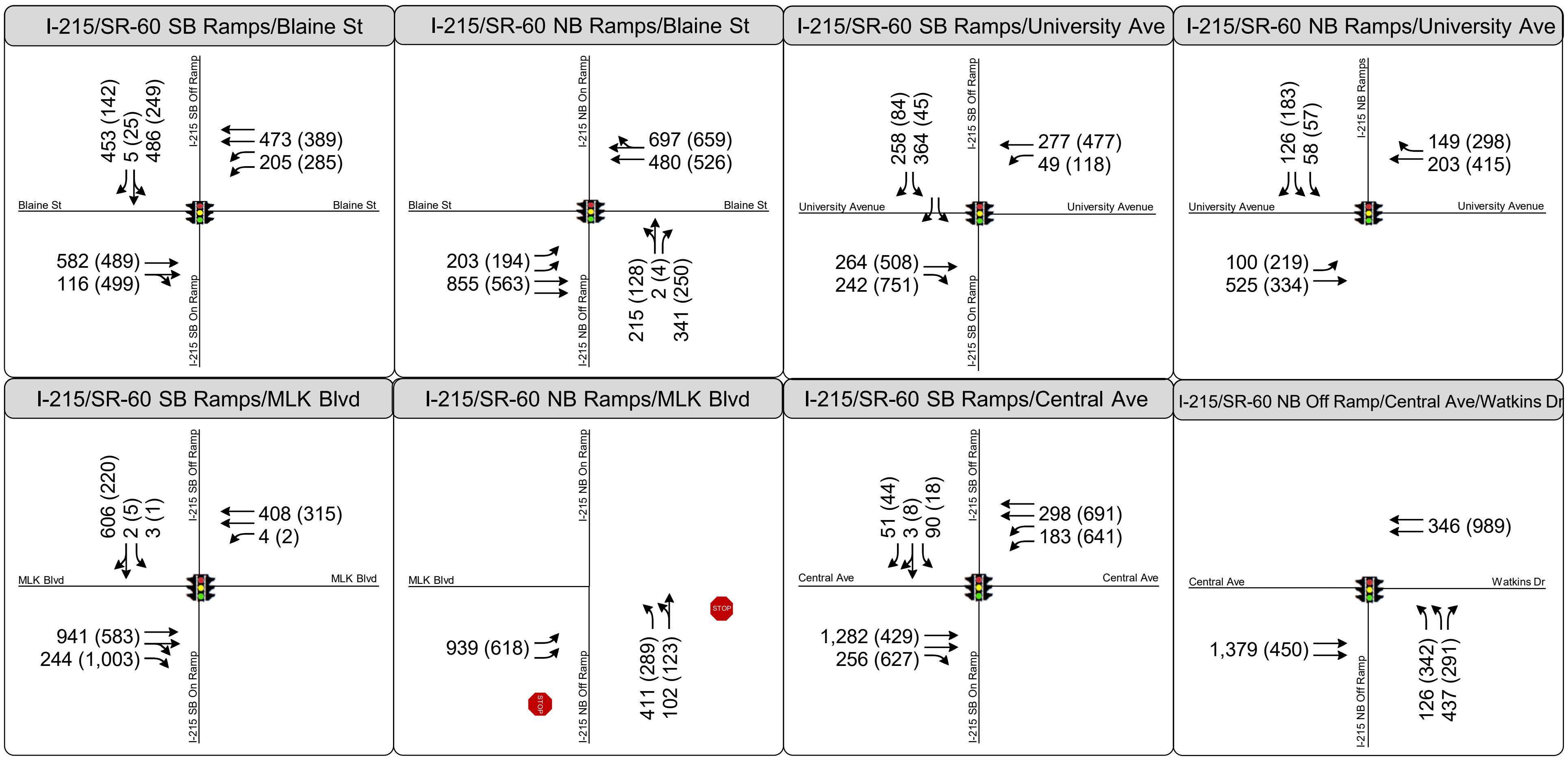


Figure 7

Baseline (Year 2018)
Peak Hour Traffic Volumes and
Lane Configurations

OFF-RAMP QUEUING

Queuing results for the Baseline (2018) conditions are summarized in **Table 4** below. As shown in the table, queuing was not found to exceed 85% of the storage length at any ramp terminal intersection. Technical queuing calculations are provided in **Appendix C**.

TABLE 4 – BASELINE (2018) QUEUING ANALYSIS

Intersection		Ramp length (ft)	Movement /Lane [a]	Length (ft)	AM Peak Hour		PM Peak Hour	
					Lane (ft)	Total (ft)	Lane (ft)	Total (ft)
1	I-215/SR-60 Southbound Ramps & 3rd Street	1,420	SBTL	925	456[b]	456[b]	204	204
			SBR	1,420	241		39	
2	I-215/SR-60 Northbound Ramps & 3rd Street	1,230	NBTL	860	183	269[b]	119	119
			NBR	1,230	269[a]		61	
5	I-215/SR-60 Southbound Ramps & University Avenue	1,235	SBL	1,235	263	263	50	50
			SBR	420	74		38	
6	I-215/SR-60 Northbound Ramps & University Avenue	2,075	SBL	2,075	29	38	28	50
			SBR	700	38		50	
10	I-215/SR-60 Southbound Ramps & Martin Luther King Boulevard	1,085	SBL	1,085	6	391[b]	4	55
			SBTR	530	391[b]		55	
11	I-215/SR-60 Northbound Ramps & Martin Luther King Boulevard	1,745	NBL	885	80[c]	80[c]	58[c]	58[c]
			NBTL	1,745	78[c]		58[c]	
12	I-215/SR-60 Southbound Ramps & Central Avenue	1,050	SBL	1,050	71	71	23	23
			SBT	375	21		23	
			SBR	115	0		0	
13	I-215/SR-60 Northbound Off-Ramp and Central Avenue	1,680	NBL	1,680	34	321[b]	86	86
			NBR	250	321[b]		59	

Notes:
I-215/SR-60 = Interstate 215/State Route 60, ft = feet
[a] Movement/Lane nomenclature is defined by the cardinal and physical movement of a vehicle at the intersection. The first two letters dictate the cardinal direction (Northbound = NB, Southbound = SB, Westbound = WB, Eastbound = EB). The next one to three letters dictate the direction a vehicle will travel (Left-Turn = L, Through = T, Right-Turn = R) at the intersection. Any combination of the L, T, and R represents a lane in which a vehicle can make multiple movements (i.e. Through and Left-Turn = TL, Through and Right-Turn = TR, Left-Turn and Right-Turn = LR).
[b] 95th percentile volume exceeds capacity. Queues may be longer.
[c] 95th percentile queue reported as number of vehicles. Assumed 25 ft per vehicle.

5.0 VEHICLE MILES TRAVELED IMPACT ANALYSIS

PROJECT GENERATED VMT

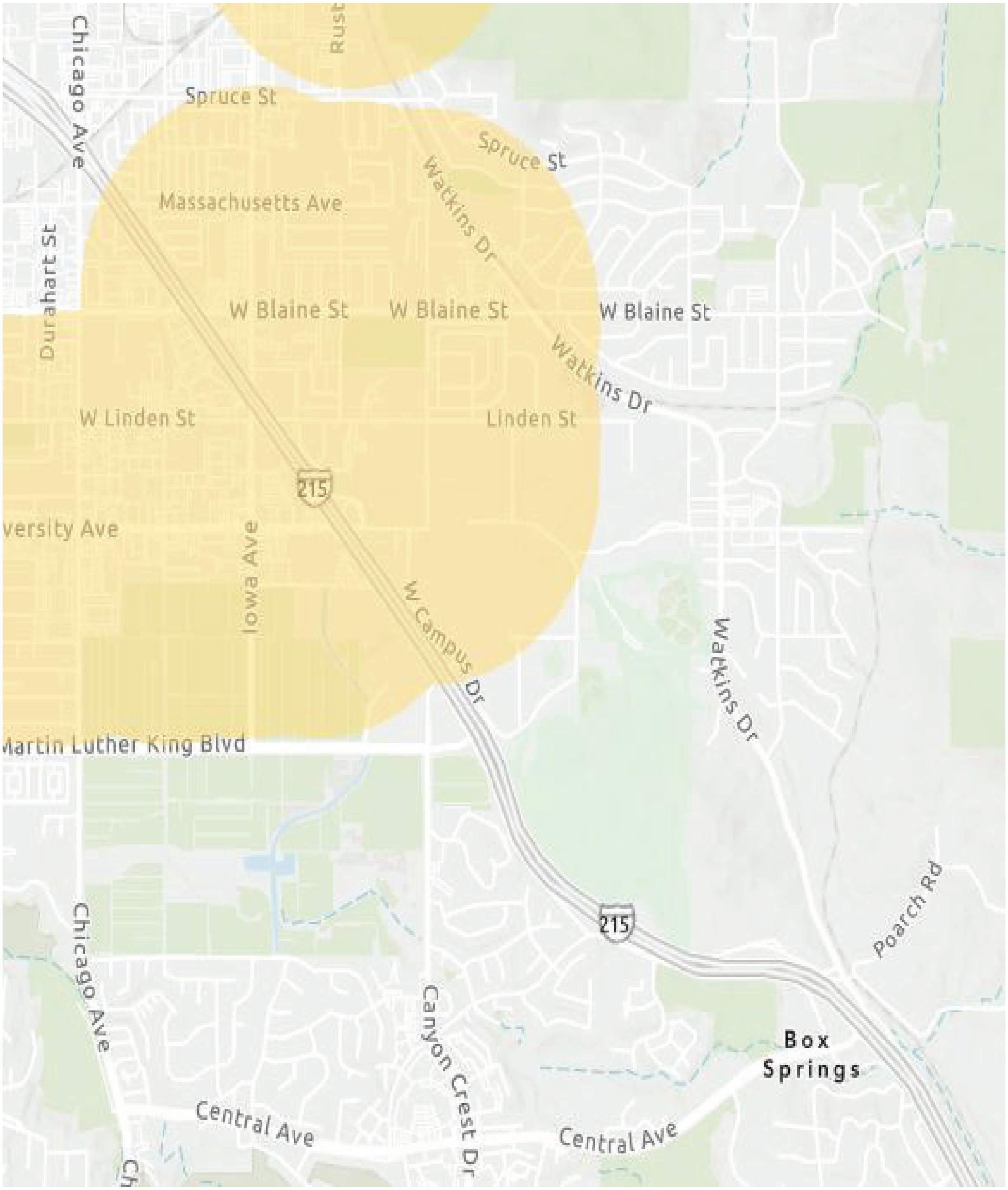
Project generated VMT was estimated using the Origin/Destination method to measure the impact of the VMT generated by the UC Riverside campus with the LRDP compared to the significance threshold.

OPR guidelines allow for projects to be screened from doing a full VMT analysis if the project is in a Transit Priority Area (TPA). (CEQA Guidelines Section 15064.3(b)(1).) **Figure 8** shows the TPAs around the UC Riverside campus as identified in the WRCOG VMT Screening Tool. As the LRDP is a long-range plan for the development of the UC Riverside campus with limited information regarding specific project locations, and the current TPAs do not cover all the campus, a full VMT analysis was conducted.

BASELINE PLUS PROJECT

The RivTAM base model was modified to include the population growth of the LRDP to evaluate the VMT impact of the UC Riverside campus with the addition of the LRDP. The addition of 11,078 students, 7,489 residential beds, and 2,806 employees was incorporated in the campus TAZs to assess the Project generated VMT per Service Population of the UC Riverside campus with the LRDP.

The WRCOG VMT per Service Population was calculated for the baseline condition using the RivTAM model to establish the regional threshold. The baseline UC Riverside campus and UC Riverside campus with the proposed LRDP growth both operate more efficiently with a lower Project generated VMT per Service Population than the baseline WRCOG average. This is due to the VMT efficiency gained with the increase in the proportion of students living on campus; multimodal infrastructure throughout and around the campus which supports alternative modes of transportation; and continued use of Transportation Demand Management (TDM) programs such as U-PASS, ride-sharing, vanpooling, and support of other alternative modes of transportation. The development of the referenced TDM program was a policy set forth in the 2005 UC Riverside Long Range Development Plan which will be implemented as part of the Project.



Legend

● Transit Priority Areas

Figure 8
Transit Priority Areas

As shown in **Table 5,** the Baseline Plus Project generated VMT per Service Population is 38% below the WRCOG VMT per Service Population [1-(17.65/28.65) = 0.38], therefore it does not exceed the identified threshold.

TABLE 5 – BASELINE PROJECT GENERATED VEHICLE MILES TRAVELED

	VMT	Service Population	VMT Per Service Population
Baseline (UC Riverside Campus)	518,486	28,661	18.09
Baseline Plus Project (UC Riverside Campus with LRDP)	750,916	42,545	17.65
WRCOG Region	67,532,979	2,357,270	28.65
15% Below WROG Region Threshold	-	-	24.35

Note: VMT = Vehicle Miles Traveled; LRDP = Long Range Development Plan
Service population includes employees, residential students, and nonresidential (commuting) students.

CUMULATIVE PLUS PROJECT

The prior Baseline Plus Project VMT analysis constitutes an independent basis for upholding UCR's cumulative VMT impact conclusions. As discussed under OPR's Technical Advisory, "metrics such as VMT per capita or VMT per employee, i.e., metrics framed in terms of efficiency (as recommended below for use on residential and office projects), cannot be summed because they employ a denominator. A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact, and vice versa." (OPR Technical Advisory p. 6.) Nevertheless, additional cumulative analysis has also been performed.

The RivTAM future model was modified to reflect the baseline campus population and used to evaluate cumulative Project generated VMT per Service Population. The addition of 11,078 students, 7,489 residential beds, and 2,806 employees were incorporated in the campus TAZs to assess the Project generated VMT per Service Population of the UC Riverside campus with the LRDP.

A threshold of 15% below the baseline WRCOG VMT per Service Population was used to identify Project generated impacts. The Cumulative Plus Project scenario operates more efficiently with a lower Project generated VMT per Service Population than the identified threshold. This is due to the same notions of the Baseline Plus Project analysis.

Overall VMT per Service Population does increase in the WRCOG region from the baseline to future year. The UC Riverside campus follows this trend but is still below WRCOG average. The increase in the VMT per Service Population of the future UC Riverside campus with the LRDP compared to the future baseline UC Riverside campus is likely associated with the change in land use patterns in the WRCOG region in the future year. The students and employees associated with the future UC Riverside campus have more opportunities for goods and services in the WRCOG region. This increase in opportunities for goods and services along with the increase in students and employees can result in a varied trend of the VMT per Service Population Cumulative Plus Project condition as compared to the Baseline Plus Project condition.

As shown in **Table 6,** the cumulative Project generated VMT per Service Population is 30% below the WRCOG VMT per Service Population [1-(19.93/28.65) = 0.30], therefore it does not exceed the identified threshold.

TABLE 6 – CUMULATIVE PROJECT GENERATED VEHICLE MILES TRAVELED

	VMT	Service Population	VMT Per Service Population
Cumulative (2035) Without Project (Future UC Riverside Campus)	560,180	28,661	19.55
Cumulative Plus Project (Future UC Riverside Campus with LRDP)	848,022	42,545	19.93
WRCOG Region	67,532,979	2,357,270	28.65
15% Below WROG Threshold	-	-	24.35

Note: VMT = Vehicle Miles Traveled; WRCOG = Western Riverside Council of Governments
Service population includes employees, residential students, and nonresidential (commuting) students.

PROJECT EFFECT ON VMT

Project effect on VMT was estimated using the boundary method on the future RivTAM model. This was completed by selecting all roadway segments in the RivTAM model within the WRCOG boundary and multiplying the number of trips on each roadway segment by the length of that roadway segment.

Project effect on VMT is a measure of the potential effects of a project because it captures the combined effect of new VMT, shifting of existing VMT to/from other neighborhoods, and/or shifts in existing VMT to alternate travel routes or modes. Project that have a positive effect on VMT result in a decrease in the regional VMT per Service Population. Conversely, projects that have a negative effect on VMT increase regional VMT per Service Population. A positive effect on VMT (i.e. a decrease in regional VMT per Service Population) is seen as improving VMT efficacy and better for the region as a whole.

As shown in **Table 7**, the WRCOG VMT per Service Population under the "with project" condition does not exceed the WRCOG region, identified under the RTP/SCS, condition.

TABLE 7 – WRCOG REGION CUMULATIVE PROJECT EFFECT VEHICLE MILES TRAVELED

	Boundary VMT	Service Population	VMT Per Service Population
Cumulative VMT Per Service Population	64,586,173	3,568,224	18.10
Project Effect on VMT Per Service Population	64,665,606	3,582,108	18.05

Note: VMT = Vehicle Miles Traveled
Service population includes employees, residential students, and nonresidential (commuting) students

6.0 CAMPUS ACCESS AND CIRCULATION

This chapter provides an overview of the UC Riverside campus related to internal and external circulation for the LRDP. Considerations include site access, parking, and on-site circulation.

ON-SITE CIRCULATION

On-site circulation will be provided by a series of roadways and multi-modal paths connecting the buildings located on the campus to the internal parking facilities and adjacent street network. Campus Drive distributes vehicles to the perimeter of the Academic Center from the various external access points. Development of parking facilities at the campus edges prioritizes active transportation modes in the Academic Center by creating better access and pedestrian-oriented circulation.

PROJECT SITE ACCESS

VEHICLE ACCESS

Access to the UC Riverside campus is provided by multiple roadways. Connectivity to the east and west is provided by Martin Luther King Boulevard, University Avenue, West Linden Street, Blaine Street, and Big Springs Road. Connectivity to the north and south is provided by Canyon Crest Drive, Watkins Drive, and Iowa Avenue. Regional connectivity is provided by three interchanges along I-215/SR-60 at Blaine Street, University Avenue, and Central Avenue. Changes to vehicular access are not proposed as part of the Project.

EMERGENCY VEHICLE ACCESS

Another consideration related to the site plan review is the provision of adequate emergency vehicle access. Providing adequate emergency vehicle access ensures that these vehicles can quickly respond to service calls. Direct emergency access will be provided to all buildings. Emergency access will be provided by the surrounding streets and the multi-modal paths throughout the UC Riverside campus. All multi-modal paths will be designed to meet the requirements for emergency vehicle access.

PEDESTRIAN ACCESS

The UC Riverside campus provides pedestrian access to buildings, parking areas, and surrounding neighborhoods through a system of walkways and plazas to create a pedestrian friendly environment. The network of off-street paths will be designated as shared walkways and bikeways.

BICYCLE ACCESS

Along with pedestrian facilities, the LRDP will encourage the use of bicycling as an active and sustainable mode of transportation. Access to the UC Riverside campus from surrounding streets is provided by shared facilities on all connecting roadways. Additional bicycle parking is also proposed throughout the campus.

TRANSIT ACCESS

Transit facilities are currently located near and on the UC Riverside campus along Canyon Crest Drive, Blaine Street, Big Springs Road, and at Parking Lot 30. The removal of transit stops is not proposed as part of the Project.

PARKING

UC Riverside actively manages parking demand through a tiered parking permit system in which users purchase permits to access various parking facilities. Campus parking supply and demand are regularly reviewed to identify the adequacy of the parking facilities. The LRDP includes the development of multiple parking structures to meet the response to growth in campus population and changes to surface parking supply due to infill development. The increase in the student population that lives on-campus; development of the U-PASS program; and continued encouragement for use of public transit, ride-sharing, vanpooling, cycling, and walking to campus can help minimize the parking demand associated with the growth in campus population.

In addition to the active parking management that UCR implements, the City of Riverside has implemented residential parking permit programs on some residential streets near the campus. This residential parking program helps minimize the effect of UCR staff, students, and visitors from parking off-campus and walking onto campus. UCR staff work with the City of Riverside and surrounding neighborhoods to develop solutions to parking related concerns on residential streets.

7.0 NON-VEHICULAR IMPACT ANALYSIS

This chapter reviews Project related impacts on the transit system, bicycle, pedestrian, and roadway network in the study area. Potential impacts to pedestrians, bicycles, and transit include disruptions on existing facilities. This section also discusses potential interference with planned facilities, and conflicts with adopted plans, guidelines, policies, or standards.

PEDESTRIAN NETWORK

DISRUPTIONS TO EXISTING FACILITIES

Significance Criteria

The following significance criteria were applied:

> A significant impact occurs if a project substantially disrupts existing pedestrian facilities. This can include adding new vehicular, pedestrian, or bicycle traffic at locations experiencing pedestrian safety concerns such as an adjacent crosswalk or school, particularly if the added traffic reduces the number of pedestrian acceptable gaps at an unsignalized crossing or causes queues to spillback through pedestrian crossings.

Project Impact

A review of the Project per the significance criteria described indicates that there are no conflicts with existing pedestrian facilities. Therefore, no significant impact occurs.

PROJECT INTERFERENCE WITH PLANNED PEDESTRIAN FACILITIES

The Project will not conflict with any planned pedestrian facilities.

PROJECT CONFLICTS WITH PEDESTRIAN SYSTEM PLANS, GUIDELINES, POLICIES, OR STANDARDS

The LRDP contains several policy statements in reference to pedestrians which include the following:

- Identify and address gaps within the existing non-motorized circulation network both on-campus and within the adjacent community.

- Implement University policies to improve pedestrian safety and encourage social interaction in zones of high pedestrian activity.
- Provide adequate support amenities to facilitate and encourage the use of bicycles and other alternative transportation modes.

Development of the Project will include a continued investment in improving the quality, safety, and character of the pedestrian experience and ensuring it is developed with the principle of universal access in mind. Therefore, it is concluded that there is no conflict with these policy statements.

BICYCLE NETWORK

DISRUPTIONS TO EXISTING FACILITIES

Significance Criteria

The following significance criteria were applied:

> A significant impact occurs if a project substantially disrupts existing bicycle facilities.

Project Impact

As noted in the review of existing facilities, there are several bicycle routes within the study area. It is anticipated that the Project would not affect the operation of any of these existing facilities. Therefore, no significant impact would occur.

PROJECT INTERFERENCE WITH PLANNED BICYCLE FACILITIES

The Project will not conflict with any planned bicycle facilities.

PROJECT CONFLICTS WITH ADOPTED BICYCLE SYSTEM PLANS, GUIDELINES, POLICIES, OR STANDARDS

The LRDP contains several policy statements in reference to bicycles which include the following:

- Support and facilitate City-led initiatives to extend bikeways to campus from every direction, including routes proposed along Canyon Crest Drive, Martin Luther King Boulevard, and the Gage Canal.
- Develop wayfinding systems to interconnect preferred bicycle routes and invest in safe and secure pathways along all bicycle routes.

- Provide adequate support amenities to facilitate and encourage the use of bicycles and other alternative transportation modes.

The Project will have UC Riverside continuing to work with the City of Riverside and University advocates to improve the quality and functionality of an integrated bicycle path network that connects within the campus and to the wider community beyond. Therefore, it is concluded that there is no conflict with these policy statements.

TRANSIT SYSTEM

DISRUPTIONS TO EXISTING TRANSIT SERVICE

Significance Criteria

The following significance criteria were applied to determine if the Project is responsible for a disruption of existing transit services or facilities:

> A significant impact occurs if a project or project-related mitigation disrupts existing transit services or facilities. This includes disruptions caused by proposed project driveways on transit streets and impacts to transit stops/shelters; and impacts to transit operations from traffic improvements proposed or resulting from a project.

Project Impact

As noted in the review of existing transit routes, there are several routes which currently run through and around the campus. The Project does not propose changes that would significantly disrupt any of the existing transit routes. Therefore, no significant impact occurs.

INTERFERENCE WITH PLANNED TRANSIT SERVICES

The Project will not conflict with any planned transit services.

PROJECT CONFLICTS WITH ADOPTED TRANSIT SYSTEM PLANS, GUIDELINES, POLICIES, OR STANDARDS

The LRDP contains several policy statements in reference to transit which include the following:

- Promote public transit as a convenient and preferred mode of commuting to campus and connecting campus residents to the community and regional destinations.
- Improve access to public transit on campus by providing connectivity to access points via pathways or shuttles, as well as comfortable waiting facilities, proximate to commuter related services, where appropriate.
- Advocate and support the development of a Metrolink train platform along Watkins Drive adjacent to campus to provide direct access and significantly reduce commute times. Consider dedicated vanpools or shuttles to nearby stations in the interim.

The Project will have UC Riverside continuing to work with the City of Riverside and RTA to address constraints and expand transit access for its students, faculty, and staff. Therefore, it is concluded that there is no conflict with these policy statements.

8.0 VEHICULAR QUEUEING ANALYSIS

BASELINE PLUS PROJECT

Traffic volumes for the Baseline Plus Project Conditions scenario consist of volumes from the Baseline (2018) conditions plus volumes generated by the LRDP as described in Chapter 3. The Baseline Plus Project traffic volumes are shown in **Figure 9.**

QUEING ANALYSIS

Queuing results for the Baseline Plus Project conditions are summarized in **Table 8** below. As shown in the table, queuing was not found to exceed 85% of the storage length at any ramp terminal intersection. Technical queuing calculations are provided in **Appendix C**.

CUMULATIVE (2035) WITHOUT PROJECT

This chapter summarizes the Cumulative (2035) Without Project conditions as outlined in Chapter 3. The traffic forecasts and operations analysis for this scenario reflect the growth derived from RivTAM without the Project. The Cumulative (2035) Without Project conditions traffic forecasts are shown on **Figure 10.**

Queuing Analysis

Queuing results for Cumulative (2035) Without Project conditions are summarized in **Table 9** below. As shown in the table, queuing was not found to exceed 85% of the storage length at any ramp terminal intersection. Technical queuing calculations are provided in **Appendix C**.

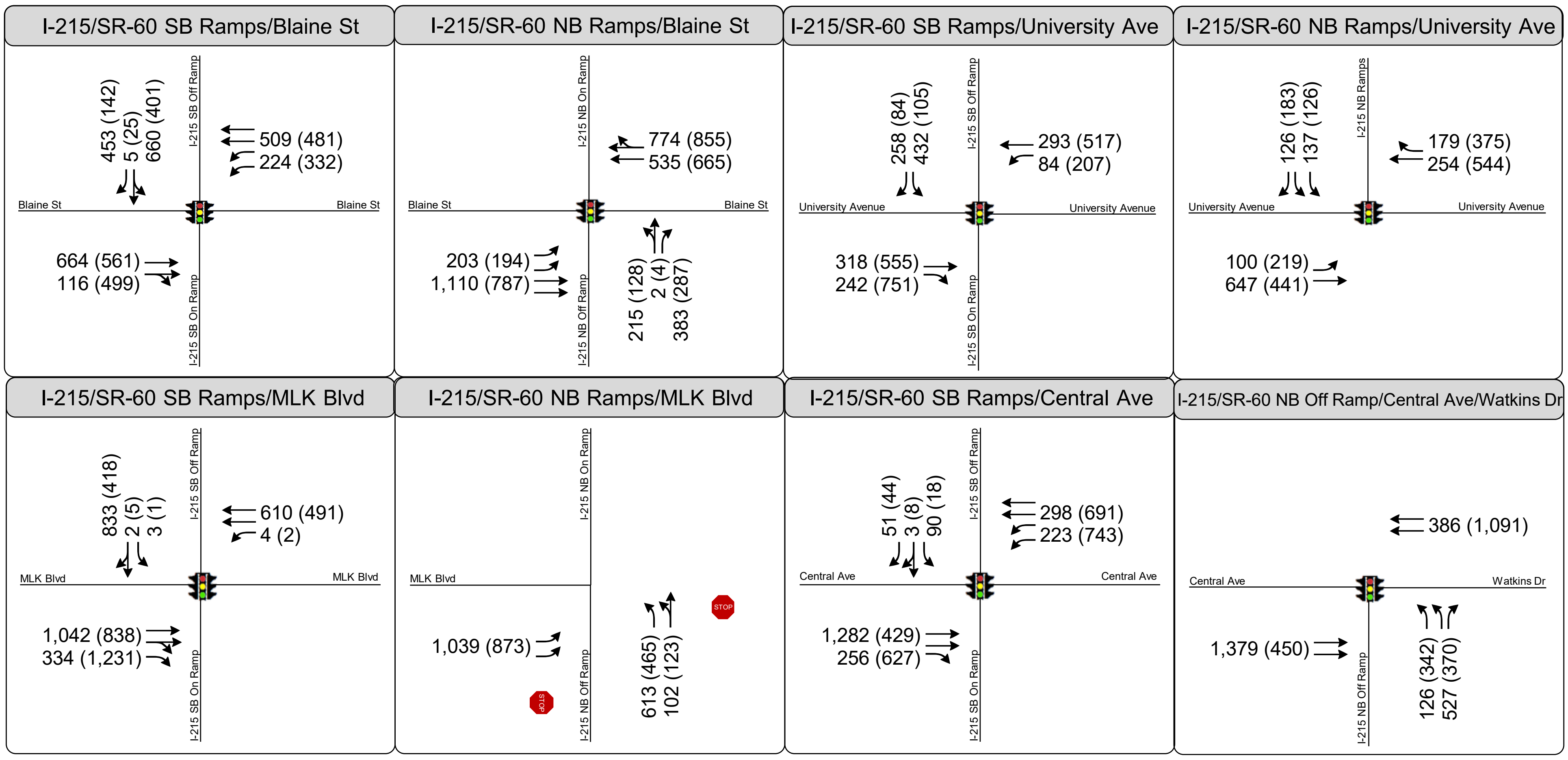


Figure 9

Baseline Plus Project
Peak Hour Traffic Volumes and
Lane Configurations

TABLE 8 – BASELINE PLUS PROJECT QUEUING ANALYSIS

Intersection		Ramp (ft)	Move/ Lane [a]	Length (ft)	Baseline (2018)				Baseline Plus Project					
					AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
					Lane (ft)	Total (ft)	Lane (ft)	Total (ft)	Lane (ft)	Total (ft)	>85% Ramp	Lane (ft)	Total (ft)	>85% Ramp
1	I-215/SR-60 Southbound Ramps & 3rd Street	1,420	SBTL	925	456[b]	456[b]	204	204	716[b]	716[b]	No	339	339	No
			SBR	1,420	241		39		260			39		
2	I-215/SR-60 Northbound Ramps & 3rd Street	1,230	NBTL	860	183	269[b]	119	119	183	359[b]	No	112	136	No
			NBR	1,230	269[b]		61		359[b]			136		
5	I-215/SR-60 Southbound Ramps & University Avenue	1,235	SBL	1,235	263	263	50	50	325	325	No	98	98	No
			SBR	420	74		38		80			38		
6	I-215/SR-60 Northbound Ramps & University Avenue	2,075	SBL	2,075	29	38	28	50	59	59	No	53	53	No
			SBR	700	38		50		38			50		
10	I-215/SR-60 Southbound Ramps and Martin Luther King Boulevard	1,085	SBL	1,085	6	391[b]	4	55	6	799[b]	No	4	171	No
			SBTR	530	391[b]		55		799[b]			171		
11	I-215/SR-60 Northbound Ramps and Martin Luther King Boulevard	1,745	NBL	885	80[c]	80[c]	58[c]	58[c]	170[c]	170[c]	No	143[c]	143[c]	No
			NBTL	1,745	78[c]		58[c]		168[c]			138[c]		
12	I-215/SR-60 Southbound Ramps and Central Avenue	1,050	SBL	1,050	71	71	23	23	71	71	No	23	23	No
			SBT	375	21		23		21			23		
			SBR	115	0		0		0			0		
13	I-215/SR-60 Northbound Off-Ramp and Central Avenue	1,680	NBL	1,680	34	321[b]	86	86	34	419[b]	No	76	91	No
			NBR	250	321[b]		59		414[b]			91		

Notes:

I-215/SR-60 = Interstate 215/State Route 60, ft = feet

[a] Movement/Lane nomenclature is defined by the cardinal and physical movement of a vehicle at the intersection. The first two letters dictate the cardinal direction (Northbound = NB, Southbound = SB, Westbound = WB, Eastbound = EB). The next one to three letters dictate the direction a vehicle will travel (Left-Turn = L, Through = T, Right-Turn = R) at the intersection. Any combination of the L, T, and R represents a lane in which a vehicle can make multiple movements (i.e. Through and Left-Turn = TL, Through and Right-Turn = TR, Left-Turn and Right-Turn = LR).

[b] 95th percentile volume exceeds capacity. Queues may be longer.

[c] 95th percentile queue reported as number of vehicles. Assumed 25 ft per vehicle.

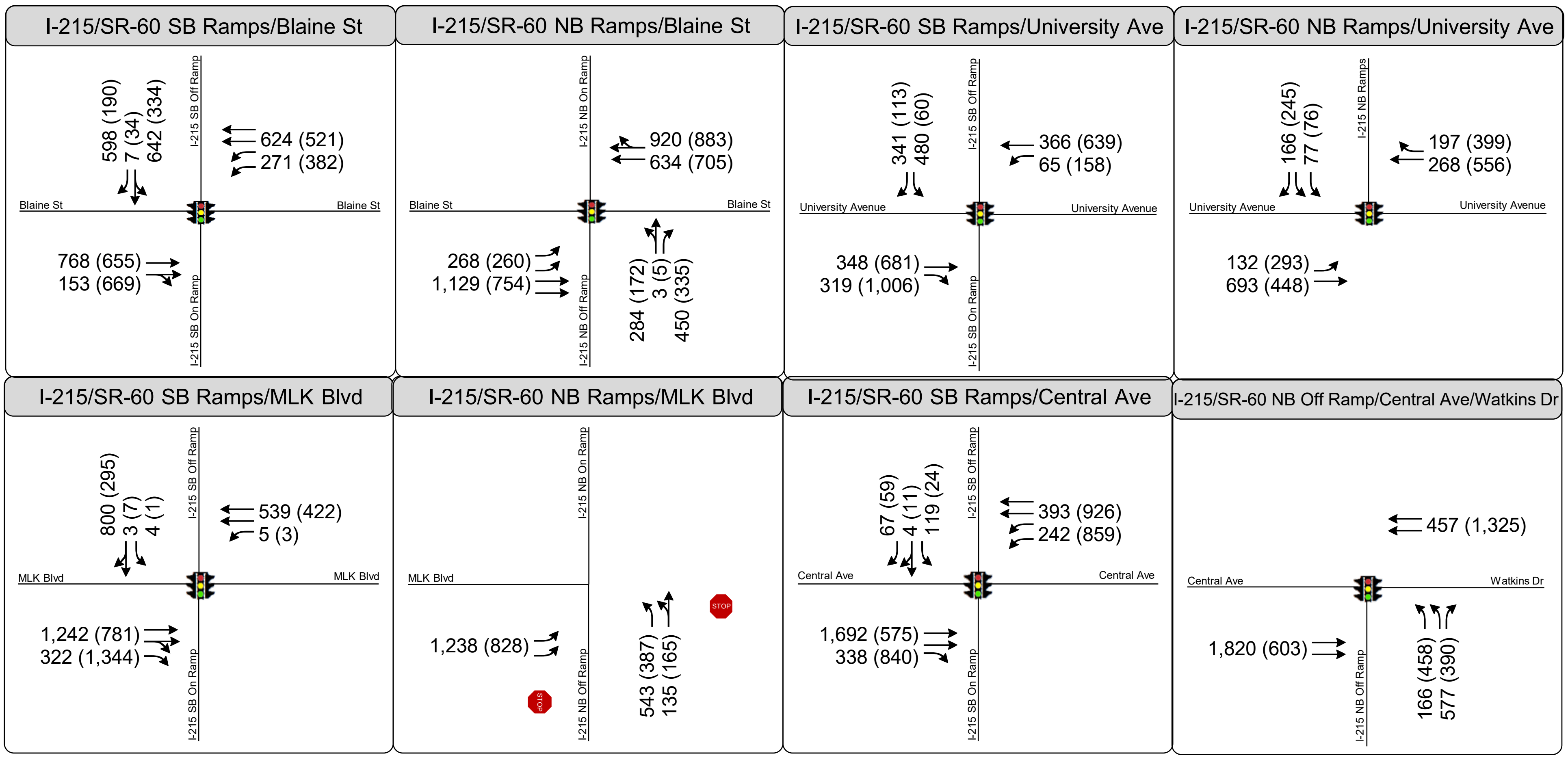


Figure 10

Cumulative (2035) Without Project
Peak Hour Traffic Volumes
and Lane Configurations

TABLE 9 – CUMULATIVE (2035) WITHOUT PROJECT QUEUING ANALYSIS

Intersection		Ramp length (ft)	Movement/Lane [a]	Length (ft)	AM Peak Hour		PM Peak Hour	
					Lane (ft)	Total (ft)	Lane (ft)	Total (ft)
1	I-215/SR-60 Southbound Ramps & 3rd Street	1,420	SBTL	925	624[b]	624[b]	285	285
			SBR	1,420	546[b]		44	
2	I-215/SR-60 Northbound Ramps & 3rd Street	1,230	NBTL	860	232	424[b]	155	176[b]
			NBR	1,230	424[b]		176[b]	
5	I-215/SR-60 Southbound Ramps & University Avenue	1,235	SBL	1,235	375	375	63	63
			SBR	420	166		44	
6	I-215/SR-60 Northbound Ramps & University Avenue	2,075	NBL	2,075	43	48	41	65
			NBR	700	48		65	
10	I-215/SR-60 Southbound Ramps and Martin Luther King Boulevard	1,085	SBL	1,085	6	708[b]	4	69
			SBTR	530	708[b]		69	
11	I-215/SR-60 Northbound Ramps and Martin Luther King Boulevard	1,745	NBL	885	155[c]	155[c]	118[c]	118[c]
			NBTL	1,745	150[c]		118[c]	
12	I-215/SR-60 Southbound Ramps and Central Avenue	1,050	SBL	1,050	137[b]	137[b]	29	29
			SBT	375	27		29	
			SBR	115	2		0	
13	I-215/SR-60 Northbound Off-Ramp and Central Avenue	1,680	NBL	1,680	43	481[b]	111	136
			NBR	250	481[b]		136	

Notes:

I-215/SR-60 = Interstate 215/State Route 60, ft = feet

[a] Movement/Lane nomenclature is defined by the cardinal and physical movement of a vehicle at the intersection. The first two letters dictate the cardinal direction (Northbound = NB, Southbound = SB, Westbound = WB, Eastbound = EB). The next one to three letters dictate the direction a vehicle will travel (Left-Turn = L, Through = T, Right-Turn = R) at the intersection. Any combination of the L, T, and R represents a lane in which a vehicle can make multiple movements (i.e. Through and Left-Turn = TL, Through and Right-Turn = TR, Left-Turn and Right-Turn = LR).

[b] 95th percentile volume exceeds capacity. Queues may be longer.

[c] 95th percentile queue reported as number of vehicles. Assumed 25 ft per vehicle.

CUMULATIVE PLUS PROJECT

This chapter summarizes the Cumulative Plus Project conditions within the study area.

TRAFFIC VOLUMES

Traffic volumes for the Cumulative Plus Project conditions consist of intersection volumes from the Cumulative (2035) Without Project conditions plus volumes generated by the LRDP as described in Chapter 3.

Traffic volumes for Cumulative Plus Project conditions are shown on **Figure 11**.

QUEUING ANALYSIS

Queuing results for the Cumulative Plus Project conditions are summarized in **Table 10** below. As shown in the table, freeway off-ramp queueing was found to exceed 85% of the storage length at the I-215/SR-60 Southbound Ramps at Martin Luther King Boulevard (Intersection 10) with inclusion of Project traffic during the AM peak hour but not exceed the ramp length in total.

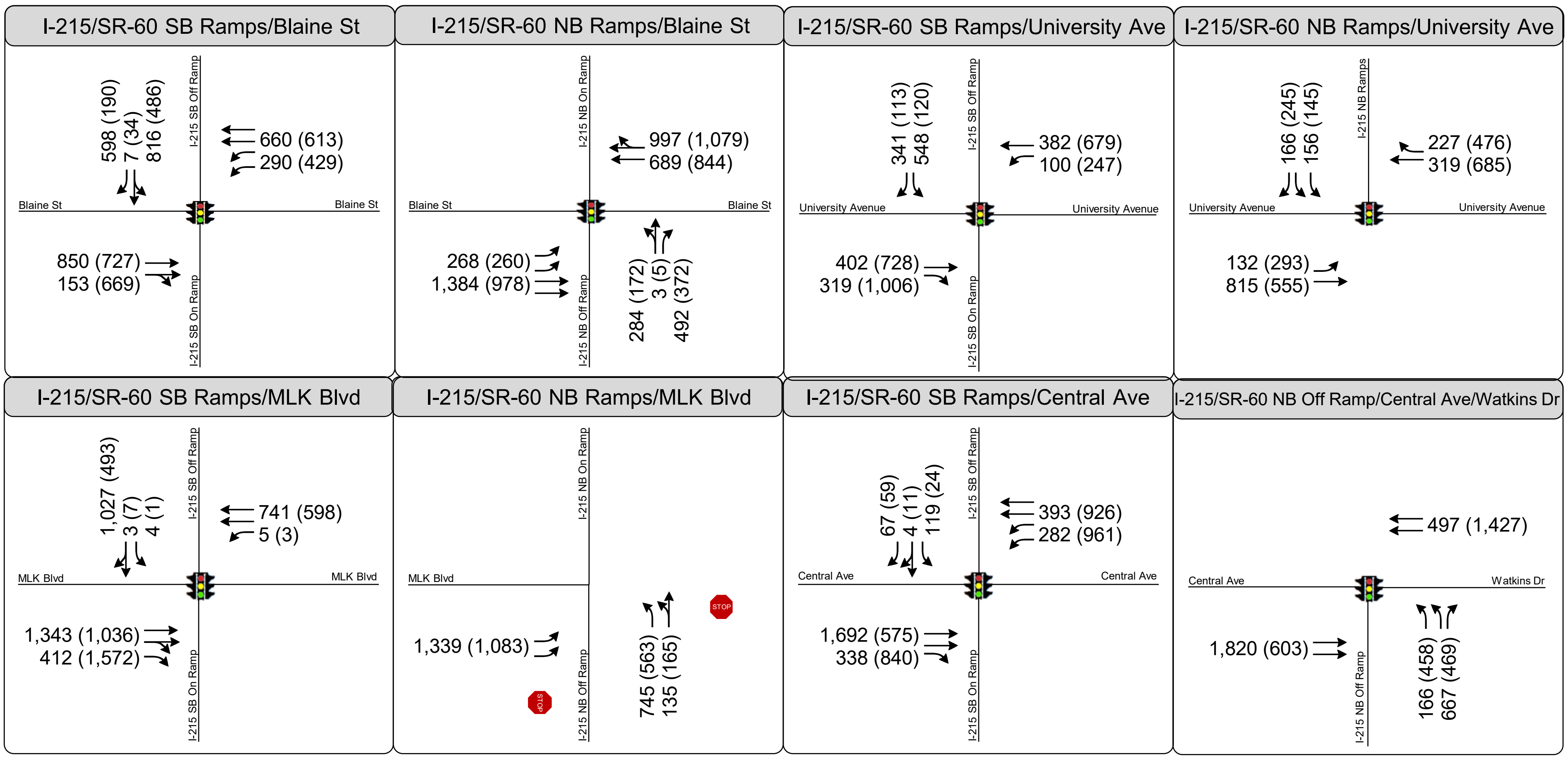


Figure 11

Cumulative Plus Project Peak Hour Traffic Volumes and Lane Configurations

TABLE 10 – CUMULATIVE PLUS PROJECT QUEUING ANALYSIS

Intersection		Ramp (ft)	Move/ Lane [a]	Length (ft)	Cumulative (2035) Without Project				Cumulative Plus Project					
					AM Peak Hour		PM Peak Hour		AM Peak Hour			PM Peak Hour		
					Lane (ft)	Total (ft)	Lane (ft)	Total (ft)	Lane (ft)	Total (ft)	>85% Ramp	Lane (ft)	Total (ft)	>85% Ramp
1	I-215/SR-60 Southbound Ramps & 3rd Street	1,420	SBTL	925	624[b]	624[b]	285	285	879[b]	879[b]	No	486[b]	486[b]	No
			SBR	1,420	546[b]		44		556[b]			44		
2	I-215/SR-60 Northbound Ramps & 3rd Street	1,230	NBTL	860	232	424[b]	155	176[b]	232	484[b]	No	155	318[b]	No
			NBR	1,230	424[b]		176[b]		484[b]			318[b]		
5	I-215/SR-60 Southbound Ramps & University Avenue	1,235	SBL	1,235	375	375	63	63	470[b]	470[b]	No	110	110	No
			SBR	420	166		44		171			44		
6	I-215/SR-60 Northbound Ramps & University Avenue	2,075	NBL	2,075	43	48	41	65	76	76	No	69	69	No
			NBR	700	48		65		48			65		
10	I-215/SR-60 Southbound Ramps and Martin Luther King Boulevard	1,085	SBL	1,085	6	708[b]	4	69	6	1,051 [b]	**Yes**	4	339[b]	No
			SBTR	530	708[b]		69		1,051 [b]			339[b]		
11	I-215/SR-60 Northbound Ramps and Martin Luther King Boulevard	1,745	NBL	885	155[c]	155[c]	118[c]	118[c]	295[c]	295[c]	No	250[c]	250[c]	No
			NBTL	1,745	150[c]		118[c]		285[c]			148[c]		
12	I-215/SR-60 Southbound Ramps and Central Avenue	1,050	SBL	1,050	137[b]	137[b]	29	29	137[b]	137[b]	No	29	29	No
			SBT	375	27		29		27			29		
			SBR	115	2		0		2			0		
13	I-215/SR-60 Northbound Off-Ramp and Central Avenue	1,680	NBL	1,680	43	481[b]	111	136	43	571[b]	No	111	235[b]	No
			NBR	250	481[b]		136		571[b]			235[b]		

Notes:

I-215/SR-60 = Interstate 215/State Route 60, ft = feet

[a] Movement/Lane nomenclature is defined by the cardinal and physical movement of a vehicle at the intersection. The first two letters dictate the cardinal direction (Northbound = NB, Southbound = SB, Westbound = WB, Eastbound = EB). The next one to three letters dictate the direction a vehicle will travel (Left-Turn = L, Through = T, Right-Turn = R) at the intersection. Any combination of the L, T, and R represents a lane in which a vehicle can make multiple movements (i.e. Through and Left-Turn = TL, Through and Right-Turn = TR, Left-Turn and Right-Turn = LR).

[b] 95th percentile volume exceeds capacity. Queues may be longer.

[c] 95th percentile queue reported as number of vehicles. Assumed 25 ft per vehicle.

INTERSECTION IMPROVEMENTS

With inclusion of the Project traffic, the queue at the I-215/SR-60 Southbound Off-Ramp at Martin Luther King Boulevard will exceed 85% of the storage length, but not exceed the total off-ramp length. Improvements to reduce the queue length are summarized below. As the intersection is not under the control of UC Riverside, any physical improvement to the intersection would require review and approval from the appropriate jurisdiction.

10) I-215/SR-60 Southbound Ramps and Martin Luther King Boulevard

Improvements at this intersection would consist of reconfiguring the southbound approach from one left-turn lane and one shared through/right-turn lane to one shared left/through/right-turn lane and one right-turn lane. Optimizing the signal-timings with the geometric improvements would also be required. This improvement can be accommodated within the existing roadway width and have no effect on pedestrians and bicyclists.

This improvement will reduce the 95th percentile queue length during the AM peak hour compared to the intersection with no improvement. As shown **Table 11**, queuing was found to not exceed 85% of the storage length at the I-215/SR-60 Southbound Ramps and Martin King Boulevard (Intersection 10).

TABLE 11 – CUMULATIVE PLUS PROJECT INTERSECTION IMPROVEMENT QUEUING ANALYSIS

Intersection		Ramp (ft)	Move /Lane [a]	Length (ft)	Cumulative Plus Project with Improvement					
					AM Peak Hour			PM Peak Hour		
					Lane (ft)	Total (ft)	>85% Ramp	Lane (ft)	Total (ft)	>85% Ramp
10	I-215/SR-60 Southbound Ramps and Martin Luther King Boulevard	1,085	SBLTR	1,085	460[b]	460[b]	No	74	74	No
			SBR	530	452 [b]			68		

Notes:

I-215/SR-60 = Interstate 215/State Route 60, ft = feet

[a] Movement/Lane nomenclature is defined by the cardinal and physical movement of a vehicle at the intersection. The first two letters dictate the cardinal direction (Northbound = NB, Southbound = SB, Westbound = WB, Eastbound = EB). The next one to three letters dictate the direction a vehicle will travel (Left-Turn = L, Through = T, Right-Turn = R) at the intersection. Any combination of the L, T, and R represents a lane in which a vehicle can make multiple movements (i.e. Through and Left-Turn = TL, Through and Right-Turn = TR, Left-Turn and Right-Turn = LR).

[b] 95th percentile volume exceeds capacity. Queues may be longer.

Improving the intersection is considered feasible. However, UC Riverside does not have jurisdictional control over the identified intersection and any physical improvement would require an agreement with Caltrans and an appropriate fair share contribution at the time of implementation. As the intersection is controlled by the Caltrans and physical improvements to the intersection cannot be guaranteed at this time, the off-ramp queuing at this intersection will remain deficient under the cumulative plus project scenario.

9.0 CONSTRUCTION ANALYSIS

Historically, construction trips at UC Riverside have been managed to minimize the effect construction related traffic has on the university and surrounding neighborhoods. The management of construction related traffic has been accomplished through the implementation of policies in the existing 2005 UC Riverside Long Range Development Plan. These include the following:

- The campus will periodically assess construction schedules of major projects to determine the potential for overlapping construction activities to result in periods of heavy construction vehicle traffic on individual roadway segments, and adjust construction schedules, work hours, or access routes to the extent feasible to reduce construction-related traffic congestion.
- To the extent feasible, the campus shall maintain at least one unobstructed lane in both directions on campus roadways. At any time only a single lane is available, the campus shall provide a temporary traffic signal, signal carriers (i.e., flagpersons), or other appropriate traffic controls to allow travel in both directions. If construction activities require the complete closure of a roadway segment, the campus shall provide alternate routes and appropriate signage.
- For any construction-related closure of pedestrian routes, the campus shall provide alternate routes and appropriate signage and provide curb cuts and street crossings to assure alternate routes are accessible.
- To maintain adequate access for emergency vehicles when construction projects would result in roadway closures, the Office of Design and Construction shall consult with the UC Riverside Police Department, Transportation and Parking Services, Environmental Health & Safety, and the Riverside Fire Department to disclose roadway closures and identify alternative travel routes.
- If on-campus parking is not available, off-site construction worker parking shall be provided.

To maintain the management of construction related traffic, these existing policies will be implemented as mitigation measures for the Project.

Many jurisdictions in Southern California have regarded construction-related traffic as causing adverse but not significant impacts because, while sometimes inconvenient, construction-related traffic effects are temporary. Depending on the size of the facility under construction and the associated labor needs, many projects can be construction without exceeding the 110 daily trip threshold established by OPR for necessitating a VMT analysis.

While there may be periods of time in which the daily construction trips exceed the 110 daily trip threshold, these periods of time will be temporary and can be managed with implementation of the proposed LRDP mitigation measures and the following additional measures:

- Off-site truck staging shall be provided in a legal area furnished by the construction truck contractor.
- A flagman shall be placed at the truck entry and exit from any construction site to control the flow of exiting trucks.
- Access shall remain unobstructed for land uses in proximity to construction site during construction.
- In the event of a lane or sidewalk closure, a worksite traffic control plan, approved by UC Riverside, shall be implemented to route traffic or pedestrians around any such lane or sidewalk closures.
- A Construction Management Plan shall be developed by the contractor and approved by the UC Riverside. In addition to the measures identified above, a Construction Management Plan shall include the following:
    - Identify the locations of the off-site truck staging and shall detail measures to ensure that trucks use the specified haul route.
    - Schedule vehicle movements to ensure that there are no vehicles waiting off-site and impeding public traffic flow on the surrounding streets.
    - Establish requirements for the loading, unloading, and storage of materials on a construction site.
    - Establish requirements for time limits for the reduction of travel lanes and closing or diversion of pedestrian and/or bicycle facilities to ensure the safety of pedestrians and bicyclists and access to local land uses.
    - Coordinate with UC Riverside and emergency service providers to ensure adequate access is maintained to the Project site and neighboring businesses.

APPENDIX A: RELATED PROJECTS

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City of Riverside Cumulative Projects List (Jan 2020)

Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
M13	P05-1528 P09-0087	15592 Constable Road	Tract Map 34509; 50 Single family lots; Phase I - Develop approx 60 acres to 11 subdivision lots	Riverside	CA	254.34	-	50	CC 11/06/07; CPC 4/23/09 (Phase I)	245070051
M4	P06-0900 P08-0269 P08-0270	SWC Lurin Avenue and Wood Road	Tract Map 32301; Single Family Residences	Riverside	CA	10.50	-	20	CPC 4/19/07	266100011
M8	P06-1355	SWC Lurin Avenue and Barton Street	Tract Map 33480; Single Family Residences	Riverside	CA	21.14	-	32	CPC 7/3/08	266160017
M9	P06-1396	NWC Mariposa Avenue and Cole Avenue	Tract Map 33481; Single Family Residences	Riverside	CA	18.78	-	25	CPC 7/3/08	266140030
M10	P06-1404	SEC Lurin Avenue and Wood Road	Tract Map 33482; Single Family Residences	Riverside	CA	15.13	-	29	CPC 7/3/08	266140001
M19	P10-0113 P10-0118 P10-0449	19985 Van Buren Blvd	Parcel Map 36434 Scoping Session, EIR, DR; Gless Ranch - commercial retail shopping	Riverside	CA	40.00	425,447	-	CC 2/21/12	284250008
C50	P12-0019 P12-0156 P12-0158	NWC Riverwalk Parkway and Flat Rock Drive	Conditional Use Permit, Specific Plan Amendment, and Design Review of plot plan and building elevations to facilitate the construction of a vehicle fuel station and wash facility as a 2,400 square foot convenience store and a 3,946 square foot coffee shop in the Commercial Retail La Sierra University Specific Plan Overlay Zone	Riverside	CA	1.17	6,346	-	CC 9/4/12	141260037
M20	P12-0021 P12-0022 P12-0074	3990 Reynolds Rd	Parcel Map 36442; General Plan Amendment to change property from C to MHDR; Rezoning from CR-SP and O-S-R-SP to R-3-3000-SP to consider the establishment of a 4-story multi-family residential development	Riverside	CA	9.7	-	102	CC 6/5/12	145260028
D3	P12-0184 P12-0185 P12-0187	9265 Audrey Avenue	General Plan Amendment to change property from MDR to C; Rezoning from R-1-7000 to C; and Design review to facilitate the construction of a multiple tenant retail building on a two parcel site, known as the Azar Plaza	Riverside	CA	0.6	6,150	-	CC 11/13/12	191040040
C49	P12-0234	3439 Arlington Ave	Design Review; LA Fitness ~9,600 square foot expansion to an existing ~42,000 square foot health and fitness club	Riverside	CA	5.50	~51,600	-	ZA 05/31/12	225350075
C52	P12-0266 P12-0267 P12-0268	5938 - 5944 Grand Ave	Conditional Use Permit and Design Review for a 2-story senior housing facility with associated parking, on two vacant parcels approximately 1.4 acres	Riverside	CA	1.40	-	37	CC AP 10/09/2012	2180980017
C53	P12-0351	3550 Vine St	Conditional Use Permit to allow the establishment of a vocational/technical school for a maximum of 252 students at any one time within an existing 40,060 square foot 3-story office building in the Marketplace Specific Plan	Riverside	CA	2.60	10,000 of 2nd floor of existing bldg	-	CC 10/9/12	213212015
C55	P12-0360	2100 Alessandro Blvd	Conditional Use Permit to establish a vocational school on a site currently developed with an approximately 11,505 square foot single-story retail building in the Sycamore Canyon Business Park Specific Plan	Riverside	CA	2.15	11,505 (existing bldg)	-	CPC 12/6/12	263250015
M33	P12-0393 P12-0394	6240 Hawarden Drive	Parcel Map; subdivide an approximately 14.63 acre, two-parcel site into three parcels ranging in size from 1.02 to 11.61 acres; a variance for a flag lot, parcel 2, and to allow the existing parcel, located at 6260 Hawarden Drive, to increase from 0.63 acres to 1.02 acres in size, where the Hawarden Drive Special Design Area requires a minimum of 2.0 acres, located at 6240 and 6260 Hawarden Drive, in the RC – Residential Conservation Zone	Riverside	CA	14.63		3	CC 03/30/2015	241140014
C59	P12-0419 P12-0557 P12-0558 P12-0559	360 Alessandro Blvd	Conditional Use Permit and Design Review to allow the establishment of a stand-alone financial institution; General Plan Amendment to change property from MDR to C; Rezoning from Residential Estate to Office	Riverside	CA	0.84	3,858	-	CC 5/7/13	272060004
D4	P12-0507 P12-0508 P12-0509 P12-0510	2325 Cottonwood Av	DR, VR LLA, LS/I; 235,741 sqft addition to an existing 400,580 sqft warehouse/ industrial building	Riverside	CA	9.5 project site	636,321	-	ZA 12/7/12	263240047
C57	P12-0520 P12-0524	3580 Adams St	Conditional use permit; California Baptist University student services complex; rehabilitate existing retail space	Riverside	CA		36,266	-	CC 1/8/13	321080026
M27	P12-0601 P12-0697 P12-0698	14601 Dauchy Ave	Tract Map 36370; GPA from VLDR to HR; RZ from R-1-1/2 acre to RC; 10 lot subdivision	Riverside	CA	9		10	4/17/2014	276040010

City of Riverside Cumulative Projects List (Jan 2020)

Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
C58	P12-0605 P12-0606	4250 Van Buren Blvd	Conditional Use Permit and Design Review, to allow the expansion of a vehicle fuel station consisting of construction of second set of pumps and 1,776 sq.ft. canopy at existing "Food 4 Less" supermarket	Riverside	CA	7.45	-	-	CC 4/9/13	145162015
D5	P12-0717	1710 Main Street	Family Dollar store	Riverside	CA	1.01	8,039	-	ZA 3/11/13	209033051
D8	P12-0729 P12-0727	4015 Madison St	RZ/DR; Rezoning from R-1-7000 to O-S-1 to accommodate the expansion of parking lot for existing medical office	Riverside	CA	0.26	-	-	CC 9/24/13	227251007
D6	P12-0741 P12-0743 P14-0238	3545 Central Ave	Riverside Plaza renovations; Pad 3 renovations to consist of 7 tenant spaces with outdoor dining	Riverside	CA	35.00	-	-	ZA 6/7/13; ZA 7/9/14	225150028
C61	P12-0742	6825 - 6900 Jurupa Ave	Conditional Use Permit; Riverside Auto Auction; Vehicle Storage Yard, Minor Vehicle repair and inspections within an existing office/industrial building where the outdoor storage of wholesale vehicles has been previously approved (P10-0282, CC Approved 10/19/10)	Riverside	CA	27.71	56,000 (existing bldg)	-	CC 6/11/13	189073011/189180003
C60	P12-0761 P12-0442 P12-0443 P12-0444	2831 Mary St	Conditional Use Permit to allow the development of a CVS drug store that coincides with Stater Bros redevelopment project (Conditional Use Permit, Rezoning, and Design Review)	Riverside	CA	6.30	56,101	-	CC 5/14/13	235101017
M24	P12-0799 P12-0800	NWC Palm Avenue and Beechwood Place	Tract Map 36516 and Design Review; subdivide 1.26 ac vacant parcel into 7 single family residential lots ranging in size from 7,002 to 8,011 sq.ft.	Riverside	CA	1.26	-	7	CPC 4/3/14	217224015
D7	P13-0038 P13-0441	3683 Adams St	Rezoning property from Single Family Residential to Mixed Use Neighborhood Zone in the Magnolia Avenue Specific Plan; Design Review for conversion of an existing single family residence into a live/work unit	Riverside	CA	0.32	1237 (existing residence)	1	CC 8/27/13	231090076
C62	P13-0060	5160 Arlington Ave	Conditional Use Permit request on behalf of Chase Bank to allow an existing one drive-thru lane on an existing 4576.87 square foot building to be demolished and reconstructed to include a two lane 36-foot drive thru lane for business purposes	Riverside	CA	6.26	4,576.87 (existing bldg)	-	CC 6/25/13	227140023
C92	P13-0087 P13-0262	2450 Market Street	CUP, DR; establish a 67-unit senior housing facility within an existing three-story, approximately 51,321-square-foot building, on an approximately 1.7-acre site, located at 2450 Market Street situated on the easterly side of Market Street between Ogden Way and Northbend Street, across from Fairmount Park	Riverside	CA	1.7		67	CC AP 05/05/2015	209101001
C66	P13-0159 P13-0160	6692 Indiana Ave	CUP, DR; Proposal to construct new 7-Eleven vehicle fuel station to operate 24 hours within a commercial retail zone	Riverside	CA	0.75	2,958	-	CC 12/3/13	229140049
C85	P13-0165 P13-0166 P13-0167 P13-0168	3280 La Sierra Avenue	CUP, DR, GPA, RZ; Request to construct a new gas station and car wash; GPA from Office to Commercial; Rezone from Single Family Residential to Commercial	Riverside	CA	6.83	-	-	CC 8/12/14	132140006
C67	P13-0181 P13-0182	4824 Jones Ave	CUP, DR; Requesting the expansion of an existing building with 23,124 square foot building for an assembly of people within the Rural Residential zone.	Riverside	CA	6.14	Existing 33,542 square feet, proposed expansion 23,124 square feet	-	CC 12/17/13	147200026
D9	P13-0198 P13-0199 P13-0200 P13-0201	5731-5797 Picker St	PROPOSAL BY DAVID HETHERINGTON ON BEHALF OF WAKELAND HOUSING AND DEVELOPMENT CORPORATION TO PROPOSE A REHABILITATION OF THE CAMP ANZA OFFICER'S CLUB AND A COMMUNITY OF AFFORDABLE HOUSING WITH ON-SITE SUPPORTIVE SERVICES FOR DISABLED VETERANS AND THEIR FAMILIES. THE PROJECT INCLUDES THIRTY APARTMENT UNITS ON 5731,5741,5761, AND 5797 PICKLER STREET	Riverside	CA	2.14	-	30	CC 11/19/13	151123015
D14	P13-0207 P13-0208 P13-0209 P13-0210 P13-0211	4445 Magnolia Ave	EIR, GPA, RZ, DR, SP; Riverside Community Hospital proposed expansion	Riverside	CA	10.16	251,500		CC AP 05/20/2014	217070027

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Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
G23	P13-0263 P13-0264 P14-0769	18171 Van Buren Blvd	GP, RZ; GPA from VLDR to C; RZ from R-1-1/2 Acre-SP to CR-SP; to facilitate the development of a retail commercial center on 2 contiguous parcels	Riverside	CA	7.17	10,700 (Retail), 10,000 (Day Care), 2,500 (Drive-thru restaurant), 10,000 (office), 8,000 (medical office)		CC AP 12/01/2015	266-020-023
D15	P13-0324 P13-0325 P13-0326 P13-0327	3410-3426 Grande Vista Parkway	Transit-oriented residential development; Site Plan Review, DR, Rezone from R-1-7000-SP to MU-U-SP, SPA (Riverwalk Vista Specific Plan)	Riverside	CA	3.7	-	187	CPC 5/8/14	138-030-026
C73	P13-0364 P13-0365	3399 Adams St	CUP, DR; Gas station, convenience store, car wash	Riverside	CA	0.51	2,941		CC AP 04/22/2014	231-221-001
M22	P13-0389	NE cor Martha Way & Everest Ave	Tract Map 36579; subdivide 2 parcels to accommodate 5 single family dwellings	Riverside	CA	1.36	-	5	CPC 1/9/14	233083014
C64	P13-0432	6091 Victoria Ave	Conditional Use Permit to construct and operate a day care center at a church facility in a residential & cultural resources zone	Riverside	CA	3.40	1,831 (existing bldg)	-	CC 9/24/13	235280001
C65	P13-0470	8223 California Ave	Conditional Use Permit to re-establish a church and private school; originally approved in 1950s and revised in 1981	Riverside	CA	5.20	-	-	CC 11/5/13	227071033
D10	P13-0501 P13-0502	3705 Tyler St	PPE, DR; Demolish existing tire building and construct new 2-Tenant Restaurant building within existing shopping center	Riverside	CA	10.80	6,000	-	CC 12/3/13	138100023
	P13-0529 P13-0530	12000 Magnolia Avenue	Parcel Map and Design Review of 7 industrial buildings	Riverside	CA	14.34	282,000		DRC AP 02/22/2017	135220021
G20	P13-0553 P13-0554 P13-0583 P14-0065	5940 and 5980 Sycamore Canyon	GP, SP, RZ, DR; 275-unit multiple-family residential development, including common and private amenities and covered and uncovered surface parking, on two contiguous parcels	Riverside	CA	10.26		275	CC AP 03/17/2015	2630300083
D16	P13-0563 P13-0564	8069 Indiana Ave	DR,VAC; construction of 7,373 sqft addition to facilitate vehicle service and parts sales; Singh Subaru; vacation of Susan Street between Indiana Ave & SR91	Riverside	CA		7,373		CC 6/3/14	231154014
D13	P13-0607 P13-0608 P13-0609 P13-0854	6150 Sycamore Canyon Boulevard	Multi-tenant industrial building; GPA, RZ, DR, SPA to remove site from Sycamore Highlands SP and add it to Sycamore Canyon Business Park SP	Riverside	CA		171,616	-	CC 5/13/14	263020053
C69	P13-0650 P13-0651	2586 University Ave	MCUP and Certificate of Appropriateness; Proposal to convert an existing 2500 sqft 2-story residence to a bed and breakfast with an 1118 sqft addition	Riverside	CA	0.23	3,650	-	ZA 12/19/13; CHB 12/18/13	211133004
M26	P13-0665	18875 Moss Rd	Tract Map 36641; 8 lot subdivision for future development of single family residences	Riverside	CA	5.03	-	8	CPC 4/17/14	276070005
M23	P13-0723 P13-0724 P13-0725	4325, 4335, 4345, 4355, 4375 Adams St	Tract Map 36654, PRD, DR; subdivide 7.76 acres into 62 single family planned residential development	Riverside	CA	7.76	-	62	CC 2/25/14	227041006
C71	P13-0785 P13-0787	4247 Van Buren Blvd	CUP, DR; Expansion of existing church	Riverside	CA	3.43	12,166	-	CC 2/25/14	191240050
C77	P13-0903 P13-0904	3865 Jackson St	CUP, DR; 18,650 sqft expansion of existing medical emergency department and construction of a 2,005 sqft utility building; Parkview Hospital Medical Center	Riverside	CA		20,655		6/19/2014	193221016
C83	P13-0903 P13-0904	3865 Jackson St	CUP, DR; 18,650 sqft expansion of existing medical emergency department and construction of a 2,005 sqft utility building; Parkview Hospital Medical Center	Riverside	CA		20,655		CPC 07/28/2014	193221016
M32	P13-0905 P13-0906	NEC Arlington Avenue and Hawarden Drive	Tract Map 36604, PRD; subdivide an existing 12.41 acre parcel having an average natural slope of 26.4% into seven lots for the future construction of single family residences, as well as the establishment of an approximately 5.20 acre open space area, four lettered lots, and a public cul-de-sac street; resulting in a density of 0.56 dwellings per acre in the RC – Residential Conversation zone	Riverside	CA	12.41		7	CC 12/15/2015	241020002
C75	P13-0912 P13-0913	3742 Park Sierra Av	CUP, DR; LA Fitness Sports Club facility	Riverside	CA		45,000	-	CC 6/17/14	138470032
D11	P13-0916 P13-0917 P13-0918 P13-0919	10403-10485 Magnolia Ave	DR, RZ, SitePlan Review, VR; Time extension for P05-1521, P08-0706, P08-0740, P08-0794; Magnolia Square mixed use development, Parcel map 36112	Riverside	CA	16.6	71,211 commercial/retail	315 multi-family; 3 live/work	12/16/2013	143180023

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M40	P13-0956 P13-0959 P13-0960 P13-0963 P13-0964 P13-0965 P13-0966	474 Palmyrita Ave	MCUP, DR, VAR, PM to subdivide into 3 lots, GPA, SPA (Hunter Business Park Specific Plan), Vacate Columbia Avenue Loop; Construct 3 industrial buildings	Riverside	CA	72.5	1,461,449	-	CC AP 10/27/2015	275240005
C84	P13-0967 P13-0968	10995 Indiana Avenue	CUP, DR; Gas station, car wash, detail center	Riverside	CA		7065 sqft		CPC 8/7/14	138030034
C72	P13-0989	1200 Columbia Ave	CUP; Assemblies of People church and conference center within existing 64,910 sqft bldg	Riverside	CA		Existing 64,910		CC 3/11/14	249070044
C87	P14-0026 P14-0027	10938 Magnolia Ave	CUP, DR; McDonald's	Riverside	CA			-	CC 11/18/2014	138470034
D20	P14-0045 P14-0046 P14-0047 P14-0048 P14-0049	3050 Mission Inn	SPR, DR, RZ, GPA, SPA; Mission Lofts apartment complex.	Riverside	CA	4.67	-	212	CC AP 06/07/2016	211121032
C79	P14-0132	4665 Vine St	CUP; Allow a materials (metal) processing facility to operate	Riverside	CA	2.25	2 existing bldgs, 30,324 sqft total	-	CC AP 07/08/2014	219093016
M31	P14-0176	SEC La Sierra Avenue and Victoria Avenue	Tract Map 36713, GPA, RZ; Final approval of tract map; 14 lot single family subdivision	Riverside	CA	8.8		14	CPC AP 12/18/2014	136220016
D19	P14-0183	3105 Market St	DR; Centerpointe Apartments	Riverside	CA	2.51		146	ZA AP 01/26/2015	213021001
C80	P14-0188 P14-0403	3390 Orange St	MCUP, COA; Use residential building as offices	Riverside	CA	0.21			ZA AP 07/21/2014	213112006
C76	P14-0220	4035 Trail Creek Rd	CUP; Allow occupancy of an existing 4,400 sqft industrial building for use as Sunday school classrooms and offices	Riverside	CA	-	Existing 4,400 sqft bldg	-	CC AP 06/17/2014	142090062
C129	P14-0225 P14-0226 P14-0227 P16-0063	NEC Dominion Avenue and McMahon Street	Proposal by Bowlus Pacific Venture Corporation to consider: 1) Conditional Use Permit to permit a 117 unit three story senior apartment complex on 3.75 vacant acres; 2) Design Review of the project plans; 3) Street Vacation to vacate Dominion Avenue between McMahon Street and Division Street; 4) Variance to allow the proposed carports to be located closer to the to the to the front property line than the front-most wall of the dwelling units; 5) Variance to allow fewer parking sparking spaces than required by the Zoning Code; 6) Variance to allow the building to exceed the maximum building height permitted by the Zoning Code ; and 7) a Grading Exception to allow for retaining walls over six feet in height. The property is located between McMahon Street and Division Avenue and includes the Dominion Avenue right-of-way, in the R-1-8500 - Single-family Residential Zone, in Ward 3.	Riverside	CA	3.75		117		223210022
	P14-0294 P14-0295 P14-0297 P16-0497	SEC Valley Springs Parkway and Gateway Drive	Phased development on 50.85 acres with a Healthcare Campus consisting of 1) a 280-bed, 5-story hospital with penthouse; 2) five, 2- to 4-styory medical office buildings ranging in size from 40,000 to 100,000 square feet; 3) a 234-unit, 3-story senior housing facility; 4) a 290-bed, 3 story independent living/memory care, assisted living, and skilled nursing facility; and 5) two 4-level parking structures. Entitlements for this project include 1) a General Plan Amendment to amend the land use of the project site from C - Commercial to CSHCSP - Canyon Springs Healthcare Campus Specific Plan; 2) a proposed Canyon Springs Healthcare Campus Specific Plan; 3) a Specific Plan Amendment to remove the project site from the Canyon Springs Business Park Specific Plan; and 4) a Zoning Code Amendment to rezone the property from CR-SP - Commercial Retail and Specific Plan (Canyon Springs Business Park) Overlay Zones to CSHCSP - Canyon Springs Healthcare Campus Specific Plan; and 5) Environmental Impact Report related to the project.	Riverside	CA	50.85	504,000/280 beds (hospital); 370,000 (medical office)	234 (senior); 290 beds (assisted living)	CC AP 11/14/2017	291450055
C81	P14-0315 P14-0437	4334 Vine St	Revised CUP, DR; Security operations building for the adjacent Downtown Metrolink station	Riverside	CA		3,150 sqft		CPC 7/17/14	215350019
D17	P14-0318	3502 through 3520 Tyler St	PPE, DR; Construct a 10,000 sqft restaurant building; add façade improvements to an existing retail building	Riverside	CA		10,000		ZA 7/11/14	138110036
C74	P14-0435	5005 Canyon Crest Dr	MCUP; Temporary use of 2 modular buildings for offices; Saint Andrew's Orthodox Church	Riverside	CA				ZA 5/22/14	254113007
C82	P14-0450	2900 Adams St	Revised CUP; to establish classrooms and laboratories within 5 office and warehouse lease spaces; California Baptist University	Riverside	CA	9.78	9085 sqft		CPC 7/17/14	231210017

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C78	P14-0457	6465 Sycamore Canyon Blvd	MCUP; Health & fitness club/studio under 4,000 sqft within existing 92,410 sqft 2-story office bldg	Riverside	CA	8.02			ZA 6/30/14	263290079
M35	P14-0472 P14-0473 P15-0322 P15-0321	Northerly side of Grove Community Drive, between Trautwein Road and Worchester Lane	TM DR, VR; Tentative Tract Map (TM-39534); a related Planned Residential Development to subdivide an approximately 13.5 acre two-parcel vacant site, into 85 single family residential lots with common open space and shared amenities; the Design Review of the plot plan and building elevations for the proposed residential planned residential development; and variances related to building setback measurements in the R-1-8500-SP – Single Family Residential and Specific Plan (Orangecrest) Overlay Zones.	Riverside	CA	13.5		85	CC AP 06/23/2015	284390029
C88	P14-0501 P14-0529 P14-0530	4920-4980 La Sierra Avenue	CUP, DR; Drive-thru fast food restaurant, Pharmacy Drive-thru, Commercial shopping center	Riverside	CA	5.21	17340 (pharmacy), 15,961 (retail), 2,400 (drive-thru restaurant)		CC AP 1/13/15	146162067
C86	P14-0525	3622 Adams Street	MCUP; Convert apartments into student housing for California Baptist University	Riverside	CA				CC AP 10/09/14	231040014
C91	P14-0536 P14-0537	6321 Valley Springs Parkway	CUP, DR; construct an approximately 3,750-square-foot drive-thru business (“Steak and Shake”), located at the northwesterly corner of Valley Springs Parkway and Corporate Centre Place, APN 291-460-017	Riverside	CA		3,750		CC AP 5/5/15	291460017
G21	P14-0600, P14-0601, P14-0602 P15-0044	7350 San Gorgonio Drive	RZ, DR, VR, VC; consideration of 1) an Amendment to the Municipal Code (Title 19) to rezone approximately 6.2 acres from the CR-S-2-SP – Commercial Retail, Height of Building (two stories), and Specific Plan (Sycamore Canyon Business Park) Overlay Zones to the BMP-S-2-SP – Business and Manufacturing Park, Height of Building (two stories), and Specific Plan (Sycamore Canyon Business Park) Overlay Zones; 2) for Design Review of the plot plan and building elevations related to the construction of an approximately 121,390 square foot multiple tenant industrial building as associated surface parking and landscaping; 3) for a variance to permit a building to encroach into the required 40-foot front yard setback; 4) vacation of excess right-of-way beyond the terminus of the existing cul-de-sac on Mt. Baldy Drive	Riverside	CA	6.2	121,390			263250020
C89	P14-0673 P14-0675 P14-0928	9471 Magnolia Avenue	CUP, LC, PC or N; Walgreens with Drive Thru pharmacy	Riverside	CA	0.73	10,776		CC AP 2/03/15	191313004
C90	P14-0812 P14-0813 P14-0979 P14-0980 P14-0981 P14-0982 P14-0983 P14-1076	9505 Magnolia Avenue	CUP, VA, DR; Sonic Dine in and Drive-Thru; VA for landscaping, Interior side landscape planter, minimum lot size, reduce drive-thru width, increase number of signs allowed, corner blade sign, reduce parking spaces.	Riverside	CA		3,275		CC AP 02/03/2015	145304010
G25	P14-0841 P14-0842 P14-0843 P14-0844 P14-0845 P14-0846 P14-0847 P14-0848 P16-0472	2620 Alessandro	GP, RZ, SP, CUP, DR, LL; GENERAL PLAN AMENDMENT (B/OP TO C), REZONE (BMP TO CR), SPECIFIC PLAN AMENDMENT TO ALLOW DRIVE-THRU BUSINESS WITH CUP, (3) CONDITIONAL USE PERMITS, DESIGN REVIEW AND LOT LINE ADJUSTMENT	Riverside	CA	10.57	73,200 industrial, 15,000 retail		CC AP 01/26/2016	263100022
C97	P14-0955 P14-0957	2000 Alessandro Bouelvard	CUP, DR; NEW SINGLE STORY, TWO TENANT, DRIVE-THRU RESTAURANT WITH 10-CAR STACKING	Riverside	CA	0.95	4,050			263250069
C93	P14-1021	4260 Tequesquite	CUP; CONDITIONAL USE PERMIT FOR A 19,254 SQ. FT. CHARTER SCHOOL. NO EXTERIOR MODIFICATIONS PROPOSED.	Riverside	CA		19,254		CPC AP 07/28/2015	217050010
D21	P14-1033 P14-1034	3667 Placentia	DR, LL; 308,000 sq. ft. warehouse	Riverside	CA	15.9	308,000		CC AP 12/11/2019	246070002
M34	P14-1053 P14-1054	1750 Dan Kipper Drive	Parcel Map;subdivide three existing parcels, totaling 13.08 acres into 5 lots to facilitate the development of 5 warehouse buildings ranging in size from 36,424 to 53,006 square feet in size.	Riverside	CA	13.08	229,547		CPC AP 04/23/2015	260020078
D22	P14-1070	7105 Old 215	DR; 240,080 SQUARE FOOT WAREHOUSE BUILDING	Riverside	CA		240,080		ZA AP 10/01/2015	263080026
C95	P15-0155	4135 Chicago Avenue	CUP; Open a charter high school in a 10,000 square foot square site	Riverside	CA					221070011

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C94	P15-0247 P15-0248 P15-0250 P15-0251 P15-0252 P15-0363	3750 Main Street	CUP, TM, VR; construction of a mixed-use project, consisting of 91 residential units, approximately 8,841 square feet of commercial space and a 115-stall parking garage, on three parcels totaling 0.62 acres, partially developed with an existing commercial building (Imperial Hardware) and a surface parking lot	Riverside	CA	1.49	8,841	91	CPC AP 05/21/2015	213271013
C103	P15-0404 P15-0405	3399 Adams St	Conditional Use Permit, Design Review, and Two Variances for the demolition and construction of a 3,040 square foot fuel station canopy with 6 MPDs (Mobil), and associated 4,159 square foot convenience store and 2,080 square foot drive-thru car wash.	Riverside	CA	0.9	4,159 (c-store), 2,080 (car wash), 6 MPDs		CPC 10/23/2015	231221001
D24	P15-0478	3439 Arlington Ave	DR; NEW COMMERCIAL BUILDING. SINGLE STORY - APPROXIMATELY 15,186 SF. DESIGNED FOR MIXED USE (RETAIL + RESTAURANT).	Riverside	CA	9.5	15,186		DRC AP 12/03/2018	225350063
C99	P15-0535	3530/3540/3558 Fairmount & 3555/3547/3545/3505 Market	CUP; A NEW HOTEL DEVELOPMENT WITH TWO PHASES. PHASE 1 = A 104 ROOM, 62,852 S.F., 75'-0" HIGH, 5-STORY HOTEL. PHASE 2 = A 135 ROOM, 74,275 S.F., 91'-4" HIGH, 6-STORY HOTEL AND A 60' HIGH 6-STORY PARKING GARAGE WITH 195 PARKING SPACES.	Riverside	CA	1.62		239 guest rooms	CPC 04/19/2016	213181002
C100	P15-0610 P15-0611	5695 Glenhaven Ave	CUP, DR; NEW 85 UNIT ASSISTED LIVING AND MEMORY CARE FACILITY.	Riverside	CA			85	CC AP 05/03/2016	222250006
C104	P15-0783	3612 Arlington	CUP: ADDITION OF THREE MODULAR CLASSROOMS TO ENHANCE THE EDUCATIONAL OFFERINGS OF RIVERSIDE CHRISTIAN DAY SCHOOL.	Riverside	CA				CC AP 06/28/2016	229070008
C106	P15-0075 P15-0076 P15-0819	Prairie Way and Van Buren	To construct an approximately 11,738 square foot vehicle repair facility ("Les Schwab Tire Center") and a 2,200 square foot drive-thru restaurant ("Dunkin Donuts"), with an approximately 450 square feet outdoor dining area, on an approximately 2.11 acre vacant site	Riverside	CA	2.11	11,738 automotive, 2,200 drive-thru restaurant		CC AP 10/27/2015	280270028
C107	P15-0847 P15-0848 P15-0850	3530 Madison	To construct a commercial center in two phases as follows: Phase 1 consists of a 37,849 square foot health and fitness club (24 Hour Fitness) and a 1,950 square foot drive-thru restaurant (Starbucks); and Phase 2 consists of a 41,117 square foot retail building.	Riverside	CA	8.21	37,849 fitness, 1,950 drive-thru restaurant, 41,117 retail		CPC AP 01/12/2017	230090002
M36	P15-0862 P15-0863 P15-0864 P15-0865	4105 Jefferson	TM, RZ, GP, PPE: Tentative Tract Map No. 36994, one-lot subdivision for condominium purposes for the development of 36 single-family attached townhomes, a restroom facility and pool on a 2.96 acre net parcel.	Riverside	CA	2.96		36	CC AP 12/13/2016	227131011
C117	P15-0877 P16-0066 P16-0067	1277 University	Specific Plan Amendment, Conditional Use Permit, and Design Review to allow the construction of a seven-story, 143,983 square foot hotel consisting of 126- rooms/suites, administrative offices, gymnasium, recreation room, roof top garden, swimming pool, and a 12,000 square foot restaurant	Riverside	CA	0.82	12,000 restaurant	144 guest rooms	CC AP 06/05/2018	250240034
C109	P15-0907 P15-0908	2234 Main	CUP: ALLOW A GAS STATION IN CONJUNCTION WITH A 3,978 S.F. CONVENIENCE STORE WHICH REQUIRES A TYPE 20 ABC LICENSE4 AND A 968 SF INCIDENTAL CAR WASH.	Riverside	CA	1.75	3,978 retail, 968 car wash		CPC AP 10/19/2017	209092033
C110	P15-0958 P15-0959 P15-1105	6458 Van Buren	Conditional Use Permit for a drive-through vehicle wash station related to a proposed mixed automotive, retail and restaurant complex.	Riverside	CA	3.96	2,572 car wash, 14,035 retail		CPC AP 12/15/2016	155290061
C111	P15-0979 P15-0980 P15-0981	5573 Arlington	Proposal by Westmoreland Dynasty LP to consider a Zone Change, Conditional Use Permit, and Design Review to rezone 0.54 acres from O - Office Zone to CR - Commercial Retail Zone to facilitate the construction of a 2,200 square foot drive-thru restaurant (Cowboy Jr.), located at 5573 Arlington Avenue, situated on the north side of Arlington Avenue approximately 140 feet east of Phoenix Avenue, in Ward 3.	Riverside	CA	0.54	2,200		CC AP 01/17/2017	190322015
C112	P15-0983 P15-0984	515 Alessandro	CUP, DR: CONSTRUCT A 10,000 SF SINGLE STORY "THE LEARNING EXPERIENCE" CHILD CARE CENTER. SITE TO INCLUDE A 15, 000 SF SECURED OUTDOOR PLAY AREA AND RELATED SITE IMPROVEMENTS.	Riverside	CA	1.42	10,000		CC AP 07/26/2016	276370012
C113	P15-1000	10866 Arlington	Conditional Use Permit to permit the establishment of a place of worship and associated parking on 2.98 acres, developed with a residence, located at 10866 Arlington Avenue, situated on the south side of Arlington Avenue, west of Mitchell Avenue and east of La Sierra Avenue, in the RR - Rural Residential Zone, in Ward 7.	Riverside	CA	2.98	2,290		CPC AP 04/19/2018	149070023
C114	P15-1030	4375 Van Buren	CUP: VETERINARY CLINIC WITHIN A COMMERCIAL RETAIL ZONE	Riverside	CA	0.81			CC AP 04/05/2016	191240042

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Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
C115	P15-1098	141 E. Alessandro	CUP: VETERINARY SERVICES CLINIC. INTERIOR REMODEL OF EXISTING COMMERCIAL UNIT, NO ADDITIONAL SQUARE FOOTAGE ADDED.	Riverside	CA				CC AP 06/28/2016	276110011
C116	P16-0011	4135 Chicago Avenue	CUP: Planet Fitness to go in an existing 18,000 SF tenant space within University Specific Plan shopping center.	Riverside	CA	15.4	18,000		5/19/2016	221070011
M38	P16-0016	978 Orange	TM: A Tentative Tract Map for one 0.91 acre lot being divided into five parcels.	Riverside	CA	0.91		5	CPC AP 06/26/2017	246230003
D26	P16-0163	3532 Monroe	TI TO EXISTING CLASSROOMS, ADD 5 TEMPORARY MODULAR BUILDINGS, AND FILL IN PARKING TOWARDS THE REAR OF THE PROPERTY.	Riverside	CA				5/13/2016	233120010
G27	P16-0168 P16-0170 P16-0388 P16-0389	3280 Vine	The following entitlements are requested to permit a 797 unit, three-story commercial storage facility: 1) Rezone the subject site to apply the CS—Commercial Storage Overlay Zone to the underlying BMP—Business and Manufacturing Park Zone; 2) Design Review of plot plan and building elevations for the commercial storage facility; 3) Variances requested to allow for a lesser front yard setback than required by Code and for a greater building height than permitted by the CS Overlay Zone.	Riverside	CA	1.7	117,478		CC AP 09/13/2016	213060027
C119	P16-0184 P16-0185 P16-0186	3628 Madison	(DR): Proposal by WB Allen Development, LLC. to consider a Conditional Use Permit and Design Review for the construction of a 9,712 square foot two story senior apartment building, located at 3628 Madison Avenue, situated on the west side of Madison Avenue between Delaware Street and Orchard Street, in the R-1-7000 - Single-family Residential Zone, in Ward 3.	Riverside	CA	0.62		12	CPC AP 10/26/2016	230054009
D27	P16-0207	6030 Sycamore Canyon	DR; 1.9-acre parking lot expansion for an existing auto dealer (Raceway Nissan), including landscaping, site improvements and water quality measures	Riverside	CA	1.9			ZA AP 11/18/2016	263020079
C121	P16-0235 P16-0367	3590 Tyler	MCUP, VR; Storefront assembly of people (IEHP Community Outreach Center) to include office and classroom/meeting uses. Parking Variance.	Riverside	CA	1.65	3500		ZA AP 07/27/2016	138100021
C122	P16-0277 P16-0279	6350 Van Buren Boulevard	Proposal by DRC Engineering, Inc. to consider a Conditional Use Permit to permit a 3,000 square foot drive thru fast food restaurant on 3.73 acres, developed with the Arlington Plaza, and Design Review of the plot plan and building elevations for the drive-through restaurant, located at 6350 Van Buren Boulevard, situated at the southwest Arlington Boulevard and Van Buren Boulevard, in the CR - Commercial Retail Zone, in Ward #6.	Riverside	CA	12	3,000		CPC AP 01/26/2017	151151008
D30	P16-0301	9644 Magnolia Avenue	DR; 12,000-square foot retail and commercial project with 55 parking stalls on vacant 40,000-square foot Successor Agency-owned parcel	Riverside	CA	0.88	12,000		DRC AP 10/26/2016	234101028
M42	P16-0314	147-310-036	Tentative tract map to subdivide a 12.5 acre site into 5 parcels in the Residential Conservation zone.	Riverside	CA	12.5		5	CPC AP 01/26/2017	147310036
D31	P16-0316	901 Marlborough Avenue	DR; Plot plan + elevations for the construction of a 20,360- and 42,630-sq ft multi-tenant industrial warehouse buildings, 149 parking spaces and related site improvements.	Riverside	CA	3.76	62,990	2	ZA AP 11/14/2016	249070011
C123	P16-0321 P16-0323 P16-0324 P16-0325	3650 Market Street	CUP, COA, VR, PM; Stalder Plaza - 165 residential units, 22,000sf retail and subterranean parking. 0-foot rear-yard setback along alley frontage where 15 feet is required. Commercial Airspace Condominium Map	Riverside	CA	0.53	22,000	165	CPC AP 04/20/2017	213222023
C124	P16-0329	1695 Spruce Street	CUP; NON-PROFIT CHARTER SCHOOL WITHIN AN EXISTING MULTI-TENANT COMPLEX IN THE BUSINESS MANUFACTURING PARK ZONE.	Riverside	CA	1.88	6647		CPC AP 10/20/2016	249120016
C125	P16-0396 P16-0397 P17-0440	3640 Central Avenue	CUP, DR; NEW CHI-FIL-A ON CENTRAL AVE. LOCATED WITHIN THE COMMERICAL RETAIL ZONE IN THE MAGNOLIA AVENUE SPECIFIC PLAN OVERLAY.	Riverside	CA	0.88	4,721		CPC AP 06/29/2017	225242047
D33	P16-0413 P16-0414	7820 Lincoln Avenue	Design Review of project plans for the construction of a 100,974-square-foot light industrial building.	Riverside	CA	5.45	100,974		DRC AP 02/22/2017	237040015
D34	P16-0423 P16-0424	6264 Nogales Street	DR, VR; PROPOSING TWO COMMERCIAL BUILDINGS, ONE 7,030 SF LEGAL OFFICE AND A 4,140 SF MEDICAL OFFICE WITH A PARKING VARIANCE.	Riverside	CA	0.97	11,170		DRC AP 09/30/2016	225051028
C126	P16-0425 P16-0426	8389 Mount Hood Road	CUP, DR; New 39-unit senior housing complex on two parcels totaling 1.5 acres in the R-1-7000 zone	Riverside	CA	1.5		39	CPC AP 03/23/2017	193132015
D35	P16-0436	1020 Marlborough Avenue	DR; Proposing the development of a new 5,300 sf cmu research building, a 3,000 sf pre-manufactured Laboratory. Also, future proposal of a 680 sf greenhouse	Riverside	CA	1.04	8,300		DRC AP 08/24/2016	249130022

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Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
D36	P16-0452	8432 Magnolia Ave	Dr; Proposal by Steve Smith, on behalf of CBU, to consider a DR for the construciton of a 112 space surface parking lot, on the north side of Diana Avenue between Adams Street and Emily Court, at 8432 Magnolia Ave, in the CVUSP MU/R - Mixed Use/Residential ZOne of the CBU Specific Plan, in Ward 5.	Riverside	CA				DRC AP 01/11/2017	231030024
M43	P16-0454	4663 Hedrick Ave	Project proposing 7 single-family lots in addition to the existing residence. All lots are proposed to access a privately maintained road including public connections to all utilities and adding full width public street improvements on Hedrick Avenue frontage.	Riverside	CA	1.72		8	CPC AP 02/08/18	143040011
D38	P16-0504	1420 University Ave	DR; remodel of an existing Taco Bell, removal of playground equipment, trellis, and an upgrade to façade per chain guidelines	Riverside	CA				DRC AP 10/25/2016	253030018
D39	P16-0510 P16-0511 P16-0512	3345 Madison St	1) Conditional Use Permit to permit a 3,288 square foot automated carwash facility on 0.5 acres; 2) Design Review of the plot plan and building elevations and landscape plan for the construction of the automated carwash facility; and 3) Variance to allow a reduced side yard building setbacks.	Riverside	CA	0.5	3,288		CPC AP 12/15/2016	230370005
D40	P16-0532 P16-0533 P16-0534 P16-0535	4508 Olivewood Ave	Design Review to facilitate construction of a two-story, 27,000 square foot medical office building and Variances to permit fewer parking spaces than required by Code and to allow reduced landscape setbacks along Mulberry Street and Olivewood Avenue, on a vacant, eleven-parcel site	Riverside	CA	1.89	27,000		DRC AP 10/12/2016	219043018
D42	P16-0544	4253 Fairgrounds Street	Design Review to facilitate construction of a 15,000 square foot warehouse building and related site improvements on a vacant site	Riverside	CA	0.91	15,000		DRC AP 01/06/2017	207130017
G28	P16-0556 P16-0567 P15-1035	APN: 263-091-015	To permit eight industrial buildings ranging in size from 12,015 to 35,661 square feet. The following entitlements are requested: 1) Specific Plan Amendment to amend the land use designation and establish development standards for properties located north of Alessandro Boulevard, south of Cottonwood Avenue, west of Old 215 Frontage Road, and east of Interstate 215 from the Retail Business Office and Industrial Support land use designations to the Industrial land use designation; 2) a Tentative Parcel Map for the subdivision of two parcels into six parcels, ranging in size from 27,099 square feet to 72,159 square feet; and 3) Design Review.	Riverside	CA	10.2	176,149		CC AP 11/07/2017	263091015
C128	P16-0612 P16-0613 P16-0614	10920 Magnolia Avenue	The construction of an 11,000 square foot multi-tenant commercial building on two contiguous parcels, totaling 1.37 acres, for the establishment of restaurants. The following entitlements are requested: 1) Rezone 1 acre of the 1.37 site from R-1-7000-SP - Single-family Residential and Specific Plan (Magnolia Avenue) Overlay Zones to CR-X-10-SP - Commercial Retail, Building Setback (10 feet - Magnolia Avenue), and Specific Plan (Magnolia Avenue) Overlay Zones; 2) Minor Conditional Use Permit for the on-sale of alcoholic beverages at the proposed restaurants, and 3) Design Review of the plot plan and building elevations for the construction of the commercial building.	Riverside	CA	1.37	11,000		CPC AP 07/27/2017	138470013
C130	P16-0620 P16-0621	1168 Stacy Court	Minor Conditional Use Permit and Design Review of a plot plan and building elevations to facilitate construction of a 3,008 square foot vehicle repair facility on a vacant, two-parcel site	Riverside	CA	0.21	3,008		DRC AP 09/05/2018	249033011
M44	P16-0671 P16-0672 P16-0673	18876 Van Buren Blvd	1) Design Review of a plot plan and building elevations for the construction of a 23,290 square foot two story medical office building on a 1.62 acre site; 2) Parcel Map (PM-37218) to subdivide two contiguous parcels into 18 condominium parcels; and 3) Variance to allow a building height greater than required by the Building Stories Overlay of the Zoning Code.	Riverside	CA	1.62	23,290		CPC AP 06/29/2017	280270011
C131	P16-0690 P16-0691	10660 Magnolia	Conditional Use Permit and Design Review for the construction of a new 4,473 square foot fast food drive-thru restaurant (Raising Canes) with outdoor patio and 59 parking spaces	Riverside	CA	1.71	4,473		CPC AP 02/23/2017	138052027
C133	P16-0716 P16-0717	3605 Market	1) a Certificate of Appropriateness to a City Structure of Merit for façade improvements; and 2) a Minor Conditional Use Permit for entertainment within the Fox Entertainment Plaza proposed to include 15,500 square feet of restaurant and storage space for 14 independent eateries and exclusive use of the 2,500 square foot outdoor patio area	Riverside	CA	0.78	15,500 in existing building		DRC AP 10/19/2017	213221009

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Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
C132	P16-0727 P16-0728 P16-0729 P16-0730	3870 Main St	Develop a 42,974-square-foot, five-story mixed-use building containing 35 dwelling units, 5,684 square feet of commercial space and 44 parking stalls on a 0.36-acre parcel developed with a public parking lot. Entitlements for consideration include: 1) a Conditional Use Permit to permit the construction of a mixed-use project with a density greater than 60 dwelling units per acre; 2) Parking Variances to allow fewer parking stalls than required by Code, reduced internal drive aisle widths, and the use of tandem parking stalls; and 3) Building Setback Variances to allow encroachment of the structure into the required 15-foot rear-yard setback, and encroachment of the residential portion of the structure into the required 15-foot interior side yard setback.	Riverside	CA	0.36	8,197	36	CPC AP 02/09/2017	213301009
M45	P16-0731 P16-0732 P16-0733	1080 Marlborough Ave	1) Parcel Map (PM-37238) to subdivide a 4.05 acre parcel into five parcels; 2) Design Review of a plot plan and building elevations for the construction of five warehouse buildings ranging in size from 10,000 to 13,850 square feet in size; and 3) Grading Exception to allow a retaining wall to exceed the maximum height required by the Grading Code.	Riverside	CA	4.05	74,210		CPC AP 03/09/2017	249130052
M46	P16-0774	South Side of Bradley Street east of Golden Star Avenue, west of Harbart Drive and north of Highridge Street	Tentative Tract Map (TM-37177) to subdivide 34.6 acres into 48 Single-family residential lots and one (1) lot for a retention basin.	Riverside	CA	34.6		48		24217029
C134	P16-0862 P16-0863 P16-0864	4399 Main	To consider the following entitlements for the establishment of a 1,425 square foot restaurant with 3,100 square feet of outdoor dining on a 0.30-acre parcel, developed with an existing, abandoned vehicle fuel station: 1) a Minor Conditional Use Permit; to permit a restaurant larger than 1,500 square feet, with outdoor dining and on-sale of alcoholic beverages; 2) Design Review for the conversion of an existing 925-square-foot vehicle fuel station building to a restaurant, construction of a 500-square-foot addition and a 1,715 square foot attached canopy, and reconfiguration of an existing parking lot; and 3) a Variance to allow the on-sale of alcohol within 600 feet of a public park and hospital.	Riverside	CA	0.3	4,525		DRC AP 12/20/2018	215272007
M49	P16-0885 P17-0090 P16-0886	Myers Street and Primrose	Planned Residential Development and Tentative Tract Map (TM 37219) to subdivide seven, vacant parcels into 64 residential lots for the construction of single family residences, and four lots for common open space	Riverside	CA	9.3		64	CPC 12/14/2017	No parcel #
G30	P16-0891 P16-0892 P16-0894 P17-0374	Madison Street and Railroad Avenue	To consider the construction of an 18,900 square foot commercial warehouse building. The following entitlements are requested: 1) General Plan Amendment to amend the General Plan designation from Medium Density Residential to Industrial; 2) a rezone to change the zone from R-1-7000 - Single Family Residential to I – General Industrial; and 3) Design Review of the project plans for the construction of the warehouse building and parking spaces	Riverside	CA	3.82	18,900			230253010
M50	P17-0001	North of Paschels Way and east of Clark Street	Tentative Tract Map (TM 37279) to subdivide one vacant parcel, totaling 1.6 acres into 7 residential lots,	Riverside	CA	1.6				206100052
C135	P17-0030 P17-0031	3393 Mission Inn Avenue	Conditional Use Permit to permit the construction of a mixed-use project containing: 72 affordable housing units, 5,400 square feet of office and meeting space, 3,700 square feet of museum/exhibition space, and 77 parking spaces	Riverside	CA	1.38	9,100	72	CHB AP 10/18/2017	213331008
	P17-0038	8043 Indiana	Proposed demolition of a 2,205 square foot showroom and office building, construction of a new two-story, 8,455 square foot showroom with a service drive area, and construction of a 3,975 square foot addition to an existing service building, on two contiguous parcels totaling 1.85 acres, located at 8043 and 8069 Indiana Avenue.	Riverside	CA	1.85	12,430		DRC AP 09/05/2018	231154016

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	P17-0073	4790 La Sierra Avenue	Proposal by Ryan Condron of Luv2Play Riverside to consider a Conditional Use Permit to establish an 18,000-square-foot indoor playground facility including 5,534 square feet of play area and incidental café, coffee bar, party rooms, kitchen and service areas within an existing 131,000-square-foot multi-tenant commercial complex, located at 4860 La Sierra Avenue, on the west side of La Sierra Avenue between Schuyler Avenue and Pierce Street, in the CG – Commercial General Zone, in Ward 7.	Riverside	CA		18,000 in existing building		CPC AP 02/23/17	146220042
	P17-0097 P17-0098 P17-0099 P17-0228	6289 Palm Avenue	Proposal by David Peery, on behalf of Kingsfield Development Corporation, to consider: 1) Design Review for the construction of a self-storage facility with 5 self-storage buildings totaling 96,022 square feet, a 1,575 square foot management office, and a 1,575 square foot caretaker unit on two contiguous parcels totaling 3.02 acres; 2) Variance to allow the building lot coverage to be increased by 10 percent for a maximum 50 percent lot coverage; and 3) Variance to allow the building height and building stories to be increased to 36 feet and two stories. This property is located at 6289 Palm Avenue, situated at the northwest corner of Palm Avenue and Dewey Avenue, in the R-1-7000 – Single Family Residential Zone, in Ward 3.	Riverside	CA	3.02	99,172	1	CC AP 03/27/2018	226332022
	P17-0100 P17-0105 P17-0559	3763 Tibbetts Street	Proposal by Liviu Eftimie to consider: 1) a Design Review of project plans for a 2,500-square-foot expansion of an existing 2,770-square-foot medical office building, and a surface parking lot expansion; and 2) a Variance to allow the expansion to encroach into the required 15-foot rear yard setback and to allow fewer parking spaces than required by the Zoning Code. This property is located on two parcels totaling 0.41 acres, developed with existing office buildings, located at 3757-3763 Tibbetts Street, on the north side of Tibbetts Street, east of Magnolia Avenue and west of Brockton Avenue, in the O-SP – Office and Specific Plan (Magnolia Avenue) Overlay Zones, in Ward 3.	Riverside	CA	0.41	2,500		DRC AP 09/18/2017	225292015
	P17-0190 P17-0288	7229 Lincoln Avenue	Proposal by Charles Brown on behalf of Icon Vehicle Dynamics, to consider: 1) a Design Review of project plans for a 24,480-square-foot expansion of an existing 33,860-square-foot warehouse building, and 2) a Variance to allow 78 parking spaces where the Zoning Code requires 110 parking spaces on a 3.01-acre site, located at 7929 Lincoln Avenue, on the northwest corner of Lincoln Avenue and Jefferson Street, in the BMP – Business and Manufacturing Park Zone, in Ward 4.	Riverside	CA	3.01	24,480		DRC AP 06/07/2017	231260049
	P17-0239 P17-0241	7979 Auto Drive	Proposal by Beth Keeler of Whitfield & Associates Architects on behalf of Kienle & Kienle Investments to consider the following entitlements for an auto dealership: 1) the Summary Vacation of approximately 10,000 square feet of excess right-of-way; and 2) Design Review of project plans for the construction of a 53,878 square foot auto dealership and service center (Walter's Sprinter and Certified Pre-Owned Mercedes-Benz), on a 2.52-acre site developed with existing vehicle sales and service buildings to be demolished, located at 7979 Auto Drive, on the entire block bounded by Auto Drive, Jefferson Street, Indiana Avenue and Detroit Drive, in the CG-SP – Commercial General and Specific Plan (Riverside Auto Center) Overlay Zones, in Ward 4.	Riverside	CA	2.52	53,878		DRC AP 08/28/2018	231240014
	P17-0243	3909 Van Buren Boulevard	Proposal by Niall Saunders, on behalf of Saunders & Wiant Architects, to consider a Design Review of project plans for the construction of a 4,722 square foot, two-tenant dental office building, on two contiguous parcels totaling 0.27 acres, located at 3909 and 3915 Van Buren Boulevard, on the northeast corner of Van Buren Boulevard and Hayes Street, in the O-SP – Office and Specific Plan (Magnolia Avenue) Overlay Zones, in Ward 5.	Riverside	CA	0.27	4,722		DRC AP 11/17/2017	191331037

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Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
	P17-0257 P17-0258	9241 Audrey Avenue	Proposal by Dan Hinson of HC&D Architects to consider a Conditional Use Permit and Design Review for the construction of a 2,558 square foot Taco Bell drive-thru restaurant and associated parking on a vacant 0.70 acre parcel, located at 9241 and 9265 Audrey Avenue, situated on the north side of Audrey Avenue and east of Van Buren Boulevard, in the CR-X-50-S-2-AP - Commercial Retail, Building Setback (50-feet from the easterly property line), Building Stories (two stories), and Airport Protection Overlay Zones, in Ward 6.	Riverside	CA	0.7	2,558		CPC 12/14/2017	191040040
	P17-0268	5900 Brockton Avenue	Proposal by Nelson Smith on behalf of Pacific Grove Hospital to consider revisions to a Conditional Use Permit (Planning Case C-46-589) to permit a 18,200 square foot addition to an existing hospital, modifications of the parking lot layout and circulation, and addition of three bio-retention areas. This 3.75-acre parcel is located at 5900 Brockton Avenue, situated on the southeast corner of Brockton Avenue and Maplewood Place, in the R-1-7000-SP – Single Family Residential and Specific Plan (Magnolia Avenue) Overlay Zones, in Ward 1.	Riverside	CA	4	18,200		CPC 12/14/2017	218251016
	P17-0360 P17-0361	1001 E. Alessandro Boulevard	Proposal by Chad Hamilton of Northwest Commercial Advisors to consider a Conditional Use Permit and Design Review for the construction of a 1,857 square foot Jack In The Box drive-thru restaurant and associated parking on a vacant 0.45 acre parcel, located at 1001 E. Alessandro Boulevard, situated on the southeast corner of Alessandro Boulevard and Barton Street, in the CR – Commercial Retail Zone, in Ward 4.	Riverside	CA	0.45	1,857		CPC 11/02/2017	297021021
	P17-0419 P17-0420 P17-0421	1301 University Avenue	Proposal by Katie Rounds of the Kaidence Group, on behalf of Starbucks, to consider the following entitlements: 1) a Specific Plan Amendment, to amend the University Avenue Specific Plan to allow drive-thru restaurants within Subdistrict 3; 2) a Conditional Use Permit to permit the drive-thru restaurant; and 3) a Design Review of project plans for the construction of a 2,819 square-foot drive-thru restaurant. The subject 0.88 acre site is currently developed with a 3,020 square-foot restaurant building, located at 1301 University Avenue, on the northwest corner of University and Iowa Avenues, in the CR-SP – Commercial Retail and Specific Plan (University Avenue) Overlay Zones, in Ward 2.	Riverside	CA	0.88	2,819		CPC AP 03/08/2018	250190040
	P17-0466 P17-0467 P17-0468 P17-0469 P17-0470 P17-0471 P17-0472	3575-3661 Merrill Avenue	Proposal by Richard Hamm of Pelican Properties to construct a 98,608 square-foot mixed-use development containing 108 dwelling units, 1,200 square foot commercial area, and 192 parking stalls on six contiguous parcels, totaling 3.14 acres, partially developed as a surface parking lot. Entitlements for consideration include: 1) amend the Magnolia Avenue Specific Plan to include MU-U – Mixed Use – Urban as a General Plan Land Use Designation in the Magnolia Center District; 2) amend the General Plan Land Use Designation from C – Commercial to MU-U – Mixed Use - Urban; 3) amend the zoning designation from CG-SP – Commercial General and Specific Plan (Magnolia Avenue) Overlay Zones to MU-U-SP – Mixed Use – Urban and Specific Plan (Magnolia Avenue) Overlay Zones; 4) Site Plan Review; 5) a Traffic Pattern Modification for the reconfiguration of Merrill Avenue; 6) a Minor Conditional Use Permit for on-site alcohol sales (Type 47 License) in conjunction with the proposed commercial area; and 7) a Variance to allow a reduced rear yard building setback. The property is located at 3575 – 3661 Merrill Avenue, situated on the north side of Merrill Avenue, between Riverside and De Anza Avenues, in the CG-SP – Commercial General and Specific Plan (Magnolia Avenue) Overlay Zones, in Ward 3.	Riverside	CA	3.14	2,400	108	CC AP 05/22/2018	225140007

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	P17-0494 P17-0495 P17-0496	9501 Lincoln Avenue	Proposal by Steve Berzansky of Steven Walker Communities to consider the following entitlements for future development of 6.70 acres, developed with a plant nursery, with future multiple family residential and commercial uses: 1) a General Plan Amendment to amend the land use designation of approximately 4.74 acres from MDR - Medium Density Residential to HDR - High Density Residential and approximately 1.86 acres from MDR - Medium Density Residential to C - Commercial; 2) Zoning Code Amendment to change the zone of approximately 4.74 acres from RE - Residential Estate Zone to R4 - Multiple Family Residential Zone and of approximately 1.86 acres from RE - Residential Estate Zone to CR - Commercial Retail Zone; and 3) a Parcel Map to subdivide the property into three parcels for future multiple family residential and commercial development. This property is located at 9501 Lincoln Avenue, situated on the northwest corner of Lincoln Avenue and Van Buren Boulevard, in Ward 5	Riverside	CA	6.60	Unknown - up to 40,000 commercial	Unkown - up to 190		234270020
	P17-0506 P17-0507	750 Marlborough Avenue	Proposal by Jim Guthrie of Guthrie Companies to consider the following entitlements for the construction of a 346,330 square foot industrial warehouse building, consisting of 6,820 square feet of office use and 339,510 square feet of warehouse area, and associated parking, on two contiguous parcels, totaling 21.32 acres: 1) Design Review of project plans; and 2) a Grading Exception for retaining walls exceeding the maximum height requirements along the east and west property lines. The property is located at 750 Marlborough Avenue and 1550 Research Park Drive, situated at the eastern terminus of Marlborough Avenue and the southwestern terminus of Research Park Drive, in the BMP-SP - Business and Manufacturing Park and Specific Plan (Hunter Business Park) Overlay Zones, in Ward 1.	Riverside	CA	21.32	346,330		CC AP 06/26/2018	257060002
	P17-0533	1606 Orange Street	Proposal by BJ Ghuman of Go-Man Constructions and Investments Inc. to consider Tentative Tract Map 37146 to subdivide a partially developed 1.96 acre parcel into seven single-family residential parcels, ranging in size from 7,975 square feet to 12,197 square feet, located at 1606 Orange Street, situated on the southwest corner of the intersection of Orange Street and Tyco Drive, in the R-1-7000 – Single Family Residential Zone, Ward 1.	Riverside	CA	1.96		7	CPC AP 11/01/2019	206152015
	P17-0567 P17-0568	2909 Lime Street	Parcel Map to subdivide a single parcel into two lots with a Variance to allow 50 feet of street frontage per lot where 60 feet is required.	Riverside	CA	0.39		2	DRC AP 01/08/2018	
	P17-0583 P17-0584	7918 Lindbergh Drive	Minor Conditional Use Permit and Design Review for a 114-space secured parking lot	Riverside	CA	2.38			DRC AP 12/27/2017	276160015
	P17-0585 P17-0586 P17-0755 P17-0756 P17-0757	3510-3522 Adams Street	Minor Conditional Use Permit, Design Review and Variances for a five-level, 1,456-space parking structure for California Baptist University	Riverside	CA	3.48			DRC AP 04/12/2018	231080034
	P17-0627 P17-0628	7434 Diamond Street	Revised Conditional Use Permit and Design Review for expansion on an existing church	Riverside	CA	1.10	7,078 (new)			230293009
	P17-0638 P17-0639	6990 Van Buren Boulevard	Conditional Use Permit and Design Review for gas station, two drive through restaurants and a retail shops building - Riverside Gateway Plaza	Riverside	CA	3.90	3,800 (fuel station), 16 fueling positions, 1,152 (car wash), 6,250 (drive thru restaurants), 3,000)retail)		CC AP 05/21/2019	155060005
	P17-0667	3775 Fairmount Boulevard	City-initiated closure and vacation of entire segment of Fairmount Boulevard between Mission Inn and University Avenues, in conjunction with new Main Library	Riverside	CA	0.46	42,000 (library)		CC AP 05/22/2018	155060030
	P17-0686 P17-0687	16151 Alta Cresta Avenue	Conditional Use Permit and Design Review for a new drive-through fast food restaurant on site developed with existing SFR to be demolished	Riverside	CA	0.73	2,558	-1	CPC AP 09/20/2018	274130040
	P17-0688 P17-0689	18806 Van Buren Boulevard	Conditional Use Permit and Design Review for a new 5,440-square-foot automated car wash	Riverside	CA	2.20	5,440			28026030
	P17-0690 P17-0691 P17-0692 P17-0693 P17-0694	10525 Hole Avenue	General Plan Amendment from MDR to C; Rezone from R-1-7000 to CG; Conditional Use Permit for drive-thru business; Parcel Map to subdivide 1.46 acres into two lots; and Design Review for new automated car wash	Riverside	CA	1.46	5,380			143080026

City of Riverside Cumulative Projects List (Jan 2020)

Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
	P17-0761 P17-0762 P17-0763 P17-0764	4019 Mission Inn Avenue	Proposal by Russ Haley of CityMark Communities, LLC to consider the following entitlements: 1) a Specific Plan Amendment to amend the Neighborhood Commercial District of the Downtown Specific Plan to allow residential uses subject to a Conditional Use Permit; 2) a Conditional Use Permit to permit the construction of 13 attached single family dwellings; and 3) a Condominium Map to subdivide a 0.66-acre parcel into 13 condominium lots. This property is located at 4019 Mission Inn Avenue, situated on the northwest corner of Mission Inn Avenue and Chestnut Street, in the DSP-CR - Downtown Specific Plan-Neighborhood Commercial District, in Ward 1	Riverside	CA	0.66		13	CC AP 07/24/2018	214211007
	P17-0813 P17-0814 P17-0846	Van Buren Boulevard and Jurupa Avenue	CONDITIONAL USE PERMIT (P17-0813) AND DESIGN REVIEW (P17-0814) TO ALLOW FOR THE CONSTRUCTION OF A 5,400 SF AUTOMATED CARWASH FACILITY ON 2.33 ACRES, SITUATED ON THE NORTHWEST CORNER OF JURUPA AV. AND VAN BUREN BLVD., IN WARD 7. Rezone from RE - REsidential Estate to CG - Commercial General.	Riverside	CA	2.33	5,400			155060030
	P17-0853 P17-0854	1705-1761 Seventh Street	General Plan Amendment from MDR to HDR and Rezone from R-1-7000 to R-3-1500 for consistency with Chicago-Linden Strategic Plan, in conjunction with Housing Authority redevelopment project	Riverside	CA	2.04		63	CC AP 09/20/2018	211181026
	P17-0872	11754 Warm Springs Road	Revised Conditional Use Permit to expand an existing Assemblies of People - Non-Entertainment with new 5,560sf sanctuary in an existing industrial building	Riverside	CA	4.95	5,560 (existing building)		CPC AP 09/20/2018	142090055
	P17-0873	9531-9597 Rudicill Street	Design Review of plot plans and building elevations for two spec light industrial buildings	Riverside	CA	3.71	66,300		DRC AP 08/22/2018	234250016
	P17-0883 P17-0884 P17-0885	3490 Madison Street	Design review (P17-0883) of project plans for Phase II of Madison Plaza, which includes the construction of a 17,889 square foot grocery store with the off-sale of alcoholic beverages and an 8,065 square foot in line tenant spaces	Riverside	CA	7.04	25,954		DRC AP 06/13/2018	230090004
	P17-0929 P17-0930 P17-0931 P17-0932	Talcey Terrace SW'ly Overlook Parkway	TENTATIVE TRACT MAP 37392 PROPOSING A SUBDIVISION OF A 16.8 ACRE LOT INTO EIGHT (8) SINGLE-FAMILY RESIDENCES; variances for lot size, width, corridor access	Riverside	CA	16.79		8	CC AP 09/04/2018	243210037
	P17-0946	9315 Magnolia Avenue	DESIGN REVIEW FOR NEW 2 STORY OFFICE/MEDICAL BUILDING - 4415 SF - IN THE COMMERCIAL RETAIL ZONE (MAGNOLIA AVENUE SPECIFIC PLAN)	Riverside	CA	0.23	4,415			191321023
	P17-0960 P17-0961	2002 Iowa Avenue	CONDITIONAL USE PERMIT FOR A 9,701 SQUARE FOOT ASSEMBLY OF PEOPLE USE WITH A 2,700 SQUARE FOOT SANCTUARY WITHIN AN EXISTING OFFICE COMPLEX IN THE BMP-SP (HUNTER BUSINESS PARK) AND A PARKING VARIANCE.	Riverside	CA	9.25	9,700		CPC AP 08/23/2018	249140042
	P18-0018 P18-0019	10000 Magnolia Avenue	Design Review and Variance to convert existing 22,000-square-foot furniture store to office space and to construct a single-level parking deck with 35 spaces	Riverside	CA	1.22	21,120		DRC AP 07/11/2018	234050001
	P18-0020 P18-0021 P18-0022 P18-0023	3444 Center Street	Rezoning, Tentative Map, Conditional Use Permit and Design Review to establish a 104-lot mobile home park with onsite amenities	Riverside	CA	12.88		104		246130001
	P18-0028 P18-0029 P18-0030 P18-0031 P18-0032 P18-0033 P18-0034	NEC Central Avenue and Sycamore Canyon Boulevard	REZONE, VACATION, SUMMARY VACATION, 2 CONDITIONAL USE PERMITS, DESIGN REVIEW, AND PARCEL MAP FOR A PROPOSED VEHICLE FUEL STATION WITH A 3,200 SQ FT CONVENIENCE STORE WITH TYPE 20 BEER AND WINE LICENSE AND A 3,800 SQ FT RESTAURANT.	Riverside	CA	2.19	3,200 C-store, 3,800 fast food, 6 MPDs		CC AP 06/11/2019	256050007
	P18-0035 P18-0037 P18-0053	6610 Doolittle Avenue	Proposal by Richard Finkel of Bundy-Finkel Architects to consider the following entitlements for the construction of seven industrial buildings, ranging in size from 11,193 to 20,250 square feet, and 199 parking stalls: 1) a Parcel Map to subdivide four vacant, parcels totaling 4.98 acres into seven parcels ranging in size from 0.60 to 0.80 acres; 2) a Design Review of project plans; and 3) a Variance to allow Building 7 to encroach into the rear yard setback.	Riverside	CA	4.98	107,939		DRC AP 07/25/2018	155280029
	P18-0083 P18-0084 P18-0085	3300 Central Avenue	PROPOSED CONDITIONAL USE PERMIT FOR CONSTRUCTION OF A 2-STORY 2,916 SF MAUSOLEUM WITH 512 CRYPTS, 396 GRAVE SITES, AND 3,060 SF OF COVERED AREA, WITH NEW ACCESS ROAD AT OLIVEWOOD MEMORIAL PARK	Riverside	CA	52.74	2,916 (908 gravesites)		CPC AP 05/16/2019	223150010

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Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
	P18-0091 P18-0092 P18-0093 P18-0094 P18-0095 P18-0096 P18-0097 P18-0098 P18-0099 P18-0100 P18-0101	NEC Orange Street and Vista Avenue	THE EXCHANGE - Master-planned mixed use development with 482 multi-family residential units, 44,500 square feet of retail and restaurant space, fuel station with 4,000-sf convenience store and 8 MPDs/16 pumps, two hotels totaling 229 rooms and 27 RV camping spaces. General Plan Amendment, Rezone, Site Plan Review, Conditional Use Permits (5), Tentative Parcel Map, Minor CUP and Design Review. APNS: 209-151-029, 209-151-036 209-020-022, 209-020-047 209-020-048, 209-020-059 209-020-060, 209-020-061 209-020-062, 209-060-023 209-060-027, 209-060-029 209-070-015	Riverside	CA	35.40	48,500 retail/restaurant, 8 MPDs	482 (residential), 229 (hotel), 27 (RV)	CC AP 06/04/2019	209060029
	P18-0104 P18-0105 P18-0106	8230 Magnolia Avenue	CUP, DR and Variance to convert an existing 32-unit apartment complex to a 116 bed student housing development on 1.66 acres.	Riverside	CA	1.66		32 units/116 beds	CPC AP 04/19/2018	23090069
	P18-0122 P18-0123	3723 Strong Street	CUP and DR to consider the construction of a 58-unit senior housing complex consisting of a 57,799 square foot two-story building on 2.01 acres	Riverside	CA	2.01		58	CPC AP 8/23/2018	209033051
	P18-0151	3536 Adams Street	DESIGN REVIEW FOR THE CONSTRUCTION OF 12,500 SF NEW ATHLETIC PERFORMANCE CENTER THE RENOVATION OF 6,350 SF AND ADDITION OF 11,200 SF TO THE EXISTING RECREATION CENTER, AND ASSOCIATED 19,300 SF OF ENHANCED PEDESTRIAN PROMENADES TO SOUTH/WEST AT CBU.	Riverside	CA	12.72	23,697		DRC AP 05/16/2018	231080031
	P18-0172	9501 Lincoln Avenue	DESIGN REVIEW OF PLOT PLAN AND ELEVATIONS FOR 180-UNIT MULTI-TENANT APARTMENT COMPLEX WITH COMBINED LEASING AND RECREATIONAL BUILDING.	Riverside	CA	5.34		180	DRC AP 08/15/2018	234270020
	P18-0189 P18-0190 P18-0191 P18-0192 P18-0193	10434 Arlington Avenue	To consider the following entitlements for a multi-tenant commercial center: 1) a Conditional Use Permit for a 3,000-square-foot drive-thru restaurant and associated queuing lane; 2) a Conditional Use Permit for a 3,000-square-foot automated vehicle wash facility and associated queuing lane and vacuum bay canopy; 3) Design Review of the plot plan and building elevations for the drive-thru restaurant, vehicle wash facility and a 15,768-square-foot, two-story multi-tenant retail and office building; 4) a Variance request to allow fewer parking spaces than required by Code; and 5) a Variance request to allow a portion of the proposed on-site parking spaces to have compact dimensions.	Riverside	CA	1.48	3,000 drive-thru, 3,000 express car wash, 15,768 retail/office			150062008
	P18-0199 P18-0200	2375 Third Street	DESIGN REVIEW OF PLOT PLANS AND ELEVATIONS FOR THE CONSTRUCTION OF A 26,076 SQ. FT. SINGLE TENANT CONCRETE BLOCK TYPE III -B INDUSTRIAL BUILDING AND ASSOCIATES 8,147 SQ FT OF LANDSCAPING & ASSOCIATED PARKING VARIANCE TO SHARE PARKING WITH ADJACENT SITE OWNED BY SAME OWNER	Riverside	CA	3.62	26,076			210190030
	P18-0255	17815 Van Buren Boulevard	Design Review of project plans for the construction of a 4,400 square foot, multiple tenant, commercial building and drive-thru restaurant previously reviewed under P14-0973, P15-0303, P15-0304, and P15-0305. The site is located on the southwest corner of Van Buren Boulevard and Fred Street, in the CR- Commercial Retail Zone, in Ward 4.	Riverside	CA	1.94	4,400		DRC AP 07/25/2018	274140036
	P18-0279 P18-0280 P18-0281 P18-0282	4800 Palm Avenue	Proposal to construct a 51,998 square foot two-story senior housing complex consisting of 59 dwelling units: 1) a Zoning Code Amendment to rezone a portion of the site from O-Office Zone to R-1-7000 Single Family Residential Zone, 2) A Conditional Use Permit to permit the construction of a senior housing complex, 3) Design Review of project plans, and 4) a Grading Exception for retaining walls up to 21 feet high.	Riverside	CA	1.96		59	CC AP 08/28/2018	217140036

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Map ID #	Case Number	Location	Project Description	City	State	Acres	Buildings Total Square Feet	Dwelling Units	Approval Date	APN
	P18-0295 P18-0331 P18-0330	3753 Myers Street	Proposal by City of Riverside Housing Authority to consider the following entitlements for the construction of a four unit condominium project on 0.57 acres: 1) a Zoning Code Amendment to rezone the project site from CR-NC-SP - Commercial Retail, Neighborhood Commercial, and Specific Plan (Magnolia Avenue) Overlay Zones to MU-V-SP - MU-V - Mixed Use-Village and Specific Plan (Magnolia Avenue) Overlay Zones; 2) a Parcel Map to subdivide the site into one parcel for condominium purposes; and 3) a Design Review of project plans and building elevations.	Riverside	CA	0.57		4	CPC AP 08/09/2018	234101051
	P18-0296 P18-0297 P18-0298 P18-0299 P18-0300 P18-0301 P18-0302 P18-0303	9608 Indiana Avenue	To consider the following entitlements for a commercial development consisting of a vehicle fuel station with eight MPDs; a 5,000-square-foot multi-tenant convenience store building; a 4,495-square-foot drive-thru vehicle wash facility; a 2,533-square-foot drive-thru restaurant; a 5,555-square-foot restaurant; and a 4-story, 84-room hotel building and related site improvements: 1) a General Plan Amendment to amend the General Plan 2025 Land Use Designation from B/OP – Business and Manufacturing Park to C – Commercial; 2) a Rezoning request to change the zoning designation from BMP – Business and Manufacturing Park to CG – Commercial General; 3) a Conditional Use Permit to permit the establishment of a vehicle fuel station with the concurrent off-sale of beer and wine (Type 20 license); 4) a Conditional Use Permit to permit the off-sale of alcohol (Type 21 license); a Conditional Use Permit to permit the establishment of an automated drive-thru vehicle wash facility; 5) a Conditional Use Permit to permit the establishment of a hotel; 6) a Conditional Use Permit to permit the establishment of a drive-thru restaurant; and 7) Design Review of project plans.	Riverside	CA	6.03	5,000 C-Store, 8 MPDs, 2,533 drive-thru restaurant, 5,555 sit-down restaurant	84 (hotel)		234250009
	P18-0364	3434 Arlington	Design Review of project plans for the construction of a 1,100-square-foot retail building, expansion of an existing parking lot and reconfiguration of an existing drive-thru restaurant vehicle queueing lane.	Riverside	CA	1.24	1,100		DRC AP 09/19/2018	229140025
	P18-0367 P18-0368	7351 Lincoln Avenue	Entitlements for the construction of a 210 unit condominium project: 1) a Tentative Tract Map (TM-37541) for condominium purposes; and 2) a Design Review of project plans and building elevations.	Riverside	CA	9.48		210	CPC AP 08/23/2018	230360001
	P18-0396 P18-0370	3907 Polk Street	Entitlements for the construction of a 92-unit multiple-family residential development on 2.92 vacant acres: 1) Zoning Code Amendment to change the zone of the project site from R-1-7000-SP – Single Family Residential Zone and Specific Plan (Magnolia Avenue) Overlay Zones to MU-V-SP – Mixed Use – Village and Specific Plan (Magnolia Avenue) Overlay Zones; and 2) Site Plan Review of project plans.	Riverside	CA	2.92		92	CPC AP 05/16/2019	143280002
	P18-0403	7137 Margeurita Street	Tentative Parcel Map to subdivide one parcel into three lots for single-family residential development	Riverside	CA	0.50		3	DRC AP 07/25/2018	230320030

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	P18-0432 P18-0433 P18-0434 P18-0435 P18-0436 P18-0437 P18-0571 P18-0612	3505 Van Buren Boulevard	Entitlements for the construction of a commercial shopping center: 1) A Specific Plan Amendment to amend the Magnolia Avenue Specific Plan to permit a Community Entry Sign (freeway oriented sign); 2) a Zoning Code Amendment to adjust the boundaries of the Neighborhood Commercial Overlay Zone; 3) a Conditional Use Permit to permit a 3,700 square foot fast food drive-thru restaurant; 4) a Conditional Use Permit to permit a vehicle fuel station with a 3,800 square foot convenience store with off-sale of beer/wine (Type 20 Alcohol License) and a 1,300 square foot quick service restaurant; 5) a Conditional Use Permit to permit an automated car wash facility; 6) a Parcel map to subdivide the property into three parcels; 7) Design Review of project plans, including a 12,000 square foot multi-tenant commercial building; and 8) a Variance to allow alcohol sales within 100 feet of single family residences. The 3.93 acre site consists of two contiguous parcels and is developed with an abandoned single-family residence, located at 3483 and 3505 Van Buren Boulevard, situated on the northeast corner of State Route 91 and Van Buren Boulevard, in the CR-SP - Commercial Retail and Specific Plan (Magnolia Avenue) Overlay Zones and the CR-NC SP - Commercial Retail, Neighborhood Commercial and Specific Plan (Magnolia Avenue) Overlay Zones, in Ward 5.	Riverside	CA	3.90	3,800 C-Store, 8 MPDs, 1,300 Restaurant, 3,700 Drive-thru restaurant, 12,000 retail			23306204
	P18-0526 P18-0527 P18-0528 P18-0529	4890 Van Buren Boulevard	Entitlements for the construction of a fueling station: 1) a Conditional Use Permit to permit a vehicle fuel station in conjunction with a convenience store with off-sale of beer and wine (Type 20 Alcohol License); 2) Design Review of project plans; 3) a Variance to allow alcohol sales within 100 feet of an existing residential dwelling; and 4) A Variance to allow alcohol sales within 1,000 feet of another business licensed for off-sale of alcoholic beverages. The project site consists of two contiguous parcels, totaling 0.78 acres, located at 7410 Wells Avenue and 4890 Van Buren Boulevard, situated on the southwest corner of Van Buren Boulevard and Wells Avenue, in the CR - Commercial Retail Zone	Riverside	CA	0.78	3,010 C-Store, 6 MPDs		CPC AP 05/02/2019	151380045
	P18-0563 P18-0569	8432 Magnolia Ave	Certificate of Appropriateness and Variance for development of 185,000-square-foot, 1,198-bed student housing complex	Riverside	CA	7.50		1,198 beds	CHB AP 10/19/2018	231030024
	P18-0575 P18-0576 P18-0577	2719 Eleventh Street	Entitlements to facilitate the future construction of an affordable housing development on a vacant 0.52 acre site: 1) a General Plan Amendment to change the General Plan Land Use designation of the project site from MDR – Medium-Density Residential to MHDR – Medium High-Density Residential; 2) a Zoning Code Amendment to change the zone of the project site from R-1-7000 – Single-Family Residential to R-3-3000 – Multi-Family Residential; and 3) a Variance to allow the application of the R-3-3000 Zone to a site with a net area less than 30,000 square feet.	Riverside	CA	0.52		8		211213012
	P18-0595	1049 Spruce Street	Design Review of project plans for new 115,000-square-foot light industrial/warehouse building on 7.22 acres.	Riverside	CA	7.22	115,000		DRC AP 06/12/2019	249140018
	P18-0600	3765 La Sierra Avenue	Design Review for the demolition of an existing 6,000 square foot restaurant building and construction of a new 6,000 square foot multi-tenant commercial building on a 0.85 acre parcel	Riverside	CA	0.85	6,000		DRC AP 05/01/2019	138470030
	P18-0603	7400 Jurupa Avenue	Entitlements to expand an existing 44,951 square foot warehouse building by 21,526 square feet: 1) Design Review of project plans; 2) a Variance to allow fewer parking spaces than required by Code.	Riverside	CA	3.39	21,526		DRC AP 01/09/2019	155080049
	P18-0646 P18-0648 P18-0649	8283 Arlingon Avenue	Entitlements for the construction of a vehicle fuel station: 1) a Conditional Use Permit to replace the existing development with a vehicle fuel station including a fueling canopy and a 2,356-square-foot convenience store; 2) Design Review of project plans; and 3) a Variance to allow a reduced rear yard building setback.	Riverside	CA	0.48	2,356 C-Store; 4 MPDs		CPC AP 12/13/2019	155273013
	P19-0022 P19-0024 P19-0026 P19-0027 P19-0028	19260 Van Buren Boulevard	Parcel Map, Design Review, Variance, and Conditional Use Permit to construct a a 4,319 square foot Panera Bread and drive-thru	Riverside	CA	7.72	4,319			284020011

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	P19-0042	18451 Van Buren Boulevard	Design Review to construct a phased commercial development consisting of a 4,300 square foot Denny's restaurant (phase 1) and a 9,920 square foot office building	Riverside	CA	1.65	14,220			266020055
	P19-0055	8775 Magnolia Avenue	Variance for a 524 bed Student Housing Project	Riverside	CA					193253013
	P19-0077	7509 Arlington Avenue	Design Review for a 102-unit gated apartment complex	Riverside	CA	3.47		102		155290017
	P19-0089 P18-0922 P18-0923 P18-0924	2841 Mulberry Street	General Plan Amendment, Zoning Code Amendment, Design Review, and Variance for 10 small cottage affordable housing units	Riverside	CA	0.48		10		209222027
	P19-0151 P19-0152 P19-0153	8719 Trautwein Road	Minor Conditional Use Perit, Design Review, and Variance for the construction of a 21,706-square foot health and fitness facility	Riverside	CA	1.82	21,706		DRC AP 06/12/2019	284250023
	P19-0225 P19-0226	4046 Tyler Street	Conditional Use Permit and Design Review for a 36-bed assisted living facility	Riverside	CA	0.30	8,190	36		143150051
	P19-0283 P19-0284 P19-0285	NWC Wells Avenue and Hedrick Avenue	22-lot PRD, APN 147-160-007	Riverside	CA	1.77		22		147200011
	P19-0235	3630 Center Street	6,000 square foot warehouse and a 2,156 square foot office building on a vacant 2.99-acre site	Riverside	CA	2.99	8,156			246081031
	P19-0332 P19-0333	6291 Valley Springs Parkway	New 4340 SF car wash faciliy	Riverside	CA	1.11	4,333			291450042
	P19-0336 P19-0337	6020 Arlington Avenue	New gas station, 2,570 SF convenience store, and 1,125 SF car wash	Riverside	CA	0.91	3,696			227022042
	P19-0388 P19-0389	9174 Indiana	GPA and Rezone; GP MDR to HDR, RZ R-1-7000 to R-3-1500	Riverside	CA	6.86				233180007
	P19-0410 P19-0411 P19-0412	4350 La Sierra Avenue	34-Lot Planned Residential Development	Riverside	CA	3.74		34		142480005
	P19-0420	Patterson Street and Minnesota Street	33-Unit Apartment Complex	Riverside	CA	1.70		33		211111060
	P19-0421	6488 Riverside Avenue	16-unit senior housing apartment complex	Riverside	CA	0.82		16		225340012
	P19-0507 P19-0508	4070 Jackson Street	Conditional Use Permit and Design Review of project plans to permit the construction of 50 units of affordable and supportive housing, a 6,700 square foot parish hall, a 2,950 square foot friary and chapel, and a 1,300 square foot greenhouse.	Riverside	CA	3.57		50		191302012
	P19-0553 P19-0554 P19-0555	11253 Pierce Street	GPA, Rezone, and DR for 79 affordable housing units	Riverside	CA	4.67		79		146141072
	P19-0560 P19-0561 P19-0562 P19-0563	3466 Mission Inn Avenue	CUP, Variance, and Design Review for the construction of a 194,500 square foot 8-story hotel with 225 rooms	Riverside	CA	0.94	194,500			213281006
	P19-0570 P19-0571	5041 Sierra Street	CUP and VR for an assisted living facility for 12 people	Riverside	CA	0.28	4,160			226143052
	P19-0620 P19-0621	2941 Market Street	CUP and Design Review for 17 one-to-three bedroom townhomes	Riverside	CA	0.64		17		209193018
	P19-0625 P19-0626 P19-0627 P20-0024 P20-0025	Alessandro Boulevard and Barton Street	Parcel Map, Minor Conditional Use Permit, and Design Review to permit the constructio of two warehouse buildings totaling 603,100 SF	Riverside	CA	49.50	603,100			263060036
	P19-0655	7688 Indiana Avenue	Design Review to permit a 5,730 SF addition to an existing 35,045 SF motorcycle sales and repair facility	Riverside	CA	1.79	40,775			230242025

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	P19-0665 P19-0666 P19-0667 P19-0668	4015 13th Street	Design Review and Variances to construct a 128,000 SF 4-story conference center	Riverside	CA	0.93	128,000			215231013
	P19-0690 P19-0691	2200 La Cadena Drive	Design Review and Variance for a 6700 SF industrial building	Riverside	CA	0.03	6,700			210100001
	P19-0692	4682 Mitchell Avenue	Design Review for a 56-unit gated apartment community	Riverside	CA	2.47		56		143051001
	P19-0694 P19-0695 P19-0696 P19-0697 P19-0698 P19-0699	3102 Main Street	Conditional Use Permit, Design Reviwe, Variances, and Certificate of Appropriateness to establish a 116-unit multi-family development and construction of a 745 SF commercial building	Riverside	CA	1.82		116		213031002
	P19-0775 P19-0776 P19-0777	Sycamore Canyon Boulevard and Central Avenue	General Plan Amendment, Rezone, and Design Review for a 237-unit apartment complex	Riverside	CA	9.77		237		256050012
	P19-0806	3252 Mission Inn Avenue	Variance for Parking for a banquet facility.	Riverside	CA	0.68	14,914			213291013
	P19-0833	11124 Pierce Street	60 Senior apartments and 5.750 square feet of commercial space	Riverside	CA	2.38	5,750	60		146220041
	P19-0863	10431 Magnolia Avenue	Plan review for new ground up mixed use project consisting of 450 for rent apartments homes and 9000 sf commercial/retail area.	Riverside	CA	11.86	9,000	450		143180028
	P19-0869 P19-0870 P19-0871 P19-0872	3491 Market Street	Design review for a new 3,400 square foot commercial retail building on vacant property.	Riverside	CA		3,400			213103005
	P19-0874	6255 Jurupa Avenue	Design Review of new 3,600 square feet office and warehouse building on vacant site.	Riverside	CA		3,600			189033012
	P19-0922	3362 Winstrom Street	Design review of project plans for a new parking lot containing 40 parking spaces	Riverside	CA	0.42				230242021
	P19-0931	7227 Central Avenue	DR for parking lot expansion	Riverside	CA	10.83				189160080
	P19-0941 P19-0942	1673 Columbia Avenue	Construction of new unmanned fueling facility on vacant lot.	Riverside	CA	0.32				249033013
	P19-0951	4631 Tyler Street	Design review for the construction of a 2,000 square foot townhome building for single tenant per unit for a total of 4 units.	Riverside	CA	0.48	2,000	4		147282018
	P19-958 P19-0959	2998 Ivy Street	Design review for self storage facility expansion: related to P19-0926	Riverside	CA	1.73				219270006
	P20-0004 P20-0005	6808 Murray Street	MCUP for an existing single-family residence conversion into office with out door storage.	Riverside	CA	0.00				189250028
	P20-0013 P20-0014 P20-0015 P20-0016	19811 Lurin Avenue	Tentative Tract map for 81 lot planned residential development. Variance for setbacks for 81 lot planned residential development.	Riverside	CA	9.61		81		266160006
	P20-0018 P20-0019 P20-0020 P20-0021	19331 Lurin Avenue	Tentative tract map for 138 lot planned residential development. Variance for setbacks for 138 lot planned residential development.	Riverside	CA	0.69		138		266140003
	P20-0026 P20-0028 P20-0029	9321 Duncan Avenue	Duncan Avenue Condominums. Tentative Tract map for 6 units. Variance for 7.5 side setback requirement.	Riverside	CA	0.48		6		191200028
	P20-0035	3861 Fourth Street	COA for 33 unit affordable housing development- The Aspire.	Riverside	CA			38		213071008
	P20-0044	6612 Columbus Avenue	New 3,256 S.F office and warehouse building (single tenant) in industrial zone.	Riverside	CA	0.49	3,256			189071031
		Canyon Crest Drive and Blaine Street	800 FTE student school.	Riverside	CA					

COUNTY OF RIVERSIDE ACTIVE PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
1	Polygon	SP00342		SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	ADOPTED	5/6/2004	<Null>	3/20/2018	<Null>
2	Polygon	SP00239A01	AMENDMENT TO SP00239	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPLIED	7/12/2019 8:11	<Null>	<Null>	<Null>
3	Polygon	SP00366	SP FOR 636.9 AC/MDR/MHDR/GARDEN COUTS/HDR-TRIPLEX/ MIXED USE/SCHOOL/OS-R/OS-W/OS-CH/SEE PROJECT DESCR IPTION FOR MORE DETAILS	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	LDC REVIEW	11/3/2006	<Null>	<Null>	<Null>
4	Polygon	SP00394	ESTABLISH A SP ON 327.4 AC FOR 513 RES UNITS	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	LDC REVIEW	8/17/2016	<Null>	<Null>	<Null>
5	Polygon	TR37217	PROPOSING SUBDIVING 16 LOTS TO 513 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	LDC REVIEW	10/13/2016	<Null>	<Null>	<Null>
6	Polygon	PM37227	PROPOSING 16 LOTS TO DEVLOP 9 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	10/13/2016	<Null>	<Null>	<Null>
7	Polygon	SP00250A1	AMEND SP LAND USES DUE TO ADOPTED GP/MSHCP	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPLIED	11/20/2013	<Null>	<Null>	<Null>
8	Polygon	TR32976	DIVIDE 60 AC INTO 167 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	LDC REVIEW	10/12/2004	<Null>	<Null>	<Null>
9	Polygon	CUP03789	117' TOWER - VERIZON WIRELESS ANTENNAS AND EQUIP	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	PC	11/17/2017	<Null>	<Null>	<Null>
10	Polygon	CUP03265	CUP-MOTORCYCLE TEST TRACK & COOLEY CRUSHER MECH OP	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	LDC REVIEW	5/14/1998	<Null>	<Null>	<Null>
11	Polygon	TTM37554	DIVIDE 110.4 ACRES INTO 4 LOTS	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	LDC REVIEW	9/20/2018 9:49	<Null>	<Null>	9/19/2021
12	Polygon	PPT190011	TWO INDUSTRIAL BUILDINGS 358,867 SF AND 333,799 SF	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPLIED	4/10/2019 11:48	<Null>	<Null>	<Null>
13	Polygon	TR29740E05	TR29740 EXTENSION #5	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	ASSIGNED	12/14/2017 14:45	<Null>	12/19/2018 13:21	9/9/2019
14	Polygon	TR31156	SUBD 39 AC INTO 141 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	LDC REVIEW	2/18/2003	<Null>	<Null>	<Null>
15	Polygon	CUP01192R02	REQUEST APPROVAL OF 7 ADDITIONAL MOBILE HOME SPACES FOR CUP01192	MARES	CUP06 - MOBILE HOME PARK	PLN	LDC REVIEW	7/25/2018 9:39	<Null>	<Null>	<Null>
16	Polygon	TR34747E02	2ND EXTENSION OF TIME TR34747	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	PC	5/25/2018 8:18	<Null>	<Null>	<Null>
17	Polygon	CUP03727		MARES	CUP05 - GENERAL	PLN	APPLIED	5/18/2015	<Null>	<Null>	<Null>
18	Polygon	TTM37556	SCHEDULE A MAP SUBDIVIDE 25.7 AC INTO 143 LOTS 4500 SQ FT MINIMUM LOT SIZE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	LDC REVIEW	1/17/2019 11:06	<Null>	<Null>	<Null>
19	Polygon	TTM37665	TENTATIVE TRACT MAP FOR 36 RESIDENTIAL LOTS - SCHEDULE B MAP	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	ASSIGNED	12/17/2019 9:22	<Null>	<Null>	12/16/2022
20	Polygon	PPT180029	ONE INDUSTRIAL WAREHOUSE BUILDING (BLDG 20) AT 406,496 SQFT CONCRETE TILT-UP; WITH 20,325 SQUARE-FEET OFFICE AREA AND THE REMAINING 386,171 SQUARE-FEET FOR WAREHOUSE SPACE. THERE WOULD BE A 2.4 ACRE DETENTION BASIN THAT COULD ACCOMMODATE PICNIC TABLES ALONG THE RIM OF THE BASIN AND A DESIGNATED PARKING CUT-OUT FOR FOOD TRUCKS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	11/14/2018 14:26	<Null>	<Null>	<Null>
21	Polygon	SP00152A5	CHANGE BOUNDARIES OF PLANNING AREA 22, 23, 24. INCREASE TOTAL ACREAGE BY 2.3 ACRES, AMEND LAND US E DESIGNATION AND DECREASE THE NUMBER OF DWELLING UNITS FROM 325 TO 239. ALSO REMOVE THE GATED ENTRI ES ALONG DE PALMA RD AND HORSETHIEF CANYON RD THAT ACCESS THE PLANNING AREAS. THE CHANGE IN ACREAGE I S A RESULT IF IMPROVED SURVEY MEASUREMENTS AND INC ORPORATION OF .7 ACRES OF VACATED AND QUITCLAIMED OF RIGHT-OF-WAY.	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	LDC REVIEW	7/29/2015	<Null>	<Null>	<Null>
22	Polygon	TR32600	SCHED A DIVISION 39.5 AC. INTO 32 SFR LOTS/3 ESTAT AND 2 OPEN SPACE - SCHEDULE A	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	LDC REVIEW	2/10/2005	<Null>	<Null>	<Null>
23	Polygon	PM32428	SUBIDIVDE 942 ACRES INTO 28 LOTS (SCHEDULE "I")	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPLIED	5/25/2004	<Null>	<Null>	<Null>
24	Polygon	TR33977M1		TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPLIED	5/19/2015	<Null>	<Null>	<Null>
25	Polygon	TPM37799	SCHEDULED J MAP FOR 5 INDUSTRIAL BUILDINGS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	LDC REVIEW	9/23/2019 8:32	<Null>	<Null>	<Null>
26	Polygon	TR30592E04	4TH EOT FOR TR30592	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPLIED	3/2/2018 14:26	<Null>	<Null>	<Null>
27	Polygon	PP26293	PLOT PLAN FOR 612,481SF INDUSTRIAL WAREHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPLIED	6/19/2017	<Null>	<Null>	<Null>
28	Polygon	PPT190008	694,540 S.F. LOGISTICS AND WAREHOUSE BUILDING WITH OFFICE, PARKING AND TRUCK BAYS, 14' PERIMETER WALL, AND LANDSCAPING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	3/5/2019 12:51	<Null>	<Null>	<Null>
29	Polygon	TR36763	SFR SUBDIVISION WITH 24 LOTS AND 1 COMMON AREA	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	LDC REVIEW	9/17/2015	<Null>	<Null>	<Null>
30	Polygon	TR37142	TENTATIVE MAP FOR 29 MEDIUM DENSITY RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	LDC REVIEW	7/12/2016	<Null>	<Null>	<Null>
31	Polygon	PM35864E02	2ND EXTENSION OF TIME FOR PM35864E02	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPLIED	7/12/2018 12:33	<Null>	8/9/2018	<Null>
32	Polygon	PPT190031	418,000 SF ONE STORY INDUSTRIAL BUILDING WITH LIMITED MEZZANINE. THE PROPOSED SITE WILL BE UTILIZED FOR INDUSTRIAL/MANUFACTURING USE WITH APPROXIMATELY 5,000 SF DESIGNATED FOR SUPPORTING OFFICE USE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	PC	10/11/2019 8:44	<Null>	<Null>	<Null>
33	Polygon	PPT180034	CONSTRUCTION AND OPERATION OF A 373,368 SQUARE FOOT WAREHOUSE/DISTRIBUTION/MANUFACTURING DEVELOPMENT ON 18.35-ACRES (GROSS). NO REFRIGERATED WAREHOUSE SPACE IS PROPOSED AS PART OF THIS PROJECT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	12/4/2018 16:12	<Null>	<Null>	<Null>
34	Polygon	PPT180033	2 WAREHOUSE BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	11/28/2018 11:44	<Null>	<Null>	<Null>
35	Polygon	PPT190039	PLOT PLAN FOR 316,500 SQ. FT. DISTRIBUTION WAREHOUSE FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPLIED	12/19/2019 9:54	<Null>	<Null>	<Null>
36	Polygon	PPT200002	274,120 SQ. FT. INDUSTRIAL BUILDING WITH MEZZANINES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPLIED	2/4/2020 10:09	<Null>	<Null>	<Null>
37	Polygon	PPT190032	53, 275 SQUARE-FOOT TRUCK TERMINAL BUILDING.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	ASSIGNED	10/15/2019 15:57	<Null>	<Null>	<Null>
38	Polygon	PPT190028	197,856 SQ. FT. SINGLE-STORY CONCRETE TILT UP INDUSTRIAL BUILDING WITH A MAXIMUM HEIGHT OF 45 FT. APPROXIMATELY 13,000 SQ. FT. OF OFFICE SPACE WOULD BE PROPOSED AT GROUND LEVEL AND ON A MEZZANINE IN THE SOUTHWEST AND SOUTHEAST CORNER OF THE BUILDING. IN ADDITION, THE PROJECT WOULD PROVIDE ACCESS TO 33 LOADING DOCKS ON THE SOUTH SIDE OF THE BUILDING. A TOTAL OF 144 PARKING STALLS ARE PROPOSED FOR THE SITE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	DH	10/2/2019 11:44	<Null>	<Null>	<Null>
39	Polygon	PPT180025	SEATON COMMERCE CENTER 203,929SF WAREHOUSE FACILITY W/ OFFICE SPACE AND MEZZANINE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	10/23/2018 10:47	<Null>	<Null>	<Null>
40	Polygon	CUP180012	COMMERCIAL CENTER CONSISTING OF 4 BUILDINGS OF FAST FOOD AND CONVENIENCE/GAS USES.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	LDC REVIEW	5/21/2018 15:58	<Null>	<Null>	<Null>
41	Polygon	PP26257	NEW ONE STORY CHURCH 5,245 SF W 62 PARKING SPACES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	5/8/2017	<Null>	<Null>	<Null>
42	Polygon	PM37293	SUBDIVIDE 10 ACRE PARCEL INTO TWO, 5 ACRE LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	5/8/2017	<Null>	<Null>	<Null>
43	Polygon	TPM37585	SUBDIVIDE 10.9 AC INTO 5 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	LDC REVIEW	7/2/2019 12:15	<Null>	<Null>	<Null>
44	Polygon	TTM37743	SUBDIVIDE 10 ACRES INTO 58 SFR LOTS AND 1 COMMERCIAL LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPLIED	5/2/2019 12:12	<Null>	<Null>	5/1/2022
45	Polygon	PPT180038	CONSTRUCTION AND OPERATION OF A 147,249 SQUARE FOOT WAREHOUSE/DISTRIBUTION/MANUFACTURING DEVELOPMENT ON 8.51-ACRES (GROSS). NO REFRIGERATED WAREHOUSE SPACE IS PROPOSED AS PART OF THIS PROJECT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	12/20/2018 13:28	<Null>	<Null>	<Null>
46	Polygon	PM37433	SCH E MAP/SUBDIVIDE 7.48 AC PARCEL INTO 4 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	LDC REVIEW	11/7/2017	<Null>	<Null>	<Null>
47	Polygon	TPM37537	TENTATIVE PARCEL MAP NO. 37537 IS A SCHEDULE E PARCEL MAP TO SUBDIVIDE 9.79 GROSS ACRES INTO FOUR (4) PARCELS. PARCEL 1 WILL BE 0.98 ACRES GROSS; PARCEL 2 WILL BE 3.62 ACRES GROSS, PARCEL 3 WILL BE 1.29 ACRES GROSS, AND PARCEL 4 WILL BE 1.29 ACRES GROSS. TENTATIVE PARCEL MAP TO REALIGN EXISTING PARCELS FOR CUP3775.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	PC	5/15/2018 8:06	<Null>	1/31/2019 17:52	<Null>
48	Polygon	CUP03775	CUP FOR GAS STATION W/STORE,CARWASH,1 DRIVE-THRU RESTAURANT, A SMALL 3 TENANT RETAIL SHELL BLDG, AND 1 LARGE RETAIL BLDG WITH OUTDOOR STORAGE AND OUTDOOR FRONTAGE DISPLAY AREA.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	PC	7/3/2017	<Null>	<Null>	<Null>
49	Polygon	PPT190002	ESTABLISH A 90840 SFT FEED STORAGE AND PRODUCTION BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	1/30/2019 12:08	<Null>	<Null>	<Null>
50	Polygon	PM37101	SUBDIVIDE 6.56 ACRES INTO 4 RESIDENTIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	3/21/2016	<Null>	<Null>	<Null>

COUNTY OF RIVERSIDE ACTIVE PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
51	Polygon	PPT190003	CONSTRUCTION AND OPERATION OF A 83,449 SQUARE FOOT WAREHOUSE/DISTRIBUTION/MANUFACTURING DEVELOPMENT ON 5.77-ACRES (GROSS). NO REFRIGERATED WAREHOUSE SPACE IS PROPOSED AS PART OF THIS PROJECT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	DH	2/14/2019 10:22	<Null>	3/23/2020 9:41	<Null>
52	Polygon	TPM37897	SUBDIVISION OF ONE 5.33 ACRE LOT INTO 3 RESIDENTIAL LOTS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	2/13/2020 11:19	<Null>	<Null>	<Null>
53	Polygon	PP09724R1	ADD TRUCK SCALE,6 NEW LOADING WELLS,LS,REPV PKG,RO LLING GATES AND BLOCK WALLS AT 4 EXISTING DRIVEWAY S	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	2/14/2012	<Null>	<Null>	<Null>
54	Polygon	TR18692	R-6 SUBDIVISION 152 UNITS AFFORDABLE HOUSING	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPLIED	5/3/2006	<Null>	<Null>	<Null>
55	Polygon	PM3115		TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPLIED	1/27/2005	<Null>	<Null>	<Null>
56	Polygon	PM36302	SCH. H SUBDIVISION - 5.22 AC GROSS INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPLIED	4/8/2010	<Null>	<Null>	<Null>
57	Polygon	CUP190039	NEW 42,000 SF COMMERCIAL BUILDING FOR CANNABIS MICRO BUSINESS AND CULTIVATION FACILITY	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	ASSIGNED	10/24/2019 11:20	<Null>	<Null>	<Null>
58	Polygon	CUP200007	NEW 42,000 SF COMMERCIAL BUILDING FOR CANNABIS MICRO BUSINESS AND CULTIVATION FACILITY	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	APPLIED	4/13/2020 14:04	<Null>	<Null>	<Null>
59	Polygon	CUP03703	MENAGERIE FOR HOUSING EXOTIC AND DOMESTIC ANIMALS. APPROXIMATELY 600 MAMMALS, BIRDS, REPTILES, AMPHIBIANS, AND FISHES FOR EDUCATION PURPOSES IN CONJUNCTION WITH LOCAL HIGH SCHOOLS AND THE MORENO VALLEY UNIFIED SCHOOL DISTRICT.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	LDC REVIEW	2/19/2014	<Null>	<Null>	<Null>
60	Polygon	PM35988R01	DIVIDE 4.94 ACRES INTO TWO LOTS	MARES	TPM09 - REVISED RESIDENTIAL AFTER 2 YRS	PLN	LDC REVIEW	2/20/2019 11:55	<Null>	<Null>	<Null>
61	Polygon	TPM37397	TENTATIVE PARCEL MAP	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	4/13/2018 8:53	<Null>	<Null>	<Null>
62	Polygon	PP24776	CHURCH WITH TWO 3,200 SF BLDGS W/SANCTUARY/OFFICE AND CLASSROOMS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	11/15/2010	<Null>	<Null>	<Null>
63	Polygon	PM32328	SUBDIVIDE 4.68 AC INTO FOUR 1-AC PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPLIED	5/28/2004	<Null>	<Null>	<Null>
64	Polygon	TPM37378	TENTATIVE PARCEL MAP NO. 37378 - CEQ180008 - APPLICANT: DAVID SAMAK - ENGINEER/ REPRESENTATIVE: ROD ARSALAN - FIRST SUPERVISORIAL DISTRICT - NORTH PERRIS ZONING AREA - MEAD VALLEY AREA PLAN: RURAL COMMUNITY: VERY LOW DENSITY RESIDENTIAL (RC: VLDR) (1 ACRE MINIMUM) - LOCATION: NORTHERLY OF POOLEY DR., SOUTHERLY OF SUNSET ST., EASTERLY OF WEBSTER ST., AND WESTERLY OF LUKENS LN. - 5.06 GROSS ACRES - ZONING: RESIDENTIAL AGRICULTURE (1 ACRE MINIMUM), (R-A-1) REQUEST: THE TENTATIVE PARCEL MAP PROPOSES A SCHEDULE ?H? SUBDIVISION OF 5.01 ACRES INTO TO FOUR (4), 1.25 ACRE RESIDENTIAL LOTS. APN: 322-280-005, BBID:	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	2/2/2018 9:18	<Null>	<Null>	<Null>
65	Polygon	PPT190026	77 UNIT MULTI-FAMILY DEVELOPMENT PROJECT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	ASSIGNED	9/11/2019 15:16	<Null>	<Null>	<Null>
66	Polygon	SP00337S1	PLEASE SEE ATTACHMENT FOR CHANGE REQUESTSPLEASE SEE ATTACHED LIST OF CHANGES REQUESTED	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPLIED	1/8/2008	<Null>	<Null>	<Null>
67	Polygon	PUP00759R03	REMOVE PLANNING CONDITION 0010-PLANNING-ON-SITE PARKING ONLY AND RENOVATE EXISTING OPEN SPACE INTO OVERFLOW PARKING AREA.	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	LDC REVIEW	7/30/2019 13:44	<Null>	<Null>	<Null>
68	Polygon	TPM37622	SUBDIVIDE 4.13 ACRES INTO 4 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM03 - RESIDENTIAL (WITH WAIVER OF FINAL MAP)	PLN	ASSIGNED	6/19/2019 15:55	<Null>	<Null>	<Null>
69	Polygon	TTM37622	TENTATIVE TRACT MAP TO SUBDIVIDE 4.13 ACRES INTO 5 LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	LDC REVIEW	1/11/2019 15:23	<Null>	<Null>	1/10/2022
70	Polygon	PPT190029	APPROXIMATELY 36,000SF GROUND-UP WAREHOUSE AND ASSOCIATED SITE WORK AND PHASE 2 PAD FOR FUTURE EXTENSION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	10/3/2019 9:20	<Null>	<Null>	<Null>
71	Polygon	TPM37830	PARCEL MAP TO SUBDIVIDED ONE PARCEL INTO THREE PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	10/21/2019 8:08	<Null>	<Null>	<Null>
72	Polygon	TPM37627	PARCEL MAP TO SUBDIVIDE 1 LOT TOTALING 3.61 ACRES INTO 2 LOTS WITH A MINIMIM SIZE OF 1.61 ACRES	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	12/14/2018 10:29	<Null>	<Null>	<Null>
73	Polygon	TTM37594	DIVIDE 3.37 ACRES INTO FIVE LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPLIED	3/27/2019 9:24	<Null>	<Null>	3/26/2022
74	Polygon	PPT180027	CONTRACTOR STORAGE YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	10/26/2018 13:09	<Null>	<Null>	<Null>
75	Polygon	CUP190021	CUP FOR GAS STATION/C-STORE AND CAR WASH	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	ASSIGNED	8/27/2019 13:00	<Null>	<Null>	<Null>
76	Polygon	TTM37686	TENTATIVE TRACT MAP SCHEDULE A SUBDIVISION OF 1 LOT INTO 10 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	LDC REVIEW	11/26/2019 12:39	<Null>	<Null>	11/25/2022
77	Polygon	PP22337E01	FIRST EXTENSION FOR PP22337	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPLIED	6/25/2019 10:21	<Null>	<Null>	<Null>
78	Polygon	PM35188	SUBDIVIDE INTO TWO RES. PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPLIED	8/8/2007	<Null>	<Null>	<Null>
79	Polygon	TPM37814	A SCHEDULE ?H? SUBDIVISION OF 2.29 NET ACRES INTO 2 SINGLE FAMILY RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 1 NET ACRE.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	LDC REVIEW	9/17/2019 13:45	<Null>	<Null>	<Null>
80	Polygon	PM37340	SCHEDULE H SUBDIVISION OF 2.27 ACRES INTO 2 PARCELS; 1.18 AND 1.08 ACRE LOTS. THE PROJECT ALSO PROPOSES THE CANCELLATION OF AN AGRICULTURAL LAND CONSERVATION CONTRACT (AG01071). RELATED CASES: CZ07954, PM37340, AND AG01071.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	PC	10/20/2017	<Null>	<Null>	<Null>
81	Polygon	PPT180006	PLOT PLAN TO DEVELOP AND CONSTRUCT TWO PRE-ENG METAL BUILDINGS-BLDG 1-11,500 SQ. FT. AND BLDG 2-18,750 SQ. FT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	2/5/2018 8:41	<Null>	<Null>	<Null>
82	Polygon	CUP180008	PROPOSED NEW SHOPPING CENTER (SERVICE STATION, DRIVE THRU RESTAURANT AND RETAILS)	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	LDC REVIEW	4/11/2018 11:33	<Null>	<Null>	<Null>
83	Polygon	TPM37568	SUBDIVIDE APPROXIMATELY 2.14 ACRES INTO (2) PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	ASSIGNED	10/21/2019 8:49	<Null>	<Null>	<Null>
84	Polygon	PPT180010	TMOBILE 50FT MONOPINE, 6' CMU WALL, 12 PANEL ANTENNAS AT 43FT RAD CENTER, 400SQ FT LEASE AREA, 5 CABINETS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	PC	3/21/2018 12:11	<Null>	<Null>	<Null>
85	Polygon	PP24294E01	EXTENSION OF TIME FOR PP24294 CONCEALED WIRELESS FACILITY	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	ASSIGNED	2/5/2020 8:16	<Null>	<Null>	<Null>
86	Polygon	PPT180002	PLOT PLAN FOR DRIVE-THROUGH RESTAURANT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	1/24/2018 9:19	<Null>	<Null>	<Null>
87	Polygon	CUP170002	CUP FOR CONTRACTORS STORAGE YARD	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	LDC REVIEW	12/28/2017 13:34	<Null>	<Null>	<Null>
88	Polygon	CUP180024	FOR A NEW RECYCLING FACILITY OF (WOOD, METAL, AND CONSTRUCTION WASTES), TWO-STORY OFFICE BUILDING (1,958 SQ. FT.), 22 PARKING SPACES, AND LANDSCAPING. OUTDOOR STORAGE FOR RECYCLABLE MATERIALS (40,586).	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	LDC REVIEW	11/8/2018 8:24	<Null>	<Null>	<Null>
89	Polygon	PPT200003	FOR A NEW RECYCLING FACILITY OF (WOOD, METAL, AND CONSTRUCTION WASTES), TWO-STORY OFFICE BUILDING (1,958 SQ. FT.), 22 PARKING SPACES, AND LANDSCAPING. OUTDOOR STORAGE FOR RECYCLABLE MATERIALS (40,586).	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPLIED	2/7/2020 11:30	<Null>	<Null>	<Null>
90	Polygon	CUP190011	CANNABIS RETAIL STORE	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	LDC REVIEW	7/10/2019 7:55	<Null>	<Null>	<Null>
91	Polygon	PPT190024	KENNEL CLASS II : UP TO 25 DOGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	9/11/2019 13:12	<Null>	<Null>	<Null>
92	Polygon	PP26165	PLOT PLAN FOR FEED STORE W/ MINI MART/SMOKE SHOP/PROPANE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	12/27/2016	<Null>	<Null>	<Null>
93	Polygon	PPT190014	CONSTRUCTION OF TWO METAL WAREHOUSE AND STORAGE BUILDINGS CONSISTING 2,400 SQUARE FEET AND 1,800 SQUARE FEET FOR A PLUMBING CONTRACTOR BUSINESS. IN ADDITION, AN EXISTING 1520 SQUARE FOOT OFFICE BUILDING IS PROPOSED TO BE RENOVATED. THE SITE WILL BE ENHANCED WITH LANDSCAPING AND PARKING LOT IMPROVEMENTS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	5/1/2019 9:21	<Null>	<Null>	<Null>
94	Polygon	CUP190045	CANNABIS RETAIL FACILITY IN EXISTING 14,047 SQ. FT. BUILDING.	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	LDC REVIEW	10/24/2019 16:07	<Null>	<Null>	<Null>
95	Polygon	CUP190029	PROPOSED TO BUILD A 2500 SQ. FT. CANNABIS RETAIL DISPENSARY ON THE PROPERTY WITH SUPPORTING SITE AND LANDSCAPE IMPROVEMENTS.	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	LDC REVIEW	10/9/2019 9:45	<Null>	<Null>	<Null>

COUNTY OF RIVERSIDE ACTIVE PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
96	Polygon	PP16109R1	CONVERT RESIDENCE TO OFFICE AND STORAGE YARD ELITE EARTHWORKS AND ENGINEERING IS A SOUTHERN CALIFORNIA GRADING, EXCAVATING, AND DEMOLITION CONTRACTOR. ORIGINAL PP16109 DESCRIPTION: THE USE HEREBY PERMITTED IS FOR THE CONVERSION OF A RESIDENCE TO A ROOFING CONTRACTOR'S OFFICE AND STORAGE YARD. THIS APPROVAL IS FOR A 5 YEAR INTERIM USE TO POSTPONE ROAD IMPROVEMENTS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPLIED	4/10/2017	<Null>	<Null>	<Null>
97	Polygon	PP26057	BEAUTY SALON AND COMMERCIAL TENANT SPACE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	LDC REVIEW	6/28/2016	<Null>	<Null>	<Null>
98	Polygon	CUP190009	CANNABIS RETAIL STORE CONSISTING OF A STOREFRONT RETAIL CANNABIS BUSINESS AND DELIVERY SERVICE THAT INCLUDES TWO (2) PARCELS WITH ONE (1) EXISTING 3,952 SQ. FT. COMMERCIAL BUILDING OF TWO (2) SUITES AND ACCOMPANYING PARKING LOT. THE FIRST SUITE OF THE EXISTING COMMERCIAL BUILDING IS 2,106 SQ. FT. AND WOULD CONTAIN THE STOREFRONT RETAIL CANNABIS BUSINESS. THE FIRST RETAIL SUITE WILL BE USED FOR OFFICE SPACE AND STORAGE RELATED TO THE RETAIL CANNABIS BUSINESS. THE HOURS OF OPERATION FOR THE RETAIL CANNABIS BUSINESS WILL BE FROM MONDAY THROUGH SUNDAY 8:00 A.M. TO 10:00 P.M. WITH NO DELIVERIES SCHEDULED AFTER 9:00 P.M. THE RETAIL CANNABIS BUSINESS WILL HAVE THREE (3) SHIFTS DAILY; OPEN, MIDDAY, AND CLOSE WITH SIX (6) TO 10 EMPLOYEES EACH SHIFT AND A TOTAL STAFF OF 33 EMPLOYEES. THE SECOND SUITE, CONSISTING OF 1,846 SQ. FT., IS VACANT AND WOULD NOT BE PERMITTED FOR ANY FUTURE COMMERCIAL CANNABIS ACTIVITIES OF ANY KIND.	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	BOS	7/2/2019 16:47	<Null>	<Null>	<Null>
99	Polygon	CUP190016	CANNABIS RETAIL STORE FRONT	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	ASSIGNED	8/8/2019 16:10	<Null>	<Null>	<Null>
100	Polygon	CUP190010	CANNABIS RETAIL STORE	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	LDC REVIEW	7/5/2019 16:06	<Null>	<Null>	<Null>
101	Polygon	TR33410E01	FIRST EXTENSION OF TIME FOR TR33410E01	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPLIED	3/2/2020 16:52	<Null>	<Null>	<Null>
102	Polygon	CUP190007	CANNABIS RETAIL STORE	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	LDC REVIEW	7/2/2019 16:16	<Null>	<Null>	<Null>
103	Polygon	PP22362E01	FIRST EXTENSION OF TIME FOR PP22362	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPLIED	7/1/2019 9:28	<Null>	<Null>	<Null>

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
1	Polygon	SP00342		SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	ADOPTED	5/6/2004	<Null>	3/20/2018	<Null>
2	Polygon	PP15641	36 HOLE GOLF COURSE W/ CLUBHOUSE/CORP OFFICES ETC.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/9/1998	<Null>	12/11/1998	<Null>
3	Polygon	SP00308A1	AMEND PA TO INCREASE RESIDENTIAL DEV/LOT SIZE	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	10/28/2002	<Null>	6/24/2010	<Null>
4	Polygon	SP00123A1	ADD 451.2 ACRES TO SP 123 TO TOTAL 1509.2 ACRES, I NCREASE DENSITY AND REALLOCATE LAND USES EA 13651 SP 123, SP 123 A#2-A#6, SP 123 SC#1-SC#8*	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	10/2/1980	<Null>	2/17/1981	<Null>
5	Polygon	PM25813	DIVIDE 1,121 ACRES INTO 8 PARCELS FOR LAND CONVEYA NCE PURPOSES DIVIDE 1,121 ACRES INTO 8 PARCELS FOR FINANCING PU RPOSES EA 35346 FM 25813, EXT 906, SP 239, SP 246	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/17/1990	<Null>	5/28/1991	5/28/1997
6	Polygon	SP00327	SUBDIVDE 960 ACRES INTO 1800 DU (4000SF MIN)	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	11/27/2001	<Null>	5/1/2008	12/19/2026
7	Polygon	PP17888	18 HOLE GOLF COURSE (SP00317)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/9/2002	<Null>	12/16/2002	<Null>
8	Polygon	PM30240	SCHED I DIVISION-1014 AC. INTO 15 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/25/2001	<Null>	6/12/2003	<Null>
9	Polygon	TR36643	SUBDIVIDE 4 LOTS INTO PA 1,2,3,4,5,17,18 OF SP327	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/24/2013	<Null>	6/19/2015	11/25/2017
10	Polygon	SP00327A1	AMEND CIRCUALTION ELEMENT OF SP	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	10/2/2013	<Null>	2/11/2016	<Null>
11	Polygon	SP00123	SP ON 1058 ACRES WITH 2,258 DU'S ON 1006 ACRES, 13 ACRES COMMERCIAL & 39 ACRE PARK EA 1742, EIR 42, DA 8 SP 123 A#1-A#6, SP 123 SC#1-SC#8*	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	12/26/1974	<Null>	8/26/1975	<Null>
12	Polygon	SP00229A1	REDUCT LOT SIZES/INC OP SP/ELIM EQUES COMPONENT	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	4/15/2002	<Null>	1/6/2005	<Null>
13	Polygon	PM32439	SCHED I DIVISION OF 942 AC INTO 5 20AC. MIN PARCEL	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/25/2004	<Null>	9/13/2005	5/17/2008
14	Polygon	PM32438	SCHED I SUBDIVISION OF 942 AC. INTO 30 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/25/2004	<Null>	9/13/2005	6/28/2008
15	Polygon	PM28502	DIVISION OF 880 ACRES INTO 3 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/7/1997	<Null>	9/7/1999	9/6/2002
16	Polygon	TR31554	SUBDIVIDE 880 ACRES INTO 421SFR/2 PARK SITE/1 SCHOOL SITE/5 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/25/2003	<Null>	6/24/2010	3/23/2021
17	Polygon	PP15092	GOLF COURSE WITH RELATED FACILITIES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/7/1997	<Null>	9/7/1999	<Null>
18	Polygon	SP00246A1	SPECIFIC PLAN AMENDMENT TO SP00246 AMENDMENT #1	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	3/23/2004	<Null>	9/13/2005	<Null>
19	Polygon	SP00246A3	AMENDMENT TOTHE ADOPTED SP 246 A1 THAT WOULD REMOV E THE MID COUNTY PARKWAY OVERLAY CONDITIONTHAT ALS O AFFECTS TTM33977 AND TTM33978 AND WERE CONCURREN TLY PROCESSED AS MINOR CHANGES	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	5/19/2015	<Null>	8/18/2015	<Null>
20	Polygon	SP00308	GOLF COURSE,OPEN SPACE & FUTURE RESIDENTIAL AREAS	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	8/7/1997	<Null>	11/16/1999	11/16/2009
21	Polygon	SP00323	MIXES SFR/OPEN SPACE/SCHOOL SITE/COMMERCIAL	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	5/30/2000	<Null>	7/24/2002	<Null>
22	Polygon	PM36448	SUBDVD 785.44AC INTO 15 PARCELS SCHED "I"	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/21/2012	<Null>	6/22/2013	4/22/2018
23	Polygon	SP00299	ALTA CRESTA RANCH SPECIFIC PLAN SP ON 793 ACRE FOR 3,121 DU'S ON 651.5 ACRES, 56 A CRES OF COMMERCIAL, 24.5 ACRES OF OPEN SPACE, * EA 36264, EIR 389, CZ 6131, CGPA 361, (AGP 727)	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	5/18/1992	<Null>	10/28/1997	<Null>
24	Polygon	TR32372	DIVIDE 305.80 INTO 803 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/22/2004	<Null>	3/12/2009	12/13/2020
25	Polygon	PM37073	SCHEDULE J SUBDIVISION 16 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/16/2016	<Null>	9/13/2018 13:31	<Null>
26	Polygon	SP00144	SP ON 1700 ARCES WITH 1720 DU ON 669.7 ACRES, 7 AC RES OF COMMERCIAL, 925 ACRES OF OPEN SPACE, * EA 13098, EIR 112, DA 25 SP 144 A#1	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	4/10/1980	<Null>	4/21/1981	<Null>
27	Polygon	SP00144A1	AMD. 1650 AC OF SP 144 TO REDUCE TO 1704 DU'S, ELI MINATE SCHOOL SITE & INCORPORATE DESIGN GUIDELINES EA 32351 SP 144, EIR 112, DA 25	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	1/6/1988	<Null>	10/6/1988	<Null>
28	Polygon	SP00270A1	ADD 86.8 ACRES (RESIDENTIAL) TO SP00270	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	8/3/1999	<Null>	12/14/1999	<Null>
29	Polygon	SP00266	I-15 CORRIDOR SPECIFIC PLAN WITH RESIDENTIAL & COM MERCIAL USES. SP ON 701.3 ACRES WITH 2,210 DU'S ON 422.9 ACRES, 196.9 ACRES OF COMMERCIAL, * EA 34371, EIR 340, CGPA 242, CZ 5619 PM 26203	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	10/11/1989	<Null>	11/2/1993	<Null>
30	Polygon	PP16044	GOLF COURSE AND CLUB HOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/8/1999	<Null>	7/21/2000	2/8/2002
31	Polygon	TR30852E02	SECOND EXTENSION OF TIME FOR TR30852	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	6/11/2018 9:18	<Null>	9/19/2018 11:02	9/3/2021
32	Polygon	SP00300	COMBINED SINGLE-FAMILY/COMMERCIAL/SCHOOL/PARK SITE SP ON 687.3 ACRES FOR 2,753 DU'S ON 621.5 ACRES, 1 4 ACRES OF COMMERCIAL, 8 ACRES OF SCHOOLS AND * EA 36366, EIR 392, CGPA 373 GEO 870, GEO 871	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	4/1/1993	<Null>	11/7/1995	8/22/2005
33	Polygon	SP00125	SP ON 554 ACRES WITH 823 DU'S ON 528.77 AC OF RESI DENTIAL, 5 AC OF PARK & 20.23 AC OF FLOOD CHANNEL EA 7648, EIR 70 N/A	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	2/3/1978	<Null>	12/19/1978	<Null>
34	Polygon	PM32311	SCHED I DIVISION OF 108.4 AC INTO 6 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/27/2005	<Null>	3/26/2007	5/15/2018
35	Polygon	TR28815	DIVISION OF 457 AC INTO 235 SFR LOTS & 10 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	4/22/1998	<Null>	2/8/1999	1/26/2005
36	Polygon	PP15701	GOLF COURSE, CLUBHOUSE, CART STORAGE, MAINT. FAC.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/13/1998	<Null>	12/21/1998	<Null>
37	Polygon	CUP03301R1	REMOVE CONDITION OF APPROVAL 20.PLANNING.2 (WHICH LIMITS THE LIFE OF THE CONDITIONAL USE PERMIT TO F IFTEEN (15) YEARS) AND SEEKS TO LEGALIZE THE EXIST ING RV PARK ONSITE ASSOCIATED WITH THE HUNT CLUB.	CONDITIONAL USE PERMIT (CUP)	CUP03 - RV PARK	PLN	APPROVED	11/9/2006	<Null>	6/13/2008	4/30/2010
38	Polygon	CUP03301	LEGALIZE AN EXISTING HUNT CLUB & 45 RECREATION VEH	CONDITIONAL USE PERMIT (CUP)	CUP03 - RV PARK	PLN	APPROVED	12/3/1999	<Null>	8/3/2001	<Null>
39	Polygon	SP00127	SPECIFIC PLAN ON 894.29 ACRE FOR 452 DU WITH A 30. 9 ACRE ARCHAEO SITE AND A 10 ACRE SCHOOL SITE. EIR 82 N/A	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	10/4/1978	<Null>	4/3/1979	<Null>
40	Polygon	TR29622	SUBD 384.9 AC INTO 274 SFR & ONE 6.8AC OS LOT	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/8/2000	<Null>	1/18/2002	12/4/2006
41	Polygon	TR28816R1	REVISION#1 TR28816 321 SFR, 1 PARK & 11 O/S LOTS	MARES	TTM12 - SFR REVISED NOT IN R-2 R-4 R-6 W/IN 2 YRS	PLN	APPROVED	1/3/2000	<Null>	9/13/2000	1/26/2005
42	Polygon	TR28816	DIVISION OF 370 AC INTO 312 SFR LOTS & 13 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	4/22/1998	<Null>	2/8/1999	1/25/2002
43	Polygon	TR33978	51.15 AC/139 SFR LOTS/5 L/S LOTS/2 LOTS PRESV ROCK	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/31/2005	<Null>	4/25/2007	3/27/2018
44	Polygon	SP00325	329.5 ACRE PROJECT WILL PROVIDE 326 DWELLINGS IN M EDIUM AND MEDIUM LOW DENSITY RESIDENTIAL PROJECT. THE PLAN PROVIDES FOR AN 18 HOLE GOLF COURSE AND 101.5 ACRES OF OPEN SPACE. (77 AC 256 DWELLINGS AN D 32 AC W/70 DWELLINGS,105 AC GOLF COURSE AND CLUB HOUSE,PROJECT CIRCULATION 14 AC)	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	3/26/2001	<Null>	1/10/2005	<Null>
45	Polygon	SP00325A1	MODIFY SP TO ADD 50 UNITS,ELIMNT GOLF CRS,ADJ PLAN NING AREA BOUNDARIES	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	4/30/2012	<Null>	11/9/2015	<Null>
46	Polygon	TR30153	SUBDIVIDE 329 ACRES INTO 295 SFR W/18 HOLE GOLF C	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	2/22/2002	<Null>	4/7/2006	1/18/2016
47	Polygon	TR36390	SCHED A MAP-333.7 AC INTO 345 SF LOTS-TOTAL 394 LT	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	7/30/2012	<Null>	10/17/2013	9/24/2018
48	Polygon	PP15782	18 HOLE GOLF COURSE W/CLUBHOUSE & ANCILLARY FAC	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/18/1998	<Null>	10/25/2000	10/2/2004
49	Polygon	SP00341	FOR 6.2 MILLION SQ FT BUS PARK & LGT IND.	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	4/21/2004	<Null>	10/12/2005	<Null>
50	Polygon	TR36665	SCH A SUBDIV OF 173 AC INTO 587 RES & 14 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	5/13/2015	<Null>	1/31/2019 14:18	12/4/2021
51	Polygon	PM36664	SCH I SUBDIV. OF 266 AC INTO 8 PARCELS W/MIN 21 AC	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	5/13/2015	<Null>	1/31/2019 14:15	12/4/2021
52	Polygon	TR33427	SCHEDULE A SUBDIVISION: 291 SFR LOTS;21 OS LOTS AND ESTABLISH A 3 PHASE MAP WHERE PHASE 1 HAS 131 RESIDENTIAL LOTS, PHASE 2 HAS 95 RESIDENTIAL LOTS AND THE FINAL PHASE HAS 65 RESIDENTIAL LOTS (WHICH REQUIRED AN OFF-SITE SECONDARY ACCESS ROAD.)	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/14/2005	<Null>	12/19/2005	10/26/2020
53	Polygon	TR27557	SUBDIVIDE 260 ACRES INTO 80 LOTS DIVIDE 260 ACRES INTO 80 LOTS EA 36277, CGPA 363, CZ 6164 N/A	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/13/1992	<Null>	8/9/1994	8/9/2003
54	Polygon	TR33976	63.4 AC/15 CONDO LOTS(207 UNITS)7 O-S/1 SCHL/4 OS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/10/2005	<Null>	8/20/2007	6/13/2018
55	Polygon	TR33977	SCHED A: 127.73 AC/340 SFR/4 O-S/9 LS O-S/1 PARK	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/31/2005	<Null>	4/25/2007	3/27/2018
56	Polygon	SP00182	SP ON 302.87 ACRES W 896 DU'S ON 117.8 AC, 3 AC CO MMERCIAL, 4.2 AC REC. CENTER, 177.87 AC OPEN SPACE EA 17098 SP 182 A#1 SP 182 A#1	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	5/25/1983	<Null>	6/5/1984	<Null>
57	Polygon	TR33977E02	THE SECOND EXTENSION OF TIME REQUEST FOR TENTATIVE TRACT MAP NO. 33977 PROPOSED TO EXTEND THE MAP'S CURRENT EXPIRATION DATE OF OCTOBER 18, 2017 FOR AN ADDITIONAL 3 YEARS, TO OCTOBER 18, 2020, SUBJECT TO ALL THE PREVIOUSLY APPROVED AND AMENDED CONDITIONS OF APPROVAL WITH TO THE APPLICANT'S CONSENT. THE APPROVED TENTATIVE MAP S A SCHEDULE "A" SUBDIVISION OF 123.07 ACRES INTO 309 RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 5,000 SQ. FT. AND 8 OPEN SPACE LOTS.	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	1/25/2018 8:53	<Null>	8/22/2018 11:23	3/27/2021
58	Polygon	TR29598	SCHED A DIV 181.45 AC TO 362 RES,1 WATR RES & 1 OS OPEN SPACE, AND 326 RESIDENTIAL LOTS OF 7,200 SQ. FT. MINIMUM LOT SIZE.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/30/2000	5/18/2007	5/18/2004	9/9/2017
59	Polygon	PM32971	SCHED I DIVISION OF 300 AC INTO SIX 20+AC PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/12/2004	<Null>	3/14/2006	12/12/2013
60	Polygon	CUP03375	CUP FOR MYSTIC LAKE DUCK HUNT CLUB/RV PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/31/2002	<Null>	6/17/2004	<Null>
61	Polygon	TR26837	SUBDIVIDE 475.6 AC INTO 40-10 ACRE LOTS DIVIDE 475.6 ACRES INTO 40 RESIDENTIAL PARCELS IN MOUNTAINOUS DESIG. WITH A 10 ACRE MINUMIM LOT SIZE EA 36342 & CZ 6154 GEO 865, SSR 531, EA 36730, UPH 89	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	7/29/1992	<Null>	2/8/1994	2/8/2003
62	Polygon	TR29334	DIVIDE 44.08 AC INTO 200 R-4 LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	8/31/1999	<Null>	9/5/2000	8/15/2005
63	Polygon	PM29249	180.28 AC INTO 7 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/17/1999	<Null>	2/29/2000	3/1/2003
64	Polygon	TR33864	SUBDVID INTO 18 LOTS 9 S-F LOTS 3 M-F LOTS 1 SCHOOTHE LAND DIVISION IS HEREBY PERMITTED FOR A SCHEDU LE C SUBDIVISION OF 168.2 ACRES OF THE OF EMERALD MEADOWS SPECIFIC PLAN NO. 337 INTO SIXTEEN (16) SC HOOL, RESIDENTIAL, AND PARK SITES, INCLUDING THIRT EEN (13) LETTER LOTS. THIS SUBDIVISION ESTABLISHE S PLANNING AREA BOUNDARIES AND AFFECTS 168.2 ACRES OF THE 278.45 IDENTIFIED BY SPECIFIC PLAN NO. 337 . ALL EXISTING RESIDENTIAL LOTS, AND PLANNING ARE AS 1 AND 17 ARE IDENTIFIED AS NOT A PART (NAP). T HE PROJECT SITE IS BOUND BY THE 60 FREEWAY TO THE NORTH, 34TH STREET TO THE SOUTH, SANTA ANNA RIVER TO THE EAST, AND RUBIDOUX BOULEVARD TO THE WEST.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/28/2005	<Null>	4/4/2007	12/6/2014
65	Polygon	PM32312	SCHED I DIVISION OF 217 AC. INTO THREE PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/26/2004	<Null>	1/4/2006	9/6/2018
66	Polygon	PM32312E04	4TH EXTENSION OF TIME FOR PM32312	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPROVED	8/17/2018 16:21	<Null>	5/14/2019 14:32	9/6/2021
67	Polygon	PM32312E03	EXTENSION OF TIME PM32312	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPROVED	8/3/2018 16:23	<Null>	2/14/2019 17:58	9/6/2018
68	Polygon	CUP01302	PROPOSED ADDITION OF 62 SPACES TO RV PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/11/2008	<Null>	2/11/2008	<Null>
69	Polygon	PP16747	2 TELECOMMUNICATIONS TOWERS & TRANSMITTER BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/29/2000	<Null>	6/21/2001	6/4/2004
70	Polygon	TR29597	SCHED A DIV 122.1 AC TO 362 RES,1 OS & 1SCHOOL LOT LOT, A 12.4 ACRE SCHOOL SITE, OPEN SPACE, AND 352 RESIDENTIAL LOTS OF 7,200 SQ. FT. MINIMUM.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/30/2000	<Null>	5/18/2004	9/9/2015
71	Polygon	TR31661	DIVIDE 197 AC INTO 106 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/17/2004	<Null>	3/8/2007	1/23/2013
72	Polygon	TR29600	SUBDIVIDE 188.84 ACRES INTO 273 SFR (7200 SF)	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/30/2000	<Null>	5/18/2004	9/9/2019
73	Polygon	SP00335	THE RESORT RESID/COMM/SCHOOL/PARKS ON 132.4 AC	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	8/14/2003	<Null>	9/8/2006	<Null>
74	Polygon	PM31645	DIVIDE 195.77 AC INTO 16 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/8/2004	<Null>	9/8/2006	12/6/2011
75	Polygon	TR33978M1	MINOR CHANGE 51.15 AC/139 SFR LOTS AND 7 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/19/2015	<Null>	11/9/2015	<Null>
76	Polygon	PM29503	DIVIDE INTO 192.2 ACRES INTO 47 I-P LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	2/10/2000	<Null>	5/23/2000	5/23/2003
77	Polygon	TR27591	DIVIDE 187.2 ACRES INTO 15/1-AC LOTS & 1/98-AC OS EA 36426 PRD ON 151.36 AC W/ 15 1-AC MIN. RES. LOTS & 1 98- AC OPEN SPACE LOT (+2 REMAINDER LOTS ON 35.84 AC)* EA 36426, CZ 6168. GEO 868	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	12/29/1992	<Null>	4/19/1994	4/19/2003
78	Polygon	TR29599	SCHED A DIVISION 142.6 AC. INTO 145 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/30/2000	<Null>	5/18/2004	9/9/2019
79	Polygon	TR29599R1	REVISED TENTATIVE MAP TO REDUCE THE NUMBER OF LOTS FROM 145 TO 143 RESIDENTIAL LOTS WITH A MINIMUM L OT SIZE OF 7,000 SQUARE FEET, 8 OPEN SPACE LOTS, 2 DRAINAGE LOTS, AND ONE WATER TANK LOT.	MARES	TTM12 - SFR REVISED NOT IN R-2 R-4 R-6 W/IN 2 YRS	PLN	APPROVED	4/3/2006	<Null>	4/20/2009	9/9/2019
80	Polygon	SP00224	SP ON 384.8 ACRES WITH 330 DU'S ON 359.7 ACRES, 18 .7 ACRES OF ROADS AND 6.4 ACRE EQUESTRIAN CENTER. EA 32115, EIR 248, GPA 120, AGP 655, CZ 5048,DA 44	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	10/30/1987	<Null>	10/4/1988	<Null>

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
81	Polygon	TR29148	SUBDVD 115.37 AC/497 SFR LOTS/2 OPEN SPACE/1 PARK	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	2/18/1999	<Null>	3/13/2000	2/1/2003
82	Polygon	TR29148M1	MOVE PARK SITE & REDUCE NUMBER OF LOTS TO 474	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	4/10/2001	<Null>	11/21/2001	2/1/2004
83	Polygon	SP00330	SPRINGBROOK ESTATES	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	7/22/2002	<Null>	5/31/2005	<Null>
84	Polygon	TR36475E01	FIRST EXTENSION OF TIME TR36475	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	5/30/2018 11:31	<Null>	9/17/2018 15:59	6/30/2021
85	Polygon	PP16216	WAREHOUSE 826,000 SF/ PHASE II 300,000 SF BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/14/1999	<Null>	2/29/2000	2/28/2002
86	Polygon	TR30993E02	2ND EXTENTION OF TIME FOR TR30993	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	3/1/2018 14:10	<Null>	8/22/2018 9:59	2/7/2021
87	Polygon	TR30993	SUBDIVIDE 161 ACRES INTO 65 SFR	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/25/2003	<Null>	5/8/2007	2/7/2018
88	Polygon	TR31612	SUBDIVIDE 61.8 AC INTO 89 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/17/2004	<Null>	10/24/2007	1/9/2018
89	Polygon	TR23682	DIVIDE 24.1 ACRES INTO 91 LOTS EA 33379 TR 23683, TR 23684, TR 23685, TR 23686, SP 152	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/6/1988	<Null>	5/30/1989	5/30/1991
90	Polygon	TR33978R01	1ST REVISION TO 33978 TENTATIVE TRACT MAP FOR 139 APPROVED LOTS	MARES	TTM12 - SFR REVISED NOT IN R-2 R-4 R-6 W/IN 2 YRS	PLN	APPROVED	5/25/2018 10:24	<Null>	6/24/2019 10:32	<Null>
91	Polygon	TR33978E02	SECOND EXTENSION OF TIME FOR TR33978 PROPOSED TO EXTEND THE MAP'S CURRENT EXPIRATION DATE OF OCTOBER 18, 2017 FOR AN ADDITIONAL 3 YEARS, TO OCTOBER 18, 2020, SUBJECT TO ALL THE PREVIOUSLY APPROVED AND AMENDED CONDITIONS OF APPROVAL WITH TO THE APPLICANT'S CONSENT. THE APPROVED TENTATIVE MAP S A SCHEDULE "A" SUBDIVISION OF 51.15 ACRES INTO 139 RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 6,000 SQ. FT. AND 2 OPEN SPACE LOTS TO PRESERVE NATURAL ROCK OUTCROPPINGS AND 5 OPEN SPACE LOTS FOR COMMON LANDSCAPING. THE MAP INCLUDES THREE PROPOSED PHASES. THE FIRST PHASE IS PROPOSED TO CONTAIN 70 RESIDENTIAL LOTS AND ONE 9.49 ACRE OPEN SPACE LOT. THE OPEN SPACE LOT IN THIS PHASE IS A LARGE HILLSIDE SLOPE THAT IS FRONTED BY A STREET TO MAXIMIZE VISUAL BENEFITS TO THE COMMUNITY. THE SECOND PHASE WILL CONTAIN 64 RESIDENTIAL LOTS. THE FINAL PHASE WILL CONTAIN 5 RESIDENTIAL LOTS, AND ONE OPEN SPACE LOT TO PRESERVE ROCK OUTCROPPINGS.	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	1/25/2018 9:20	<Null>	2/21/2019 10:17	3/27/2021
92	Polygon	TR25012M2	CHANGE TR 25012 ROAD ACCESS/LOT CONFIGURATION	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	7/19/2001	<Null>	3/24/2004	<Null>
93	Polygon	TR25012	DIVIDE 159.14 ACRES INTO 125 PARCELS DIVIDE 159.14 ACRES INTO 125 RESIDENTIAL LOTS AND 1 OPEN SPACE LOT. EA 34438 CZ 5634 (WITHDRAWN)	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	10/31/1989	<Null>	12/21/1993	12/21/2001
94	Polygon	PP25255	THE PLOT PLAN PROPOSES A WIRELESS TELECOMMUNICATIO FACILITY, FOR AT&T DISGUISED AS A 70' HIGH PALM TREE WITH TWELVE (12) PANEL ANTENNAS, TWELVE (12) REMOTE RADIO UNITS (RRU), THREE (3) SURGE SUPPRESS ORS, TWO (2) GLOBAL POSITIONING SATELLITE (GPS)ANT ENNAS, AND A 230 SQ FT EQUIPMENT ENCLOSURE. THE PR OJECT ALSO PROPOSES TO INSTALL TWO (2) LIVE PALM T REES AND ADDITIONAL LANDSCAPING AROUND THE AERA. T HE PROJECT IS LOCATED ON THE MWD PROPERTY CONTAINI NG VARIOUS STRUCTURES TO OPERATE THEIR FACILITY AN D PROPOSED WIRELESS COMM FACILITY IS LOCATED NEAR THE NORTHEAST CORNER ALONG EL SOBRANTE ROAD.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/26/2012	<Null>	12/7/2016	<Null>
95	Polygon	SP00337	DEVLOPE 250 ACRES INTO SPECIFIC PLAN (RES/COMM/PAR	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	11/24/2003	<Null>	11/14/2005	<Null>
96	Polygon	SP00130A1	AMEND SP 130 TO INCREASE DENSITY FROM 170 DWELLING UNITS TO 203 DWELLING UNITS. EA 33485, CGPA 200, TR 24284 SP 130, CZ 2956, TR 14116	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	1/10/1989	<Null>	10/4/1994	<Null>
97	Polygon	TR30337	SUBDIVIDE 143.8 ACRES INTO 209 SFR (20,000SF MIN)	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/16/2001	<Null>	2/19/2004	5/13/2007
98	Polygon	PP16067	PLOT PLAN FOR THREE INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/20/1999	<Null>	10/19/1999	<Null>
99	Polygon	PM28204M1	MINOR CHANGE TO PARCEL LAYOUT TO ACCOMODATE PP	MARES	TPM11 - MINOR CHANGE RESIDENTIAL	PLN	APPROVED	5/14/1997	<Null>	7/8/1997	4/30/2001
100	Polygon	PP15002R1	REV PP15002 EXPAND BLDG FRM 533,300SF TO 753,500	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/14/1999	<Null>	10/19/1999	<Null>
101	Polygon	PP15002	533,300 SQFT WAREHOUSE FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/14/1997	<Null>	7/8/1997	<Null>
102	Polygon	PM28204	DIVIDE APPROX 133 ACRES INTO 17 INDUSTRIAL LOTS DIVIDE 133 ACRES INTO 17 INDUSTRIAL PARCELS EA 36880, CZ 6261	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/29/1995	<Null>	4/30/1996	4/30/2000
103	Polygon	PM28204R1	REV PM28204 TO REV. BLDG CONFIG	MARES	TPM07 - REVISED COMMERCIAL/INDUSTRIAL AFTER 2 YRS	PLN	APPROVED	7/20/1999	<Null>	10/19/1999	<Null>
104	Polygon	CUP02051	SEWAGE TREATMENT PLANT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/22/1977	<Null>	<Null>	5/4/1988
105	Polygon	TR31644	DIVIDE 136.90 AC TO 425 SFR/1PARK/7 OPEN SPACES	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/28/2003	<Null>	8/10/2005	2/26/2013
106	Polygon	PP15520	2 WAREHOUSES 438,380 SQ FT & 220275 SQ FT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/19/1998	<Null>	8/20/1998	<Null>
107	Polygon	PM29537	DIVIDE SITE INTO FIVE PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/2/2000	<Null>	8/13/2003	<Null>
108	Polygon	PP16937	INDUSTRIAL PARK (100 NET ACRES, 5 BUILDINGS)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/7/2001	<Null>	10/28/2003	6/10/2005
109	Polygon	CUP01314	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/11/2008	<Null>	2/11/2008	<Null>
110	Polygon	PP16526	(5) NEW SPEC BLDGS IN GATEWAY BUSINESS PARK	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/27/2000	<Null>	6/12/2000	<Null>
111	Polygon	TR29386	DIV 148 AC TO 351 RES,1 PARK,1 SCH, 10 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/10/1999	<Null>	2/1/2000	1/31/2003
112	Polygon	TR30817	TO DIVIDE 73.98 AC INTO 271 R-1 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/1/2002	<Null>	11/26/2003	8/18/2006
113	Polygon	TR31609	SUBDIVIDE 57 ACRES INTO 92 SFR	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/31/2003	<Null>	10/24/2007	1/9/2018
114	Polygon	TR25219	DIVIDE 123 ACRES INTO 108 PARCELS DIVIDE 123 ACRES INTO 108 LOTS EA 34475, CZ 5642 UPH 52, SC 249, EXT 794, EXT 1129 SEE FILE	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/7/1989	<Null>	3/5/1991	3/5/2001
115	Polygon	TR30931	DIVIDE 120 AC INTO 419 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/16/2002	<Null>	10/31/2006	7/26/2008
116	Polygon	TR31695	SUBDIVIDE 111 ACRES INTO 99 RESIDENTAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/9/2003	<Null>	6/15/2004	5/25/2007
117	Polygon	TR31643	SUBDIVIDE 37 AC INTO 159 SINGLE FAM RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/12/2004	<Null>	11/16/2005	8/9/2008
118	Polygon	PM31962	SUBD 115 AC INTO 4 PARCELS FOR FINANCING PURPOSES	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/24/2004	<Null>	4/6/2005	3/1/2008
119	Polygon	TR30752E03	3RD EXTENSION OF TIME TR30752	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	8/2/2018 16:51	<Null>	12/19/2018 11:35	7/30/2021
120	Polygon	TR30752	SCHED B DIVISION 117 AC INTO 112 RES LOTS W/9 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/28/2003	<Null>	10/2/2013	7/30/2018
121	Polygon	TR31244E04	FOURTH EXTENSION OF TIME FOR TR31244	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	4/18/2018 16:12	<Null>	8/23/2018 15:49	5/11/2021
122	Polygon	PM30401	SUBDIVIDE 143.8 ACRES INTO 6 LOTS (20 AC MIN)	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/22/2001	<Null>	2/19/2004	5/13/2006
123	Polygon	TR33428	SCHEDULE A SUBDIVISION OF 117.69 GROSS ACRES INTO 338 RESIDENTIAL LOTS, 3 PARK LOTS, 1 OPEN SPACE LO T, AND 2 REMAINDER PARCELS.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/4/2006	<Null>	3/16/2009	2/4/2018
124	Polygon	PM29123	SUBDIVIDE 110 AC PAR INTO 1 RES/4 COM/IND PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	2/18/1999	<Null>	10/26/1999	10/26/2005
125	Polygon	TR25925	DIVIDE APPROX 111 ACRES INTO 102 LOTS DIVIDE 111 ACRES INTO 102 LOTS EA 34958, CZ 5757 GPA 229, CFG 239, EXT 868, UPH 76 SEE FILE	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	3/27/1990	<Null>	5/7/1991	5/7/1996
126	Polygon	TR28740	DVD 110.67 AC TO 107 SFR/1 REMNDR 11.2AC/SCHED "A"	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/26/1998	<Null>	10/6/1998	10/5/2001
127	Polygon	TR30971	SUBD 111.74 AC--INTO 490 SFR LOTS 5 PKS / 49 OP SP	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	10/10/2003	<Null>	6/16/2006	5/17/2008
128	Polygon	SP00331	TO BE NAMED LATER/ DEV. 11.98 ACRES COMMERCIAL / 272 SINGLE FAMILY DETACHED /91 LOW DENSITY (7200SF) / 110 LOW DENSITY (6500SF) & 6.37 ACRES NEIGHBORHOOD PARKS	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	1/22/2003	<Null>	6/16/2006	<Null>
129	Polygon	TR30480	SUBD 109 AC INTO 306 RES LOTS & ONE 8.12 AC PARK	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/19/2002	<Null>	2/24/2004	8/19/2007
130	Polygon	TR30295	SUBDIVIDE 112.3 AC INTO 204 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/23/2001	<Null>	10/16/2003	<Null>
131	Polygon	PM30360	FINANCING PARCEL MAP FOR TENT TR30295	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/12/2001	<Null>	10/16/2003	<Null>
132	Polygon	TR30908	DIVIDE 92.5 ACRES INTO 381 RES/2 PARKS/6 OPEN SPAC E LOTS AND DETENTION BASIN	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/4/2002	<Null>	11/22/2005	12/21/2017
133	Polygon	TR30908E04	FOURTH EXTENSION OF TIME FOR TR30908	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/13/2017 15:11	<Null>	2/21/2019 10:15	12/21/2020
134	Polygon	TR30913	CREATE 266 LOTS AND ONE PARK SITE ON 104 ACRES	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/7/2003	<Null>	1/5/2005	9/14/2008
135	Polygon	TR28808	DVD 107 AC/166 SFR/4 O/S TRL LOTS/ 4 LETTRD LOTS EQUESTRIAN CENTER LOT (7.3 ACRES).	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/4/1998	<Null>	12/21/1999	12/21/2004
136	Polygon	TR29677	DIVIDE 105.46 AC IN 426 R-4 LOTS & 1 OS LOT	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	3/14/2001	<Null>	12/11/2003	7/22/2006
137	Polygon	PP16588	408806 SQ WAREHOUSE/OFFICE/TRUCK LOADING 400206 SQ FT WAREHOUSE 8600 SQ FT OFFICES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/9/2000	<Null>	9/5/2000	<Null>
138	Polygon	PM29394	SUBDIVIDE 102.2 AC INTO 6 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	7/22/1999	<Null>	5/16/2000	5/16/2003
139	Polygon	TR32822	DIVIDE 103 AC INTO 83 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/30/2004	<Null>	12/12/2006	10/4/2020
140	Polygon	TR36730	DIVIDE 103 ACRES INTO 271 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	7/3/2014	<Null>	1/10/2018 9:13	5/24/2019
141	Polygon	TR36730E01	1ST EXTENSION OF TIME TR36730	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/13/2018 15:03	<Null>	5/14/2019 13:25	5/24/2022
142	Polygon	PM32311E03	FOURTH EXTENSION OF TIME PM32311	MARES	CUP05 - GENERAL	PLN	APPROVED	7/11/2018 9:21	<Null>	8/23/2018 14:25	5/15/2021
143	Polygon	TR26724	SUBDIVIDE 3.74 ACRES INTO 14 LOTS DIVIDE 4.01 ACRES INTO 14 RESIDENTIAL LOTS. EA 36056 CFG 147, SP 123, DA 8 SEE FILE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/21/1991	<Null>	6/2/1992	6/2/1998
144	Polygon	PM33530R1	DIVIDE 99 ACRES INTO 7 PARCELS SCHEDULE E	MARES	TPM06 - REVISED COMMERCIAL/INDUSTRIAL W/IN 2 YRS	PLN	APPROVED	3/10/2008	<Null>	3/18/2010	6/19/2017
145	Polygon	TR30992	TO DIVIDE 98.56 ACRES INTO 18 SFR	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	2/20/2003	<Null>	1/11/2007	10/24/2017
146	Polygon	PP23332	1,710,760 SQ. FT. INDUSTRIAL SITE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/10/2008	<Null>	3/3/2010	2/8/2015
147	Polygon	TR32677	SUBDIVIDE 101.4 AC INTO 110 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/24/2004	<Null>	6/13/2007	1/9/2015
148	Polygon	TR29124	SUBDVD 75.64 AC/265 SFR LOTS/1 PARK LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	2/11/1999	<Null>	10/26/1999	10/26/2004
149	Polygon	TR29741	DIV 59.78 AC INTO 85 RES,1 INST,1 SPEC USE,4 COMM	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/30/2000	<Null>	5/18/2004	9/9/2015
150	Polygon	TR29740M1	ADJUST APPROVED GRADING & ELEVATIONS FOR EARTHWORK BALANCE AND TO CONVERT 0.88 ACRES OF LOT A INTO A CONSERVATION EASEMENT AS REQUIRED BY THE HANS PROC ESS. THE PROJECT WILL CREATE 270 SINGLE FAMILY RE SIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 7,200 SQ UARE FEET AND 5 OPEN SPACE LOTS.	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	11/16/2006	<Null>	2/17/2009	9/9/2019
151	Polygon	TR29740	DIVIDE 97.75 ACRES INTO 270 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/30/2000	<Null>	5/18/2004	9/9/2019
152	Polygon	TR29315	SCHED A DIVISION 96.1 AC INTO 318 RES,1 PARK 2 OS.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/17/1999	<Null>	7/12/2002	9/11/2016
153	Polygon	TR31243	SUB-DIV 94.4 AC INTO 192 RES. LOTS (PA3/SP229A1) W ITH A 2.9-ACRE LINEAR PARK, AND 12-ACRE SCHOOL SIT E.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/20/2004	<Null>	8/26/2005	5/11/2018
154	Polygon	PP14940R2	REV PP FOR PARKING AREA FOR AUTO RECON FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/28/1999	<Null>	3/28/2000	<Null>
155	Polygon	TR31611E02	2ND EXTENSION OF TIME FOR TR31611	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	1/3/2018 10:22	<Null>	8/22/2018 11:26	1/9/2021
156	Polygon	TR31611	SUBDIVIDE 59 AC INTO 141 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/17/2004	<Null>	10/24/2007	1/9/2018
157	Polygon	TR26685	DIVIDE 91.02 ACRES INTO 78 LOTS DIVIDE 91.02 ACRES INTO 76 RESIDENTIAL LOTS. EA 36128, CZ 6096, (CGPA 275 - EA 35189) SP 299	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/13/1991	<Null>	1/11/1994	1/11/1998
158	Polygon	CUP02865R1	EXTEND LIFE OF CUP2865	MARES	CUP05 - GENERAL	PLN	APPROVED	11/16/2001	<Null>	10/22/2002	8/28/2022
159	Polygon	CUP03464	CONDITIONAL USE PERMIT NO. 3464 PROPOSES TO PERMIT AN EXISTING OPERATION OF A HUNTING CLUB. THE EXIS TING DEVELOPMENT IS COMPRISED OF 11 RV/TRAILER PAR KING SPACES, AN 8 FOOT BY 12 FOOT TOOL SHED, AND T HE EXISTING WELL THAT SERVES THE PROPERTY. THE PR OPOSED IMPROVEMENTS THAT WILL OCCUR ONLY ON THE SO UTHERLY 2 ACRES INCLUDES 8 ADDITIONAL RV PARKING S PACES, TWO (2) 10 FOOT BY 40 FOOT CARGO CONTAINER S, 20 AUTOMOBILE PARKING SPACES, TWO (2) 7,500 GAL LON WATER STORAGE TANKS, A TRAP AND SKEET RANGE AR EA, AND PORTABLE RESTROOMS USED ONLY DURING THE 5 MONTH HUNTING PERIOD.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/12/2005	<Null>	6/2/2010	5/25/2012
160	Polygon	TR30633	SUBD 87.25 AC INTO 327 R-4 RES LOTS & 1 COMM LOT	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	6/14/2002	<Null>	7/17/2003	6/24/2006
161	Polygon	SP00270	THE SIERRA COLLECTION SPECIFIC PLAN - SINGLE FAMIL Y RESIDENTIAL SP ON 424.2 ACRES WITH 825 DU'S ON 357.2 ACRES, 26 .2 ACRES OF OPEN SPACE, * EA 34570, EIR 347, CZ 5662, CGPA 252,DA 50,AGP 708	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	12/1/1989	<Null>	12/28/1992	<Null>

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
162	Polygon	SP00123A3	COMBINE PLANNING AREAS 33-D, E, & F INTO 33-D & TR ANSFER 28 DU TO 33-B, & ADD 1.6 NEW ACRES TO 33-H. EA 19251, TR 21428, CZ 4320, TR 20425 SP 123, SP 123 A#1-A#6, SP 123 SC#1-SC#8*	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	9/19/1984	<Null>	6/24/1986	<Null>
163	Polygon	PM27814	DIVIDE 79.3 ACRES INTO 2 PARCELS W/1 REMAINDER DIVIDE 79.3 ACRES INTO 2 FINANCING PARCELS PLUS ON E REMAINDER PARCEL OF 9.9 ACRES. SP 250	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	9/9/1993	<Null>	3/8/1994	3/8/1999
164	Polygon	PM28834	SCHED E DIVISION OF 80 AC. INTO 27 INDUSTRIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	7/16/1999	<Null>	6/20/2000	4/25/2007
165	Polygon	PP17979	52 FT MONOPINE AND UNMANNED TELECOMMUNICATIONS SIT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/21/2002	<Null>	6/2/2003	<Null>
166	Polygon	TR31554E02	2ND EXTENSION OF TIME-TR31554	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	3/8/2018 15:06	<Null>	8/22/2018 10:08	3/23/2021
167	Polygon	TR29648	SUBDIVIDE 79 AC INTO 139 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/1/2000	<Null>	2/5/2002	11/20/2007
168	Polygon	TR36475	SCHEDULE A MAP TO SUBDIVIDE 168.38 ACRES INTO 171 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/25/2013	8/23/2018	8/24/2015	6/30/2018
169	Polygon	TR30852	SUBDIVIDE 431 ACRES INTO 269 SFR LOTS AND 4 NON-RE SIDENTIAL LOTS.	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/13/2003	<Null>	12/23/2008	9/3/2021
170	Polygon	TR31243E04	FOURTH EXTENSION OF TIME TR31243	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	4/19/2018 13:29	<Null>	8/23/2018 15:38	5/11/2021
171	Polygon	TR25012M1	PHASING TR 25012	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	7/19/2001	<Null>	2/19/2004	7/29/2005
172	Polygon	TR30735	SCHEDULE "A" MAP DIVIDE 76 ACRES INTO 252 DU WITH 7200 SF MIN LOT SIZE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/16/2003	<Null>	1/12/2004	11/4/2006
173	Polygon	PM30810	DIVIDE 78.28 AC INTO 9 LOTS PLUS A REMAINDER PCL	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	7/26/2002	<Null>	12/31/2002	<Null>
174	Polygon	SP00266A1	CHANGE THE L/U DESIG PA 22 FROM CO TO C	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	7/26/2002	<Null>	12/31/2002	<Null>
175	Polygon	PM31623	SUBD 51 AC INTO 6 COMMERCIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	7/23/2003	<Null>	3/15/2004	1/13/2007
176	Polygon	CUP03405	COMMERCIAL SHOPPING CENTER	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	7/23/2003	<Null>	3/15/2004	1/13/2006
177	Polygon	PM29463	DIVIDE 78.18 AC INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/28/1999	<Null>	4/25/2000	4/25/2003
178	Polygon	TR28821	DVD 78.2/302 SFR/2 O-S/1 PRK/1 RTN BSN/1 UTILITY	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/29/1998	<Null>	12/1/1998	12/1/2003
179	Polygon	PM36895	SCHEDULE I PARCEL MAP TO SUBDIVIDE 78.8 ACRES INTO THREE (3) RESIDENTIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/19/2014	<Null>	1/4/2018 10:42	8/29/2020
180	Polygon	TR36635	DIVIDE 80.1 ACRES INTO 283 RESID LOTS/AND 4 LTS FO R WATER QUALITY BASINS 2 LOTS FOR OPEN SPACE 8 LOTS FOR LANDSCAPE (SEE ATTACHED PM 36895 AND CZ 7804)	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	7/31/2013	<Null>	1/4/2018 10:42	8/29/2020
181	Polygon	TR31496	SUBDIVIDE 79 AC INTO 311 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/1/2003	<Null>	1/28/2004	1/13/2007
182	Polygon	PM31560	SUBDIVIDE 79 AC INTO 3 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/1/2003	<Null>	1/28/2004	<Null>
183	Polygon	PP15023	2 BLDG INCLUDING 80,000SQFT OFFICE 874,940SQFTWARE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/29/1997	<Null>	7/14/1997	<Null>
184	Polygon	PM28597	SUBDIVIDE 79.32 AC INTO 2 PARCELS W/ MIN. SIZE OF	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/15/1998	<Null>	3/7/2000	1/10/2010
185	Polygon	CUP03730	105' LATTICE TOWER/WIRELESS FACILITY FOR AT&T	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/15/2015	<Null>	2/8/2018 11:32	<Null>
186	Polygon	TR33976E02	THE SECOND EXTENSION OF TIME REQUEST FOR TENTATIVE TRACT MAP NO. 33976	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	3/26/2018 12:31	<Null>	8/22/2018 9:36	6/13/2021
187	Polygon	PM29913	DIVIDE 76.70 ACRES INTO 3 INDUSTRIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	8/11/2000	<Null>	10/6/2004	4/13/2010
188	Polygon	PP16686	3 CONCRETE TILT UP BUILDINGS BLDG A PCL 1 752,276 SQ FT/BLDG B PCL 2 IS 831,050 SQ FT/BLDG C PCL 3 I S 114,520 SQ FT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/11/2000	<Null>	10/6/2004	4/13/2006
189	Polygon	PUP00783	CONSTRUCTION OF A WIRELESS TELECOMMUNICATION FACIL ITY BY REMOVING AN EXISTING 55' FLAG POLE AND INST ALLING THREE 50' FLAGPOLES/ANTENNA POLES FOR 1 PAN EL ANTENNA FOR EACH POLE, AND TWO EQUIPMENT ENCLOS URES.	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	4/7/1997	<Null>	8/26/1997	8/26/1999
190	Polygon	CUP01192	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/14/2008	<Null>	2/14/2008	<Null>
191	Polygon	CUP01192R1	ADDING 5 MOBILEHOME SPACES TO EXISTING MH PARK	MARES	CUP06 - MOBILE HOME PARK	PLN	APPROVED	9/1/2004	<Null>	1/5/2011	9/15/2012
192	Polygon	PUP00845	43-FT HIGH MONOPINE WITH A 600 SQ. FT. LEASE AREA	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	7/2/2001	<Null>	7/20/2004	4/20/2006
193	Polygon	TR29206	DIVIDE 79.69 AC INTO 30 LOTS/SINGLE FAMILY	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	3/17/2000	<Null>	2/7/2001	12/12/2003
194	Polygon	PM24209	DIVIDE 85.49 ACRES INTO 6 INDUSTRIAL PARCELS EA 33540, CZ 5388 EXT 526, EXT 865, EXT 1149	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/1/1989	<Null>	5/22/1990	5/22/1998
195	Polygon	PP23843	THE FLABOB HANGAR VILLAGE IS A NINE (9) PHASE DEVE LOPMENT OF NINE (9) PRE-FABRICATED AIRPLANE HANGAR METAL BUILDINGS TOTALING 135,569 SQUARE FEET ON 7 .2 NET ACRES OF AN APPROXIMATE SEVENTY FIVE (75) G ROSS ACRE SITE. THE PROJECT SITE IS LOCATED IN THE COMMUNITY OF RUBIDOUX OF THE JURUPA AREA PLAN OF WESTERN RIVERSIDE COUNTY; MORE SPECIFICALLY, NORTH ERLY OF CRESTMORE ROAD, SOUTHERLY OF RUBIDOUX BOUL EVARD, EASTERLY OF 46TH STREET, AND WESTERLY OF 42 TH STREET.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/14/2008	<Null>	8/31/2009	6/15/2011
196	Polygon	TR30909	DIVIDE 83.48 ACRES INTO 198 RES/2 PARKS/SCHOOL/ 4 OPEN SPACE LOTS AND 1 DETENTION BASIN	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/4/2002	<Null>	11/22/2005	12/21/2016
197	Polygon	TR30909E04	FOURTH EXTENSION OF TIME FOR TR30909	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/13/2017 15:27	<Null>	2/21/2019 10:16	12/21/2020
198	Polygon	TR36963	SCHED. A SUBDVISION OF 74 ACRES INTO 34 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/24/2016	<Null>	3/29/2018 12:02	3/27/2021
199	Polygon	TR36639E01	FIRST EXTENSION OF TIME FOR TR 36639	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	1/29/2019 10:35	<Null>	5/28/2019 11:13	2/9/2022
200	Polygon	TR36639	SCHED B SUBDIV OF 74.8 AC INTO 52 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	1/23/2014	<Null>	2/19/2016	2/9/2019
201	Polygon	PUP00880	PUBLIC USE PERMIT NO. 880 PROPOSES TO CONSTRUCT A 104' DIAMETER X 24' HIGH DOMESTIC WATER RESERVOIR LOCATED WITHIN PLANNING AREA 3 OF PHASE 2 FOR THE SPRING MOUTAIN RANCH SPECIFIC PLAN NO. 323 DEVELOPMENT, SPECIFICALLY FOR TRACTS 29598, 29599, AND 29740.PUBLIC USE PERMIT NO. 880 PROPOSES TO CONSTRUCT A 104' DIAMETER X 24' HIGH DOMESTIC WATER RESEVOIR L OCATED WITHIN PLANNING AREA 3 OF PHASE 2 FOR THE SPRING MOURTAIN RANCH SPECFIC PLAN NO. 323 DEVELOP MENT, SPECIFICALLY FOR TRACTS 29598, 29600, 29599, AND 29740	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	11/29/2005	<Null>	6/19/2007	6/5/2009
202	Polygon	SP00123A2	ADD 80.8 ACRES OF HEAVY INDUSTRIAL LAND USE TO SP 123 TO TOTAL 1590 ACRES EA 16127 SP 123, SP 123 A#1-A#6, SP 123 SC#1-SC#8*	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	3/22/1982	<Null>	5/10/1983	<Null>
203	Polygon	TR29599E05	EOT 5 TR29599	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/14/2017 14:55	<Null>	12/17/2018 12:35	9/9/2019
204	Polygon	PM33036	DIVIDE 71.60 GROSS INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/12/2004	<Null>	1/18/2006	9/13/2008
205	Polygon	TR32797	DIVIDE 43.05 GROSS ACRES INTO 119 SFR/4 OPEN SPACE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/12/2004	<Null>	4/3/2009	9/27/2011
206	Polygon	SP00264	SP ON 71.77 ACRES WITH 56 DU'S ON RESIDENTIAL ESTA TE LOTS COVERING THE ENTIRE SP ACREAGE EA 34293, TR 24985, CZ 5593, CGPA 234	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	9/26/1989	<Null>	11/2/1993	<Null>
207	Polygon	TR24985	DIVIDE 71.77 ACRES INTO 56 LOTS EA 34293, SP 264, CZ 5593, CGPA 234 EXT 838, EXT 1146	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1989	<Null>	4/23/1991	4/23/2002
208	Polygon	TR31768	SUBDIVIDE 71.66 ACRES INTO 189 SFR LOTS W/PARK	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/4/2003	<Null>	6/1/2006	4/4/2014
209	Polygon	TR29207	DIVIDE 70.31 AC INTO 293 RES & 2 OS LOTS (251 APPR	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	3/11/1999	<Null>	6/13/2000	4/11/2003
210	Polygon	TR32909	SUBDIVIDE 40 ACRES INTO 140 SINGLE FAMILY LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/29/2004	<Null>	5/26/2009	8/1/2014
211	Polygon	PP20699R1	REDUCE FROM 5 INDUS BLDG TO 3/MODIFY DRAINAGE AND WATER QUALITY CONCEPT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/16/2011	<Null>	8/18/2011	8/16/2013
212	Polygon	PM29855M1	MINOR CHANGE FOR FLOOD CONTROL CONDITION PM29855	MARES	TPM11 - MINOR CHANGE RESIDENTIAL	PLN	APPROVED	5/8/2001	<Null>	12/5/2001	<Null>
213	Polygon	PP16676	738 UNIT CONDOMINIUM OR TOWNHOUSE PROJECT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/7/2000	<Null>	2/14/2001	<Null>
214	Polygon	PM29855	DIVIDE 61 ACRES INTO 3 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/28/2000	<Null>	6/28/2001	<Null>
215	Polygon	TR29646	SUBDIVIDE 70 AC INTO 119 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/20/2000	<Null>	2/5/2002	<Null>
216	Polygon	TR30011	SUBDIVIDE 69.98 ACRES INTO 66 LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	2/2/2001	<Null>	7/31/2002	3/26/2007
217	Polygon	TR28643	DIVISION 48.25 AC INTO 98 SFR/6.19AC PARK/18.4 REM	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	1/5/1999	1/5/2002
218	Polygon	TR31842E02	SECOND EOT FOR TR31842	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/21/2017 12:23	<Null>	8/22/2018 11:35	1/23/2021
219	Polygon	TR31842	SUB 73.13 AC TO 52 1-AC MIN RES,1 OS & 10' TRAIL	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/24/2004	<Null>	3/19/2007	1/23/2018
220	Polygon	TR32477	DIV 69 AC INTO 65-1AC SFR, 3 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	6/22/2004	<Null>	11/7/2005	6/28/2018
221	Polygon	TR30816	CREATE 88 SFR LOTS ON 25.52 ACRES	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	8/27/2002	<Null>	6/13/2003	4/15/2006
222	Polygon	TR31245E04	FOURTH EXTENSION OF TIME FOR TR32145	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	4/18/2018 16:23	<Null>	8/23/2018 16:09	5/11/2021
223	Polygon	TR31245	SUB-DIV 49.8 AC INTO 83 R-A-20,000SQFT LOTS/SP229	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/20/2004	<Null>	5/11/2008	5/11/2018
224	Polygon	SP00266A2	SPECIFIC PLAN NO. 266, AMENDMENT NO. 2 PROPOSES TO TRANSFER 7.9 ACRES FROM PLANNING AREA 1 TO PLANNING AREA 23, AND CHANGE THE BOUNDARIES BETWEE N PLANNING AREAS 1 & 23. PLANNING AREA 1 WILL BE REDUCED FROM 47.9 ACRE TO 40.0 ACRES AND PLANNING AREA 23 WILL BE INCREASED FROM 26.8 ACRES TO 34.7 ACRES. THE TOTAL NUMBER OF ALLOWABLE DWELLING UNIT S WITHIN PLANNING AREA 23 WILL REMAIN UNCHANGED.	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	1/23/2007	<Null>	4/2/2008	<Null>
225	Polygon	TR28279	SUBDIVISION OF 25 LOTS WITH 1 REMAINDER LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/27/1996	<Null>	6/6/1997	5/20/2001
226	Polygon	TR28784	DIVIDE 68.8 ACRES INTO 270 SINGLE FAMILY LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/24/1998	<Null>	1/12/1999	1/12/2003
227	Polygon	TR27891M1	MINOR CHANGE TO DELETE COND 5.2 & 6.1 ON TR27891	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	12/27/1999	<Null>	6/20/2002	9/19/2004

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
228	Polygon	PPT180028	CONSTRUCT A 1,185,400 SQUARE FOOT WAREHOUSE/DISTRIBUTION/MANUFACTURING DEVELOPMENT CONSISTING OF 3 BUILDINGS ON 72.5-ACRES (GROSS). THE 3 BUILDINGS CONSIST OF A 1,138,800 SQUARE FOOT BUILDING (IDENTIFIED AS BUILDING 1), A 31,408 SQUARE FOOT BUILDING (IDENTIFIED AS BUILDING 3), AND A 15,192 SQUARE FOOT BUILDING (IDENTIFIED AS BUILDING 4). NO REFRIGERATED WAREHOUSE SPACE IS PROPOSED AS PART OF THIS PROJECT. TWO REGULAR VEHICLE DRIVEWAYS TO THE PROJECT ARE PROPOSED WITH ONE ENTRANCE EACH ON CAJALCO EXPRESSWAY AND HARVILL AVENUE, WITH AN EMERGENCY ONLY GATED DRIVEWAY ON MARTIN STREET. THE DRIVEWAY ENTRANCES WOULD CONSTRUCT TRAFFIC SIGNALS AND AN ADDITIONAL TRAFFIC SIGNAL IS PROPOSED AT THE INTERSECTION OF CAJALCO EXPRESSWAY AND SEATON AVENUE. WITH THE DRIVEWAYS LOCATED ON CAJALCO AND HARVILL, NO TRUCK TRAFFIC IS ANTICIPATED ON SEATON AVENUE AND SIGNS NOTING RESTRICTION OF TRUCK TRAFFIC WILL BE POSTED ON SEATON AVENUE. OTHER THAN THE TRAFFIC SIGNALS PROPOSED, THE PROJECT WOULD PROVIDE ADDITIONAL DEDICATION AND CERTAIN IMPROVEMENTS TO SURROUNDING ROADS. AN ADDITIONAL 39 FEET OF RIGHT-OF-WAY IS PROPOSED FOR THE NORTH SIDE OF CAJALCO EXPRESSWAY ALONG THE PROJECT'S FRONTAGE WITH ADDITIONAL PAVING FOR A NORTHERLY HALF WIDTH OF 63 FEET TO CURB AS WELL AS SIDEWALK AND LANDSCAPING IMPROVEMENTS IN THE PARKWAY. AN ADDITIONAL NINE FEET OF RIGHT-OF-WAY IS PROPOSED FOR A PORTION OF HARVILL AVENUE TO ACCOMMODATE A NEW RIGHT TURN LANE TO CAJALCO EXPRESSWAY. ALONG THE WEST SIDE OF HARVILL AVENUE ON THE PROJECT'S FRONTAGE, THE PROJECT WILL CONSTRUCT AN EIGHT FOOT DECOMPOSED GRANITE TRAIL ADJACENT TO THE EXISTING SIDEWALK SEPARATED BY A PVC FENCE. NO ADDITIONAL ROAD PAVING IS PROPOSED FOR EITHER SEATON AVENUE OR MARTIN STREET. HOWEVER, ON THE EAST SIDE OF SEATON AVENUE AN ADDITIONAL DEDICATION OF 14 FEET IS PROPOSED FOR SEATON AVENUE AS WELL AS AN EIGHT FOOT WIDE DECOMPOSED GRANITE TRAIL ADJACENT TO THE EXISTING SIDEWALK SEPARATED BY A PVC FENCE. THE PROJECT PROPOSES NEW STOP SIGNS ON SEATON AVENUE AT THE INTERSECTION OF ALVISO ROAD FOR A THREE WAY STOP WITH CROSSWALKS AS DETERMINED BY THE DIRECTOR OF TRANSPORTATION. THE SITE IS CURRENTLY VACANT, BUT DOES INCLUDE AN INTERNAL STREET THAT WAS PREVIOUSLY BUILT. THE PROPOSED PROJECT WOULD VACATE THIS STREET AND DEMOLISH THE STREET WITH SITE PREPARATION AND GRADING OF THE SITE. GRADING FOR THE SITE IS ANTICIPATED TO BE NEARLY BALANCED WITH AN ESTIMATED 26 CUBIC YARDS OF IMPORT PROJECTED. BLASTING MAY BE REQUIRED FOR CERTAIN AREAS OF THE SITE WHERE HARD ROCK MAY BE PRESENT IN THE SOUTHWESTERN PORTION OF THE SITE. IF BLASTING DOES OCCUR, THESE ACTIVITIES WOULD BE REQUIRED TO OBTAIN BLASTING PERMITS FROM THE STATE, NOTIFICATION TO THE SHERIFF'S DEPARTMENT, AND WOULD BE REQUIRED TO REMAIN BELOW THE THRESHOLDS IDENTIFIED BY THE U.S. BUREAU OF MINES (USBM) AND OFFICE OF SURFACE MINING AND RECLAMATION ENFORCEMENT (OSMRE) TO ENSURE NOISE AND VIBRATION IMPACTS FROM THE BLASTING ARE MINIMIZED. THE BLASTING CONTRACTOR WILL INSPECT ANY HOMES WITHIN 300 FEET OF BLASTING AND PROPERTIES WITHIN 600 FEET WILL BE NOTIFIED PRIOR TO ANY BLASTING ACTIVITIES. THE IMPACTS OF BLASTING ARE ANALYZED IN THE INITIAL STUDY/ADDENDUM AND WERE DETERMINED TO BE LESS THAN SIGNIFICANT. THE PROPOSED GRADING OF THE SITE WOULD CREATE AN AREA IN THE WESTERN PORTION OF THE SITE THAT SITS LOWER THAN CURRENT AND WOULD BE LOWER THAN THE ADJACENT SEATON AVENUE AND RESIDENTIAL USES TO THE WEST. AN APPROXIMATELY 18 FOOT MAXIMUM HIGH RETAINING WALL IS PROPOSED ALONG THE WESTERN BOUNDARY THAT WOULD FACE INTERNAL TO THE SITE, SPECIFICALLY THE WESTERN DOCK AREA OF BUILDING 1. A DETENTION/BIORETENTION BASIN IS PROPOSED IN THE SOUTHEAST CORNER OF THE SITE THAT WOULD TREAT RUNOFF FROM THE SITE AND OUTLET TO EXISTING DRAINAGE FACILITIES UNDERNEATH CAJALCO EXPRESSWAY.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/29/2018 11:35	<Null>	9/11/2019 15:30	<Null>
229	Polygon	PM36192	DIVIDE 68 ACRES INTO 18 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/22/2009	<Null>	4/5/2011	2/16/2014
230	Polygon	TR34747	12 FIVE ACRE LOTS/NOT A VESTING MAP	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	8/8/2006	<Null>	10/31/2008	9/2/2017
231	Polygon	TR28878	DIVIDE 32.1 ACRES INTO 98 LOTS/4 O/S LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/18/1998	<Null>	1/5/1999	1/4/2002
232	Polygon	TR33687E03	EXTENSION OF TIME FOR TR33687E03	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	6/12/2018 14:31	<Null>	9/19/2018 11:32	9/12/2021
233	Polygon	TR33687	SCHED A DIVISION OF 67.20 AC TO 309 RES/18 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/21/2005	<Null>	4/24/2007	9/12/2018
234	Polygon	TR26976	DIVIDE 64.6 ACRES INTO 205 LOTS, 11 AC. COMM, PARK , OS IN SP 251 DIVIDE 66.1 ACRES INTO 184 RESIDENTIAL LOTS, 1 COM MERCIAL LOT OF 13.4 ACRE, 1 PARK LOT OF 1.8 ACRES* EA 35822 SP 251, CZ 5549, GPA 236	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/11/1991	<Null>	2/27/1998	9/28/1999
235	Polygon	PM27905	DIVIDE APPROX 66 ACRES INTO 4 LOTS DIVIDE APPROXIMATELY 65.1 ACRES INTO 4 PARCELS FOR FINANCING PURPOSES SP 251, APP 127 FOOTHILL AVENUE	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	2/17/1994	<Null>	12/20/1994	12/20/2000
236	Polygon	SP00251	SP ON 64.4 ACRES WITH 190 DU'S ON 40.8 ACRES, 13.4 ACRES OF COMMERCIAL, * EA 33968, EIR 337, CZ 5549, CGPA 236 TR 26976	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	6/6/1989	<Null>	11/2/1993	<Null>
237	Polygon	PP19434	65FT HIGH MONOPALM W/12 ANTENNAS AND EQUIPTMENT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/10/2004	<Null>	6/10/2005	<Null>
238	Polygon	TR28875	DIVIDE 40.5 ACRES INTO 91 LOTS/1 O/S LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/18/1998	<Null>	12/4/1998	11/23/2001
239	Polygon	PM33530	SUBDIVIDE TO 26 COMMERCIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/7/2005	<Null>	8/24/2007	6/19/2017
240	Polygon	TR31610E02	2ND EXTENSION OF TIME/TTM31610	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	1/3/2018 10:08	<Null>	8/22/2018 11:29	1/9/2021
241	Polygon	PP17058	ADD LANDSCAPING/RESTROOM/GAZEBOS/GREENHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/16/2001	<Null>	2/20/2002	10/29/2005
242	Polygon	TR28898	DIVIDE 30.88 AC INTO 45 SFR LOTS & 5 O/S LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/22/1998	<Null>	1/15/1999	1/4/2002
243	Polygon	PM24064	DIVIDE 58 ACRES INTO 27 INDUSTRIAL PARCELS EA 33628, CZ 5432 EXT 292, EXT 542, EXT 931	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/2/1989	<Null>	6/20/1989	6/20/1997
244	Polygon	TR28945	DIVIDE 41.11 INTO 157 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/23/1998	<Null>	8/10/1999	8/10/2002
245	Polygon	TR27891	DIVIDE APPROX 61 ACRES INTO 156 LOTS SUBDIVIDE 61.35 ACRES INTO 156 RESIDENTIAL LOTS AN D 7 OPEN SPACE LOTS. EA 36685 SP 250, PM 27814, SSR 578	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	5/3/1994	<Null>	9/19/1995	9/19/2001
246	Polygon	TR31726	SUBDIVIDE 49.47 ACRES INTO 188 R-1 RESIDENTIAL LTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/13/2004	<Null>	9/8/2005	3/1/2008
247	Polygon	TR28623	DIVISION OF 19.3 ACRES INTO 83 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	7/7/1998	7/7/2002
248	Polygon	TR28624	DIVISION OF 87.7 ACRES INTO 97 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	7/7/1998	7/7/2001
249	Polygon	PP25422	INDUSTRIAL DISTRIB CTR 918K SF 3 BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/22/2013	<Null>	8/26/2016	<Null>
250	Polygon	TR30288	SUBDIVIDE 56.9-ACRES INTO 80 DWELLING UNITS WITH 20,000 SQUARE FOOT LOT SIZES.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/21/2001	<Null>	4/14/2003	3/24/2006
251	Polygon	TR28641	SUBDVD 41.5 AC INTO 117 RES/10.7 AC REMAINDER LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	1/5/1999	1/5/2002
252	Polygon	TR31244	SUB-DIV 60.3 AC INTO 132 R-A-20,000SQFT LOTS/SP229	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/20/2004	<Null>	8/26/2005	5/11/2018
253	Polygon	TR28946	SUBDIVIDE 70.8 AC INTO 271 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/1/1998	<Null>	8/10/1999	8/10/2005
254	Polygon	PP16216R1	ELIMINATE 351 TRUCK SPACE & ADD WAREHOUSE PHASE II	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/30/2002	<Null>	12/15/2003	<Null>
255	Polygon	TR31607	SUBDIVIDE 52 ACRES INTO 87 SINGLE FAMILY RESIDENCE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/31/2003	<Null>	10/24/2007	1/9/2018
256	Polygon	TR31607E02	2ND EXTENSION FOR TTM31607	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/28/2017 8:57	<Null>	8/22/2018 11:34	1/9/2021
257	Polygon	TR26814	SUBDIVIDE 56.52 AC INTO 56 LOTS DIVIDE 56.52 ACRES INTO 56 RESIDENTIAL LOTS AND 2 OPEN SPACE LOTS EA 35872, CZ 6019, (CGPA 277 - EA 35200) CFG 453	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	5/15/1991	<Null>	10/2/1998	9/22/1999
258	Polygon	SP00251A1	AMENDMENT TO SP251	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	7/21/2005	<Null>	4/24/2007	<Null>
259	Polygon	TR30701	CREATE 186 RESID LTS & 20 LETTERED LTS ON 45 ACRES	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/7/2002	<Null>	8/12/2003	7/22/2006
260	Polygon	TR30466	DIVIDE 51.83 AC INTO 244 R-4 LOTS AND 2 PARK SITES	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	2/14/2002	<Null>	10/1/2002	8/27/2006
261	Polygon	PPT180014	REMOVAL OF EXISTING RADIO TOWER/REPLACE W/ TALLER RADIO TOWER AT SAME LOCATION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/26/2018 13:13	<Null>	8/1/2018 8:07	<Null>
262	Polygon	PM28653	DIVIDE 63.58 ACRES INTO 5 COMMERCIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	9/23/1997	<Null>	1/22/1998	1/6/2001
263	Polygon	TR28910	SUBDIVIDE 55 AC ITNO 168 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/23/1998	<Null>	11/16/1999	11/15/2002
264	Polygon	TR31803	DIVIDE 53.91 AC INTO 183 R-1 LOTS & 1 PARK	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/18/2003	<Null>	1/25/2005	10/19/2007
265	Polygon	TR31608E02	2ND EXTENSION FOR TTM31608	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/28/2017 9:18	<Null>	8/22/2018 11:32	1/9/2021
266	Polygon	TR33675	SCHED A DIVISION OF 50.80 AC. INTO 182 SFR LOTS.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/2/2005	<Null>	6/15/2006	3/14/2014
267	Polygon	PM32545	SUBDIVIDE 35 ACRES INTO 15 COMM. LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	7/22/2004	<Null>	4/24/2006	1/10/2009
268	Polygon	TR31609E02	2ND EXTENSION FOR TTM31609	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/28/2017 9:31	<Null>	8/22/2018 11:30	1/9/2021
269	Polygon	TR31503	DIV 54.82 AC TO 92 5000 SF LOTS & 8-2 1/2 AC LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	1/20/2004	<Null>	12/10/2008	1/23/2017
270	Polygon	TR28917	DIVIDE 11.75 ACRES INTO 12 SFR LOTS & 2 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/22/1998	<Null>	1/15/1999	1/4/2002
271	Polygon	TR31252	SUBDIVIDE 52 AC INTO 205-7200 SF SINGLE FAM RES LOTS AND ONE OPEN SPACE LOT/SCHEDULE A MAP	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/2/2003	<Null>	11/17/2006	8/23/2011
272	Polygon	TR28872	DIVIDE 35.3 ACRES INTO 136 LOTS/2 O/S LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/18/1998	<Null>	12/4/1998	11/23/2001
273	Polygon	TR31608	SUBDIVIDE 41 ACRES INTO 65 SFR W/OPEN SPACE LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/31/2003	<Null>	10/24/2007	1/9/2018
274	Polygon	PP19631	COMMUNITY SHOPPING CENTER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/22/2004	<Null>	4/24/2006	1/10/2008
275	Polygon	TR31606	CREATE 314 UNIT CONDO UNITS ON 21.29 AC	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	7/22/2003	<Null>	8/24/2004	7/27/2007
276	Polygon	PM31010	DIV 54.15 ACRES INTO 2 COMM & 2 RES LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	3/13/2003	<Null>	12/17/2003	11/25/2006
277	Polygon	TR32136	DIV 50.22 ACRES INTO 165 LOTS/3 OPEN SPACE 2 PARK SITES	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/18/2004	<Null>	10/27/2005	9/27/2008
278	Polygon	TR30762	CREATE 181 SFR LTS AND 2 OPEN SPACE LOTS ON 49 AC	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	9/27/2002	<Null>	11/10/2003	10/21/2006
279	Polygon	TR31492	SCHED A SUBDIVISION OF 47.6 AC. INTO 175 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/19/2003	<Null>	2/23/2005	11/23/2011
280	Polygon	PM34826	DIVIDE TWO PARCELS FOR INDV BLDGS ON PP16937	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	5/26/2006	<Null>	11/7/2006	10/18/2010
281	Polygon	TR29093	DIVIDE 48.2 AC TO 188 SFR	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	11/30/1998	<Null>	7/20/1999	7/19/2002
282	Polygon	TR30851	SUBDIVIDE 46.81 ACRES INTO 16 SINGLE FAMILY LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	12/3/2003	<Null>	12/23/2008	9/3/2017
283	Polygon	TR31107	CREATE 162 SF RESIDENTIAL LOTS ON 47.07 AC	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/21/2003	<Null>	11/7/2003	10/7/2006
284	Polygon	TR28684R1	DIVIDE REMAINING 3 ACRES INTO 15 RESIDENTIAL LOTS	MARES	TTM12 - SFR REVISED NOT IN R-2 R-4 R-6 W/IN 2 YRS	PLN	APPROVED	5/12/2000	<Null>	6/8/1999	6/8/2004
285	Polygon	TR28874	DIVIDE 25 ACRES INTO 86 SFR/3 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/18/1998	<Null>	12/4/1998	11/23/2001
286	Polygon	TR33461	TENTATIVE TRACT MAP NO. 33461 PROPOSES TO SUBDIVID E 64.7 GROSS ACRES INTO 203 SINGLE-FAMILY RESIDENT IAL LOTS WITH A MINIMUM LOT SIZE OF 7,200 SQUARE F EET, WITH A 4.39 ACRE SCHOOL SITE (LOT 204) THAT I S A PART OF THE SCHOOL PROPOSED WITHIN TR31768 FOR AN 11 ACRE TOTAL SCHOOL SITE, A 3.28 ACRE PARK (L OT 205) THAT IS ALSO PART OF A PARK PROPOSED WITHI N TR31768 FOR A 5 ACRE TOTAL PARK SITE, AND AN ADD ITIONAL 2.19 ACRE OPEN SPACES (LOTS A TO L). THE PROPOSED MAP WILL BE DEVELOPED IN CONJUNCTION WITH PROPOSED MAPS TR31768 AND TR31778.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/29/2005	<Null>	7/20/2007	5/22/2013
287	Polygon	PP21552	PROSPD 6 LIGHT INDUS BLDGS; TOTAL OF 14 PARCELS. BLDGS RANGING FROM 40,000 SF TO 600,000 SF PER SITE PLAN. 14 PARCELS WHICH WILL BE SUBJECT TO LOT CONSOLIDATIONS, LINE ADJUSTMENTS PER SEPARATE FORTHCOMING APPLICATION.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/21/2006	<Null>	1/3/2007	12/18/2008
288	Polygon	TR29419	SUBD 42 AC INTO 105 RES & 5 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/13/1999	<Null>	11/8/2001	<Null>
289	Polygon	TR33410	SUBDVD 45.57 AC INTO 113 SFR LOTS/BASIN/PARK/OS/TR	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/7/2006	1/22/2021	1/23/2018	4/11/2020
290	Polygon	PP15256	MFG WAREHOUSE, DISTRIB. FAC FOR POLYMER PROD. LOAD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/15/1997	<Null>	1/26/1998	<Null>
291	Polygon	PP15799	WAREHOUSE DISTRIBUTION FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/4/1999	<Null>	6/15/1999	<Null>
292	Polygon	TR28933	SUBDIVIDE 43.88 AC INTO 172 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/14/1998	<Null>	10/26/1999	10/26/2003
293	Polygon	CUP03013R1	EXPAND EXISTING CUP AND EXTENDING LIFE OF PERMIT	MARES	CUP05 - GENERAL	PLN	APPROVED	5/5/1998	<Null>	11/17/1998	5/14/2025
294	Polygon	PP15051	BUILD BLDG, OUTSIDE STORAGE & MOTORCYCLE TEST TRAC RAGE. THE TOTAL STORAGE AREA EQUALS 224,300 SQ. F ACRES).	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/30/1997	<Null>	9/7/1999	<Null>
295	Polygon	TR28873	DIVIDE 14.7 ACRES INTO 57 LOTS/3 O/S LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/18/1998	<Null>	1/5/1999	1/4/2002

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
296	Polygon	TR29600E05	TR29600 EXTENSION #5	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	12/14/2017 15:02	<Null>	12/19/2018 13:19	9/9/2019
297	Polygon	TR30576	SUBDIVIDE 43 ACRES INTO 175 RES. LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	7/26/2002	<Null>	9/23/2003	7/29/2006
298	Polygon	TR28742	SUBDIVIDE 43 AC INTO 136 RES LOTS/1 16 AC PK SITE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/13/1998	<Null>	6/8/1999	6/6/2007
299	Polygon	TR34097	SCHED. B DIVISION OF 40 AC. INTO 39 RES. LOTS	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	11/22/2006	<Null>	9/23/2009	9/1/2021
300	Polygon	TR34097E03	3RD EXTENSION OF TIME FOR TR34097	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	8/28/2018 10:13	<Null>	12/19/2018 11:39	9/1/2021
301	Polygon	CUP00506R2	EXTEND LIFE OF CUP FOR PRIVATE SHOOTING CLUB FOR RECREATIONAL AND LAW ENFORCEMENT PRACTICE SHOOTING	MARES	CUP05 - GENERAL	PLN	APPROVED	7/28/2008	<Null>	8/31/2009	5/13/2011
302	Polygon	CUP00506R1	RVP TO CUP TO ALLOW EXIST. STRUCTURES FOR GUN CLUB	MARES	CUP05 - GENERAL	PLN	APPROVED	10/28/1997	<Null>	9/15/1998	9/29/2008
303	Polygon	TR30473	SCHED A DIVISION OF 40.9 AC.INTO 32 CLUSTERD LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/5/2002	<Null>	4/20/2005	1/11/2016
304	Polygon	CUP01194	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/14/2008	<Null>	2/14/2008	<Null>
305	Polygon	PM28285	SUBDIVIDE 20 ACRES INTO 4 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/31/1996	<Null>	4/14/1997	3/25/2000
306	Polygon	SP00239	SP ON 605.4 ACRES WITH 2236 DU'S ON 431 ACRES, 44 ACRES OF COMMERCIAL, 29.4 ACRES OF OPEN SPACE, * EA 33269, EIR 300, GPA 165, CZ 5317, DA 52	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	10/21/1988	<Null>	4/14/1992	<Null>
307	Polygon	TR29652	SUBD 40.28 AC INTO 31 RES LOTS & 1 OPEN SPACE LOT	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	4/6/2000	<Null>	7/26/2002	4/9/2005
308	Polygon	TR32972	SUBDIV 15.1 ACRES INTO 69 RESIDENTIAL LOTS VISION OF 15.1 ACRES (SP337, PA10) INTO 69 RESIDEN TIAL LOTS WITH A 5,500 SQUARE FOOT MINIMUM LOT SIZ ES AND ONE OPEN SPACE LOT.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/12/2004	<Null>	4/4/2007	12/6/2014
309	Polygon	TR28642	SUBDVD 40AC/104 SRF/1 REMAINDER LOT AND 1 OS/PARK	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	1/5/1999	1/5/2002
310	Polygon	TR36813	SCH B MAP/SUBDIVIDE 38.8 AC INTO 41 SFR .50 LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	12/17/2014	<Null>	1/25/2018 13:46	1/23/2021
311	Polygon	PM29767	SUBDIVIDE 40.4 ACRES INTO 12 INDIVIDUAL LOT	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/18/2002	<Null>	1/8/2003	12/17/2005
312	Polygon	PP18504	2 WAREHOUSE BLDGS W/OFFICE ON PARCEL 4 OF PM29767	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/13/2003	<Null>	11/17/2003	<Null>
313	Polygon	PP18356	5 BUILDINGS ON PARCELS 9-12	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/26/2002	<Null>	7/28/2003	<Null>
314	Polygon	PM28191	DIVIDE 40 ACRES INTO 3 PARCELS DIVIDE 40 ACRES INTO 3 PARCELS EA 36900, CZ 6265	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/22/1995	<Null>	3/25/1999	11/3/2001
315	Polygon	TR31725	SUBDIVIDE 40.61 ACRES INTO 124 SFR LOTS AND 1 OPEN	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/1/2003	<Null>	9/15/2005	8/10/2007
316	Polygon	TR28644	DIVISION OF 28.4 AC INTO 114 SFR AND 1 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	1/5/1999	1/5/2004
317	Polygon	TR32821	SUBDIVIDE 39.59 ACRES INTO 29 LOTS FOR 350 CONDO U NITS INCLUDING 6 OPEN SPACE LOTS.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/20/2004	<Null>	12/2/2009	6/23/2014
318	Polygon	TR30893	TO DIVIDE 40 AC INTO 138 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/12/2002	<Null>	2/17/2004	1/27/2007
319	Polygon	PM34491	SCHEDULE E MAP TO SUBDIVIDE 20.36 ACRES INTO 14 LO	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	3/31/2006	<Null>	12/20/2007	9/4/2015
320	Polygon	TR29104	DIVIDE 39.1 AC INTO 157 R-4 RES LOTS/1 DRAINAGE	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	1/27/1999	<Null>	4/11/2000	4/11/2003
321	Polygon	TR29248	DIVIDE 40 AC INTO 139 R-4 LOTS & 1 PARK (139 APPR)	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	9/28/1999	<Null>	<Null>	<Null>
322	Polygon	PP23256	11 WAREHOUSE AND OFFICE BUILDINGS RANGING IN SIZE FROM 6,112 SQ. FT. TO 67,432 SQ. FT. FOR A TOTAL O F 370,595 SQUARE FEET ON 19.21 GROSS ACRES OF A 35 .96 GROSS ACRE SITE. THE PROJECT PROPOSES 586 PAR KING SPACES, ONE (1) PARCEL THAT WILL REMAIN VACAN T, AND ONE (1) DETENTION/INFILTRATION BASIN. THE PROJECT WILL BE DIVIDED IN TWO PHASES DIVIDED BY B UILDINGS A1 TO A7 AND B1 TO B4.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/15/2008	<Null>	2/19/2009	1/13/2011
323	Polygon	PP20103	PH 1-BOAT MANUF/PH 2-BOAT STOR/PH 3 WARHS & IND BL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/21/2004	<Null>	8/11/2005	<Null>
324	Polygon	TR29208	DIVIDE 38.36 AC INTO 153 RES LOTS (151 APPROVED)	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	3/11/1999	<Null>	6/13/2000	4/11/2004
325	Polygon	TR29542	DIVIDE 39.92 AC INTO 151 LOTS (6500 MIN)	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	1/13/2000	<Null>	2/27/2001	12/12/2003
326	Polygon	TR34713	SCHEDULE "B" SUBDIVISION OF 38.25 ACRES INOT 33 SINGLE FAMILY RESIDENCES LOTS AND 3 OPEN SPACES .	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/7/2006	<Null>	12/11/2006	10/4/2020
327	Polygon	PM35612	SCHEDULE 'E' SUBDIVISION OF 35.96 NET ACRES INTO T HIRTEEN (13) PARCELS WITH A MINIMUM PARCEL SIZE OF 0.38 NET ACRES.	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	1/15/2008	<Null>	2/19/2009	1/13/2014
328	Polygon	PM31923	SCHED I DIVISION-40 AC INTO 2 20 AC. MIN. PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/4/2003	<Null>	7/23/2004	6/29/2007
329	Polygon	TR31931	DIVIDE 13.06 ACRES INTO 47 R-1 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/18/2003	<Null>	11/15/2004	10/26/2007
330	Polygon	TR30575	SUBDIVIDE 39.85 ACRES INTO 152 RESD LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	4/3/2002	<Null>	7/7/2003	<Null>
331	Polygon	TR28622	DIVISION OF 19.1 ACRES INTO 84 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	7/7/1998	7/7/2001
332	Polygon	PP19946	SHOPPING CENTER W/RETAIL/DRIVE-THRUS/GAS CANOPY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/4/2004	<Null>	8/12/2005	6/27/2008
333	Polygon	PM33942	PM33942 PROPOSES A SCHEDULE E SUBDIVISION OF 68.85 GROSS (64.13 NET) ACRES INTO 7 PARCELS: PARCEL ON E (1) - 30.39 GROSS ACRES, PARCEL TWO (2) - 6.06 G ROSS ACRES, PARCEL THREE (3) - 5.97 GROSS ACRES, P ARCEL FOUR (4) - 4.08 GROSS ACRES, PARCEL FIVE (5) - 16.96 GROSS ACRES, PARCEL SIX (6) FOR STORM DRA IN - 1.32 GROSS ACRES, AND PARCEL SEVEN (7) FOR S TORM DRAIN - 2.94 NET ACRES.	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	7/28/2005	<Null>	10/31/2008	6/25/2017
334	Polygon	PP20699	PP20699 PROPOSES TO DEVELOP FIVE (5) INDUSTRIAL / DISTRIBUTION WAREHOUSE BUILDINGS ON A 68.85 GROSS (64.13 NET) ACRE SITE CONSISTING OF: 1,172,710 SQU ARE FEET OF WAREHOUSE, 34,000 SQUARE FEET OF OFFIC E, 425,289 SQUARE FEET OF LANDSCAPING AREA, 927 PA RKING SPACES, AND 8 DETENTION BASINS. THE TOTAL BU ILDING SQUARE FOOTAGE PROPOSED IS 1,206,710 SQUARE FEET. THE PROJECT WILL BE BUILT IN TWO PHASES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/28/2005	<Null>	10/31/2008	6/25/2012
335	Polygon	TR28783	DVD 37.3 AC TO 143 SFR & 1 OPEN SPACE LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/24/1998	<Null>	1/12/1999	1/11/2002
336	Polygon	PP15990	TWO CONCRETE TILT-UP WAREHOUSE/DISTRIBUTION BLDGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/28/1999	<Null>	7/26/1999	<Null>
337	Polygon	PM36007	THE TENTATIVE PARCEL MAP PROPOSES A SCHEDULE "E" S UBDIVISION OF 37.15 GROSS ACRES INTO ELEVEN PARCEL S THAT RANGE IN AREA FROM 0.75 GROSS ACRES TO 6.93 GROSS ACRES. NO IMPROVEMENTS ARE REQUIRED AS THE SITE IS AN EXISTING COMMERCIAL DEVELOPMENT.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/21/2008	<Null>	9/24/2008	7/23/2011
338	Polygon	PP22277	MIXD USE/21 BLDGS/2 INDUST/2 FAST FOOD/4 RETAIL/3 RESEARCH & DEV/3 OFFICE-COMMRL CONDOS/MAJOR A/DRUG STORE/BANK/RESTAURANT/CARWASH/MINI STORAGE/MARKET SEE ATTACHED PP PROPOSAL FOR MORE DETAIL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/3/2006	<Null>	5/28/2008	12/18/2009
339	Polygon	PP22277R1	MODIFY TRANS IMPROVEMENT REQUIREMENTS AND RELATIVE CONDITIONS OF APPROVAL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/5/2009	<Null>	6/2/2009	4/15/2011
340	Polygon	PM35061	SUBDVD 40AC INTO 13 PARCELS/FOR MIXD USE & 1 CONDO	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	11/3/2006	<Null>	5/28/2008	12/18/2013
341	Polygon	CUP03568	SALE OF ALCOHOLIC BEVERAGES FOR OFFSITE COMSUMPT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/26/2007	<Null>	5/28/2008	12/18/2009
342	Polygon	PM32591	SCHED H DIVISION OF 37.5 AC. INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/25/2004	<Null>	9/13/2005	5/17/2008
343	Polygon	TR31386	SUBD 36.74 AC INTO 136 RES LOTS OF 7200 MIN SQ FT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/2/2003	<Null>	8/25/2004	6/29/2007
344	Polygon	PM35587	PM35587 IS A SCHEDULE 'E' SUBDIVISION OF 36.94 GRO SS (36.93 NET) ACRES INTO TWO (2) INDUSTRIAL PARCE LS FOR FINANCING PURPOSES. THE PROPOSED SUBDIVISIO N IS LOCATED IN THE COMMUNITY OF MIRA LOMA OF THE JURUPA AREA PLAN IN WESTERN RIVERSIDE COUNTY; MORE SPECIFICALLY, NORTHERLY OF CANTU GALLEANO RANCH R OAD, SOUTHERLY OF HARREL STREET, AND EASTERLY OF T HE DAY CREEK CHANNEL.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	2/18/2009	<Null>	9/23/2009	6/24/2012
345	Polygon	PM34178	TPM FOR CONDO USE - TWO LOTS PROPOSED SCHEDULE E	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	11/9/2005	<Null>	11/3/2006	8/29/2012
346	Polygon	PM32479	SUBDIVIDE 41 AC INTO 13 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	11/17/2004	<Null>	11/3/2006	8/29/2012
347	Polygon	PP19980	18 INDUSTRIAL BUILDINGS ON 41 ACRES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/17/2004	<Null>	11/3/2006	8/29/2008
348	Polygon	PP25954	PROPOSE 767,410 SF INDUS BLDG WITH 10000 SF MEZZ	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/29/2016	<Null>	4/3/2017	<Null>
349	Polygon	PP16049	TELE COMM SHELTER EQUIP,TOWER AND GENERATOR	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/12/1999	<Null>	2/16/2000	2/16/2002
350	Polygon	TR30592	TO SUBDIVIDE 34 ACRES INTO 131 SFR LOTS PLANNING AND TRANSPORTATION STAFF HAVE DETERMINED THAT CONDITION 50.TRANS.22 IS NOT REQUIRED, AS IT IS IN EXCESS TO THE CONDITIONED IMPROVEMENTS OF TH REE POINTS OF ALTERNATIVE INGRESS / EGRESS. THIS CONDITION IS NOT APPLICABLE PER APPROVAL OF TR3059 2M1 AT PLANNING COMMISSION ON 02/08/06.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/8/2003	<Null>	6/7/2004	2/25/2017
351	Polygon	TR30592M1	REMOVE TRANS COND. 50.TRANS.22 FOR ROW IMPROVEMNT TO A SCHEDULE A SUBDIVISION OF 34 ACRES INTO 131 S FR LOTS.	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	9/1/2005	<Null>	7/11/2006	2/25/2017
352	Polygon	PP23182	7 BLDG INDUSTRIAL CONSTRUCTION 133,782SF BLDGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/19/2007	<Null>	2/9/2010	12/22/2011
353	Polygon	PM35711	SCHED E DIVISION OF 35.23AC INTO TEN LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	11/19/2007	<Null>	2/9/2010	12/22/2012
354	Polygon	PM27581	SUBDIVIDE 34.75 INTO 43-1/2 LOTS DIVIDE 34.96 ACRES INTO 43 INDUSTRIAL PARCELS WITH A 1/2 ACRE MINIMUM PARCEL SIZE EA 36351 & CZ 6156 N/A	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	8/19/1992	<Null>	12/21/1992	12/21/1998
355	Polygon	TR28621	DIVISION OF 40.9 ACRES INTO 89 LOTS & REMAINDER	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/26/1997	<Null>	7/7/1998	7/7/2001
356	Polygon	CUP01922	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/30/2008	<Null>	1/30/2008	<Null>
357	Polygon	PP18224	CINGULAR UNMANNED SHELTER/80' TOWER (LIGHT STAND)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/15/2002	<Null>	6/10/2004	4/21/2006
358	Polygon	PP18016	UNMANNED WIRELESS FACILITY ON EXISTING SCE TRANSMI	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/11/2002	<Null>	12/23/2002	<Null>
359	Polygon	TR31580	CREATE 132 LOTS ON 31.44 AC	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/1/2003	<Null>	3/7/2005	5/25/2007
360	Polygon	PUP00760R1	EXPAND EXISTING ANTENNA SITE	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	1/13/1997	<Null>	10/7/1997	10/7/1999
361	Polygon	PUP00760	INSTALLATION OF SATELITE ANTENNAS REACTIVATE AN EXISTING UNOCCUPIED SATELLITE TRANSE IVER STATION, AND INSTALL 10 ADDITIONAL * EA 36757. N/A. SEE FILE	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	10/4/1994	<Null>	3/28/1995	3/28/1998
362	Polygon	PUP00927	ENTITLE AND ADD 11 ANTENNAS TO TELEPORT FACILITY THE SITE WAS ENTITLED UNDER PUP760,PUP00760R1 BUT SAID ENTITLEMENT HAS EXPIRED. THIS PUP IS TO ENTITLE SITE AND ADD 11 ANTENNAS-DISHES TO SITE.	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	3/11/2015	<Null>	1/5/2018 14:52	<Null>
363	Polygon	TR31778	DIVIDE 31.57 AC INTO 128 SINGLE FAMILY LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	2/11/2004	<Null>	6/1/2006	4/4/2014
364	Polygon	PP14960	240,000 SQFT SPA MANUFACTURING FACILITY FTA 97-2	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/16/1997	<Null>	5/19/1997	<Null>
365	Polygon	TR30238	SCH. B DIVISION OF 34.74 AC.INTO 26 RES. LOTS WIT H SIZES RANGING FROM 1.0 TO 3.6 AC. GROSS, ONE 1.4 -ACRE DETENTION BASIN LOT AND THREE LETTERED LOTS TOTALING 3 ACRES.	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	8/9/2005	<Null>	10/10/2012	5/23/2017
366	Polygon	PP18351	4 SEPERATE BUILDINGS ON 4.7 ACRES. TOTAL BUILDING AREA IS 103,506 SQUARE FEET. THE PROPOSED SITE WILL HAVE 22,974 SQUARE FEET OF LANDSCAPING AND 185 PARKING STALLS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/26/2002	<Null>	7/29/2003	<Null>
367	Polygon	PP18352	6 CONCRETE TILT-UP BLDGS A-F ON 7.5 ACRES. THE PROPOSED BUILDINGS WILL TOTAL 80.351 SQUARE FEET AND HAVE 15,364 SQUARE FEET OF LANDSCAPING AND 240 PARKING STALLS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/26/2002	<Null>	7/28/2003	<Null>
368	Polygon	PM31746	COMBINE TWO LOTS TO ONE IND CONDO	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/13/2004	<Null>	2/9/2005	1/25/2008
369	Polygon	PP25252	399,150 SF WAREHOUSE/OFFICE BLDG FOR DISCOUNT TIRE THE FACILITY WILL ALSO PROVIDE 152 AUTO PARKING SP ACES AND 214 TRACTOR/TRAILER PARKING SPACES, AND I NCLUDES THE CONSTRUCTION OF A PRIVATE ROAD ALONG I TS A PORTION OF THE NORTHERLY PROJECT BOUNDARY.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/20/2012	<Null>	4/1/2013	<Null>
370	Polygon	TR23121	DIVIDE 32 ACRES INTO 27 RESIDENTIAL LOTS EA 32973 EXT 295, EXT 611, EXT 988, SP 198	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/2/1988	<Null>	8/22/1989	8/22/1997
371	Polygon	CUP01313		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/11/2008	<Null>	2/11/2008	<Null>
372	Polygon	TR29115	DIVIDE 30.38 ACRES INTO 132 RES LOTS/1 OPEN SPACE	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	3/12/1999	<Null>	11/2/1999	11/2/2003
373	Polygon	TR30029	SUBDIVIDE 19.7 ACRES INTO 19 LOTS (1 ACRES MIN)	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	1/30/2002	<Null>	5/14/2003	4/15/2006
374	Polygon	TR29694	TO DIVIDE 29 AC INTO 119 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	1/11/2002	<Null>	9/4/2003	<Null>
375	Polygon	PP15352	CLUBHOUSE, PRKY & MAINT. FAC. FOR GOLF COURSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/25/1998	<Null>	4/6/1998	4/6/2000
376	Polygon	TR29533	DIVIDE 29.67 ACRES TO 119 RES. LOTS AND 1 OPEN	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	1/3/2000	<Null>	2/20/2001	12/5/2003

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
377	Polygon	CUP03573	NEIGHBORHOOD RETAIL SHOPPING CENTER TOTALING 70,74 5 SQ FT OF BUILDING AREA FOR 10 BUILDINGS ON 14.09 ACRES. PERMIT THE SALE OF BEER, WINE, AND DISTILLED SPIRITS FOR OFF PREMISES CONSUMPTION WHERE SOLD (ABC TYPE-21) FOR THE PROPOSED DRUG STORE AND PER MIT THE SALE OF BEER AND WINE FOR OFF PREMISES CON SUMPTION WHERE SOLD (ABC TYPE-20) FOR THE PROPOSED GAS STATION.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/15/2007	<Null>	12/29/2008	10/1/2011
378	Polygon	TR33258	DIVIDE 32.82 AC INTO 45 RES LOTS & 1 COMMERCIAL LT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/9/2005	<Null>	3/1/2007	8/15/2012
379	Polygon	PP24341	ADD 3 PANEL ANTENNAS 3MICROWAVE, 1 EQUIP CABINET	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/30/2009	<Null>	1/20/2010	<Null>
380	Polygon	PUP00788	37' TELECOMM FACILITY W/ 16 8' WHIP ANTENNA & 2 M CROWAVE DISHES FOR AN EXISTING ABANDONED RADIO REL AY FACILITY.	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/8/1997	<Null>	5/5/1998	<Null>
381	Polygon	TR24855	SUBDIVIDE 30.20AC INTO 135 RESIDENTIAL LOTS SUBDIVIDE 30.2 ACRE INTO 135 RESIDENTIAL LOTS AND 2 OPEN SPACE LOTS EA 34214, SP 123 SC#5, SP 123 SC#6, CZ 5572 EXT 0455,SP 123, SP 123 A#1-A#6, SP 123 SC#1-SC#8*	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/9/1991	<Null>	3/6/1990	3/6/1993
382	Polygon	TR28195	DIVIDE APPROX 28 ACRES INTO 159 LOTS DIVIDE 30.2 ACRES INTO 159 SINGLE FAMILY RESIDENTI AL LOTS. EA 36881 SP 123, CZ 5572, TR 24855, SC #6 TO SP 123	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	7/3/1995	<Null>	11/21/1995	11/21/1999
383	Polygon	SP00123S6	MODIFY SP FROM MULTIPLE FAMILY DU TO SINGLE FAMILY EA 34214, SP 123 A#5, TR 24855, CZ 5572 SP 123, SP 123 A#1-A#6, SP 123 SC#1-SC#8	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	8/22/1989	<Null>	3/6/1990	3/6/1993
384	Polygon	SP00123S5	MODIFY SP FROM MULTIPLE FAMILY DU TO SINGLE FAMILY EA 34214, SP 123 SC#6, TR 24855, CZ 5572 SP 123, SP 123 A#1-A#6, SP 123 SC#1-SC#8*	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	8/22/1989	<Null>	3/6/1990	3/6/1993
385	Polygon	TR20249	DIVIDE 24.6 ACRES INTO 43 RESIDENTIAL LOTS EA 19451 SP 123, DA 8	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/28/1984	<Null>	8/13/1985	8/13/1989
386	Polygon	TR30702	CREATE 86 SF LOTS ON 25.31 AC	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/15/2002	<Null>	8/12/2003	7/22/2006
387	Polygon	TR32125	TO DIVIDE 10 ACRES INTO 35 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/21/2004	<Null>	9/7/2005	3/15/2008
388	Polygon	TR34014	SCHED A DIVISION OF 40 AC INTO 29 CONDO LOTS/224 U 29 CONDOMINIUM LOTS (152 TRADITIONAL UNITS / 72 CL USTERED UNITS / TOTALING 224 UNITS WITH A DENSITY OF 5.6 DWELLING UNITS PER ACRE) WITH A MINIMUM LOT SIZE OF 16,104 SQUARE FEET, THREE (3) OPEN SPACE LOTS TOTALING 1.98 ACRES WHICH INCLUDES A 3,206 SQUARE FOOT TOT LOT, TWO (2) COMMUNITY FACILITIES, A ND ONE (1) PASSIVE PARK, FOUR (4) EDISON EASEMENT LOTS TOTALING 28,454 SQUARE FEET, ONE (1) DETENTIO N BASIN TOTALING 25,992 SQUARE FEET, 448 GARAGED P ARKING SPACES, 47 OFF STREET PERPENDICULAR SPACES, AND 87 ON STREET PARKING SPACES.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/31/2005	<Null>	11/16/2007	7/31/2013
389	Polygon	CUP00997	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/20/2008	<Null>	2/20/2008	<Null>
390	Polygon	TR27778	316 UNIT CONDO DIVIDE 30.39 ACRES INTO A 1 LOT, 316 UNIT CONDOMIN IUM PLANNED RESIDENTIAL DEVELOPMENT. EA 36683, VAR 1624 TR 10025, GPA 577, COC 2234, CZ 4711, PP 9218.	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	4/28/1994	<Null>	4/4/1995	4/4/2001
391	Polygon	TR28851	30.39 ACRES INTO 11 LOTS/198 CONDO UNITS	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	11/29/1999	<Null>	12/27/2000	11/8/2013
392	Polygon	TR31958	DIVIDE 27.9 AC INTO 61 RES, 1 OS & 1 PARK LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/17/2004	<Null>	10/24/2006	6/6/2009
393	Polygon	TR30825	CREATE 35 SFR LOTS ON 27.08 ACRES	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/12/2002	<Null>	9/4/2003	8/19/2007
394	Polygon	TR29372	DIVIDED 10 ACRES INTO 23 RES AND 1 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/6/1999	<Null>	2/1/2000	2/1/2003
395	Polygon	CUP03542	SPECIALTY RETAILER FOR ALCOHOLIC/NONALCOHOLIC BEV	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/29/2006	<Null>	6/19/2007	6/5/2009
396	Polygon	PM27417	DIVIDE 30.14AC INTO TWO RESIDENTIAL LOTS DIVIDE 30.14 ACRES INTO 2 RESIDENTIAL PARCELS IN T HE MOUNTAINOUS DESIG. W/ 13.26 ACRE MIN. LOT SIZE EA 36356, COC 2094 N/A	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/21/1992	<Null>	9/14/1993	9/14/1997
397	Polygon	TR32291	SCHED A DIVISON OF 29 AC INTO 69 RES, 3 OS, 1 DETE	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	3/21/2005	<Null>	8/7/2007	3/27/2018
398	Polygon	PM25028	DIVIDE 125.9 ACRES INTO 10 BUS. PK LOTS, 56 INDUST . LOTS, 2 MINING LOTS, AND 1 SEWAGE TREATMENT LOT EA 34258, TR 22342 R1, TR 24756, TR 24757 SP 176, EXT 716	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/5/1989	<Null>	2/13/1991	2/13/1998
399	Polygon	TR27294	DIVIDE 25.86 ACRES INTO 25 LOTS DIVIDE 25.86 ACRES INTO 24 RESIDENTIAL LOTS EA 36115 ASA 80, CFG 438	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	10/29/1991	<Null>	11/17/1992	11/17/1999
400	Polygon	SP00208	SP ON 320 ACRES FOR 1986 DU MAX ON 259 ACRES, 39 A CRES COMMERCIAL, 7 ACRE SCHOOL, & 15 ACRE PARK. EA 30135, EIR 218, DA 11 SP 208 SC#1, PP 6107, TR 12103, PP 8679	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	10/21/1985	<Null>	11/25/1986	<Null>
401	Polygon	TR30480M1	MINOR CHANGE TO TR30480 TO REDUCE THE TOTAL NUMBER OF RESIDENTIAL LOTS FROM 316 TO 315, ADD TWO BIO S WALE LOTS, AND INCLUDE A FLOOD CONTROL EASEMENT IN TRACT BOUNDARY. NO OTHER CHANGES PROPOSED	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	8/29/2006	<Null>	3/22/2007	1/30/2010
402	Polygon	PM17160	DIVIDE 1207.4 ACRES INTO 4 PARCELS FOR FINANCING P URPOSES EA 15139, CZ 3511 PM ?, SP 144,TR 17215,TR 17816,TR 17291,TR 19411	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/25/1981	<Null>	10/6/1981	10/6/1983
403	Polygon	TR29420M1	MINOR CHANGE TR29420 RELOCATE SECONDARY ACCESS RD	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	9/4/2001	<Null>	5/15/2002	<Null>
404	Polygon	TR29420	DIVIDE 26 ACRES INTO 61 RES & 1 FLOOD LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/4/1999	<Null>	9/13/2000	8/15/2003
405	Polygon	PP18492	15 LIGHT INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/5/2003	<Null>	2/2/2006	2/2/2008
406	Polygon	CUP02193	PROPOSED 180 SPACE MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/29/2008	<Null>	1/29/2008	<Null>
407	Polygon	PP15095	417,616 SQ FT IND. BLDG IN MIRA LOMA GATEWAY IND	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/11/1997	<Null>	3/26/1998	9/22/1999
408	Polygon	PM27485	SUBDIVIDE 26.73 ACRES INTO 10 INDUSTRIAL LOTS DIVIDE 26.73 ACRES INTO 10 INDUSTRIAL PARCELS WITH A 1.11 ACRE MINIMUM PARCEL SIZE EA 36236 N/A	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/21/1992	<Null>	1/26/1993	1/26/1999
409	Polygon	TR31734	DIVIDE 25.5 AC INTO 91 RES LOTS/INFRASTRUCTURE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/14/2003	<Null>	5/4/2005	1/11/2008
410	Polygon	TR28767	24.82 ACRES TO 6 RESIDENTIAL AND 1 COMMERCIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	9/18/1998	<Null>	2/21/2001	2/6/2004
411	Polygon	PP19261	TO CONSTRUCT TWO 40,000 SQ FT INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/10/2004	<Null>	9/8/2004	8/2/2006
412	Polygon	PP19155	CONSTRUCT FOUR MULTI-TENANT INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/27/2004	<Null>	9/8/2004	8/2/2006
413	Polygon	PP19295	12,000 SQ FT BUILDING FOR WHOLESALE PLUMBING SUPPL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/17/2004	<Null>	3/14/2005	2/22/2007
414	Polygon	TR32362	SUBDIVIDE 24 ACRES INTO 19 SFR & 1 OPEN SP LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/15/2004	<Null>	3/9/2006	1/31/2014
415	Polygon	PP14823R2	ADD MAINTENANCE SHOP/TRAINING CENTER/PARKING AREAS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/11/1999	<Null>	6/7/1999	6/7/2001
416	Polygon	PP14823R1	ADD 5.7 AC, TRUCK PRKG, TEMP SLEEPING QTR, SIGNAGE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/3/1998	<Null>	3/30/1998	<Null>
417	Polygon	TR32172	DIVIDE 23.12 AC INTO 22 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	2/26/2004	<Null>	3/27/2006	2/15/2008
418	Polygon	PM31081	DIVIDE 23.9 AC INTO 7 IND LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/6/2004	<Null>	8/22/2005	6/28/2008
419	Polygon	PP20024	BUSINESS PARK (4 BUILDINGS)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/1/2004	<Null>	10/26/2005	10/3/2009
420	Polygon	TR28899	DIVIDE 21.78 ACRES INTO 50 SFR LOTS & 2 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/22/1998	<Null>	1/15/1999	1/4/2002
421	Polygon	PM29699	SUBD 22.5 AC INTO 2 PARCELS FOR PARK & SCHOOL SITE	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/6/2000	<Null>	8/8/2000	<Null>
422	Polygon	PP21371	PLOT PLAN NO. 21371 PROPOSES THREE (3) SPECULATIVE INDUSTRIAL BUILDINGS ON A 21.35 GROSS ACRE SITE W ITH A FLOOR AREA RATIO OF 0.29 (HEAVY INDUSTRIAL 0 .15-0.50 FLOOR AREA RATIO) CONSISTING OF: 2,000 SQ UARE FEET OF OFFICE MEZZANINE(S) FOR EACH BUILDING , 367,314 SQUARE FEET OF LANDSCAPING AREA, 298,532 SQUARE FEET OF PAVED AREA, AND 370 PARKING SPACES .	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/27/2006	<Null>	5/19/2008	2/26/2011
423	Polygon	CUP03665	SUPERMARKET, DRUG STORE, AND SIX RETAIL SHOPS	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	3/31/2011	<Null>	6/22/2011	6/14/2013
424	Polygon	TR26708	DIVIDE 22.05 ACRES INTO 25 RESIDENTIAL LOTS DIVIDE 22.05 ACRES INTO 25 LOTS. EA 35687, CZ 5961 TR 25337, CZ 5674, CFG 209, EXT 1135	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	12/26/1990	<Null>	3/10/1992	3/10/2000
425	Polygon	PP15861	TWO INDUSTRIAL WAREHOUSE/DIST FACILITIES/OFFICES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/23/1999	<Null>	6/8/1999	6/8/2001
426	Polygon	PP14766R3	THE PROPOSAL IS TO INCLUDE THE COLLECTION, SEPARAT ION, BAILING, AND DISTRIBUTION OF CONSTRUCTION, DE MOLITION AND INERT (CDI) MATERIALS INTO AN ESTABLISHED WOOD RECYCLING FACILITY. THE PROPOSAL INCLUDE S: TWO 320 SQUARE FEET MODULAR OFFICE BUILDINGS AN D THEIR RESPECTIVE PARKING SPACES; FIFTEEN (15) FL EET PARKING STALLS; SEVEN (7) EQUIPMENT PARKING ST ALLS; THE RELOCATION OF TWO WOOD GRINDERS; AND, OF FLOADING, SORTING, AND STORAGE AREAS FOR CDI MATER IALS AS SHOWN IN THE CLOUDED AREA OF THE SITE PLAN . NO OTHER USES OR MODIFICATIONS TO THE PLANS ARE REQUESTED OR CONSIDERED WITH THIS PROPOSAL.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/21/2007	<Null>	9/16/2008	7/28/2010
427	Polygon	PP15795	UNMANNED PERSONAL COMMUNICATIONS SYSTEM 55'	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/30/1998	<Null>	4/8/1999	<Null>
428	Polygon	PP21472	2 PAVER PLANTS/1 MORTAR BLENDING PLANT/OFFICE/PARK ING/PRODUCT STORAGE AREA/FOR MANUFACTURING CONCRET E BLOCKS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/28/2006	<Null>	1/30/2007	12/5/2008
429	Polygon	PM37264	SUBDIVIDE ONE PARCEL INTO FOUR CONT PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/5/2017	<Null>	9/20/2018 13:50	<Null>
430	Polygon	TR28493	DIVIDE 19.18 ACRES INTO 28 RES. LOTS. (1/2 AC MIN)	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/12/1998	<Null>	2/7/2000	1/25/2005
431	Polygon	CUP03598	CUP03598 PROPOSES A 161,215 SQUARE FOOT, TWO PHASE DEVELOPMENT ON A 18.75 GROSS (18.75 NET) ACRE LOT WITH AN ASSOCIATED SIGN PROGRAM. THE PROPOSED USE IS FOR A CONCRETE REINFORCING STEEL BENDING/CUTTI NG, FORM FABRICATION, AND FUEL/WASH FACILITY FOR C ONCRETE PUMP TRUCKS.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/13/2008	<Null>	1/27/2009	12/23/2010
432	Polygon	PP14766R2	RVP TO PROPOSE NEW OPS FOR EXSTG CAN-FIBRE SITE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/14/2003	<Null>	2/16/2005	1/24/2007
433	Polygon	PP14766	134,700 SQ FT FAC FOR MANFCTG DENSITY FIBER BOARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/23/1996	<Null>	11/7/1996	11/4/1998
434	Polygon	PP26173	PROPOSAL TO CONSTRUCT A 423,665 SQ. FT. HIGH-CUBE WAREHOUSING AND DISTRIBUTION FACILITY WITH 413,665 SQ. FT. OF THE BUILDING DESIGNATED FOR WAREHOUSING AND WITH 10,000 SQ. FT. DESIGNATED FOR OFFICE USE. THE FACILITY ALSO PROPOSES WATER QUALITY BASIN, 184 STANDARD PARKING SPACES, 6 ACCESSIBLE PARKING SPACES AND 100 TRAILER PARKING SPACES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/5/2017	<Null>	4/12/2018 11:16	<Null>
435	Polygon	PP16011R1	EXPAND 16000 SQ FT OFFICES TO 27100 SQ FT WE ARE PROPOSING THE EXPANSION OF AN EXISTING ISSU ED PERMIT BNR040187 CURRENTLY AT 16000 SQ FT IN SI ZE FOR OFFICES AND TRUCK MAINTENANCE FACILITY TO B E EXPANDED TO 27100 SQ FT FACILITY TO INCLUDE OFFI CE SPACE TRUCK MAINTENANCE ALONG WITH A TRUCK TIRE RETREAD MANUFACTURING OPERATION ON BEHALF OF MICH ELIN USA CORP	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/15/2007	<Null>	2/19/2008	1/28/2010
436	Polygon	PP16011	TRUCK PARKING & MAINTENANCE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/16/1999	<Null>	9/4/2003	8/19/2005
437	Polygon	TR30736	SUBDIVIDE 20 ACRES INTO 41 SFR & 2 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/30/2002	<Null>	3/28/2003	<Null>
438	Polygon	TR28767R1	REVISE TR28767/DIVIDE 24.8 AC INTO 23 RES.LOTS	MARES	TTM12 - SFR REVISED NOT IN R-2 R-4 R-6 W/IN 2 YRS	PLN	APPROVED	7/12/2001	<Null>	5/17/2002	2/6/2008
439	Polygon	PM35173	SUBDIVIDE 21.07 AC INTO 2 RESIDENTIAL PARCELS FOR FINANCING PURPOSES ONLY. THIS PARCEL MAP IS STRICT LY FOR THE SUBDIVISION OF THE PROPERTY INTO TWO SEPARATE LOTS, AND DOES NOT APPROVE NEW BUILDINGS OR ACTIVITIES.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/4/2006	<Null>	4/23/2007	3/26/2010
440	Polygon	PM35864	THIS PARCEL MAP IS A SCHEDULE "H" SUBDIVISION OF 20 ACRES INTO 2 RESIDENTIAL PARCELS WITH A MINIMUM OF 8 ACRES PER PARCEL.SCHEDULE H SUBDIVISION OF 20.57 AC. INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/26/2008	<Null>	8/1/2013	5/20/2017
441	Polygon	PP15767	426,212 SQ FT REFRIG WAREHOUSE/DISTRIBUTION FAC	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/2/1998	<Null>	1/25/1999	<Null>
442	Polygon	PP17788	426,212 SQ FT INDUSTRIAL WAREHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/2/2002	<Null>	7/20/2011	6/14/2013
443	Polygon	PP09997R1	REV.PP ADD 10,000 SQFT MAINT BLD. 2400 SQFT OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/19/1997	<Null>	4/24/1997	<Null>
444	Polygon	PP09997R2	RVP FOR 12,800 SQ FT MAINT BLDG W/OUTDOOR STORAGE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/10/2000	<Null>	5/29/2001	<Null>
445	Polygon	TR29490	DIVIDE 19.6 AC INTO 83 R-4 RES LOTS & 1 OPEN SPACE	TENTATIVE TRACT MAP (TTM)	TTM05 - SFR IN R-2, R-4, R-6 ZONES	PLN	APPROVED	10/8/1999	<Null>	7/11/2000	7/11/2003
446	Polygon	PM23357	DIVIDE 19.90 ACRES INTO 2 PARCELS EA 32693, CZ 5158 CFG 803	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/30/1988	<Null>	10/23/1997	9/17/1999
447	Polygon	PM24956	DIVIDE 20 ACRES INTO 4 PARCELS DIVIDE 20 ACRES INTO 4 PARCELS EA 34441, CZ 5635 EXT 729, EXT 1115	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/1/1989	<Null>	1/15/1991	1/15/2001
448	Polygon	PP14886R1	ADD TWO WAREHOUSE DISTRIBUTION BLDGS (127K & 43K)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/26/1999	<Null>	12/20/1999	12/20/2001

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
449	Polygon	PP14886R2	THE REVISED PERMIT TO THE PLOT PLAN PROPOSES TO EX PAND AN EXISTING WAREHOUSE DISTRIBUTION SITE CONTA INING ONE 162.612 SQUARE FOOT INDUSTRIAL BUILDING FOR MANUFACTURING AND WAREHOUSING. THE REVISED PE RMIT WILL PERMIT THE CONSTRUCTION OF TWO ADDITIONA L TILT-UP BUILDINGS. THE PROPOSED BUILDING A WILL CONSIST OF 2,100 SQUARE FEET OF OFFICE SPACE AND 1 13,352 SQUARE FEET OF WAREHOUSE SPACE. THE PROPOS ED BUILDING B WILL CONSIST OF 2,704 SQUARE FEET OF OFFICE SPACE AND 38,322 SQUARE FEET OF WAREHOUSE SPACE. THE PROJECT WILL PROVIDE 160 ADDITIONAL PA RKING SPACES AND 3 ACRES OF LANDSCAPING.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/30/2004	<Null>	5/25/2006	3/28/2008
450	Polygon	PM32313	SUBDIVIDE 20+ ACRES INTO 3 INDUSTRIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	5/21/2004	<Null>	5/25/2006	2/22/2012
451	Polygon	PP21207	TO CONSTRUCT A EIGHT (8) INDUSTRIAL USE BUILDINGS, TOTALING 311,412 SQ. FT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/7/2005	<Null>	9/12/2007	8/27/2009
452	Polygon	TR27997	RESIDENTIAL CONDOS (SEWERED) DIVIDE 21.02 ACRES INTO SINGLE LOT CONDOMINIUM PRO JECT W 120 CONDO UNITS & 8.07 ACRES OF OPEN SPACE EA 36718, CZ 6229, VAR 1616. N/A.	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	7/20/1994	<Null>	9/24/1996	9/10/1999
453	Polygon	PM22518	DIVIDE 19.9 ACRES INTO 3 LOTS EA 32092 EXT 130, EXT 363, EXT 634	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/29/1987	<Null>	9/20/1988	9/20/1995
454	Polygon	PP20711	MANUFACTURING DISTRIBUTION FACILITIES PROPOSES THE CONSRUCTION OF TWO MANUFACTURING/ DIS TRIBUTION WAREHOUSE FACILITIES: PROPOSED BUILDING A ID APPROX. 235,500 SQUARE FEET WHICH INCLUDES 20 ,000 SQUARE FEET OF OFFICE, 100,000 SQUARE FEET OF MANUFACTURING, AS WELL AS 115,500 SQUARE FEET FOR DISTRIBUTION AND PROPOSED BUILDING B IS APPROXIMA TELY 126,500 SQUARE FEET WHICH INCLUDES 12,200 SQU ARE FEET OF OFFICE, 61,000 SQUARE FEET OF MANUFACT URING, AS WELL AS 53,300 SQUARE FEET OF DISTRIBUTI ON. THE PROJECT WILL BE BUILT IN TWO PHASES: PHASE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/29/2005	<Null>	10/26/2009	6/9/2012
455	Polygon	PP26220	TRUCKING TERMINAL/LOADING DOCK/OFFICES/PARKING LANDSCAPE AND STORM WATER FOR LIGHT INDUSTRIAL APPLICAITON	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/14/2017	<Null>	3/29/2018 11:39	<Null>
456	Polygon	PM34706	PROPOSE TO SUBDIVIDE 20 ACRES INTO 2 PARCELS. FOR MANUFACTURING AND DISTRIBUTION.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/21/2006	<Null>	10/26/2009	6/9/2016
457	Polygon	TR30896	SUBDIVIDE 19.54 AC PARCEL INTO 73 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/12/2002	<Null>	12/19/2003	12/2/2013
458	Polygon	TR24410	DIVIDE 19.31 ACRES INTO 34 RESIDENTIAL LOTS EA 34063, CZ 5529 EXT 811, EXT 1140	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/30/1989	<Null>	3/12/1991	3/12/1998
459	Polygon	TR30896M1	DELETE CUL-DE-SAC "C" AND REDESIGN LOTS	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	9/9/2005	<Null>	7/13/2006	12/2/2009
460	Polygon	TR23234M2	MC TO TR23234 TO RECONFIGURE STREETS AND LOTS	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	8/27/1996	<Null>	4/29/1997	6/7/2001
461	Polygon	TR23234	DIVIDE 44.55 ACRES INTO 170 SINGLE FAMILY RESIDENC ES EA 32259, CZ 5042 EXT 67, EXT 264, EXT 511, EXT 905	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/14/1987	<Null>	6/7/1988	6/7/2001
462	Polygon	TR28880	SUBDIVIDE 219.05 AC/499 SFR/101.32 REMAINDER LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/16/1998	<Null>	12/14/1999	11/2/2005
463	Polygon	TR27701	PLANNED RESIDENTIAL DEVELOPMENT TR 27701 DIVIDE 19.3 ACRES INTO 8 CONDO LOTS WITH 114 DWELL ING UNITS. EA 36429, VAR 1601 PP 11464, CZ 5588	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	12/31/1992	<Null>	5/31/1994	5/31/1998
464	Polygon	TR29168	DIVIDE 20.1 ACRES INTO 31 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	2/16/1999	<Null>	9/11/2000	8/15/2005
465	Polygon	TR29168M1	REVISE TR 29168 RES., TO INCLUDE DETENTION BASIN	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	12/11/2001	<Null>	10/16/2002	9/23/2005
466	Polygon	PP18961	NATIONAL ARCHIVES & RECORDS ADMIN. WAREHOUSE FAC.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/28/2003	<Null>	1/6/2004	<Null>
467	Polygon	PPT190005	333,553 SQUARE FOOT WAREHOUSE/DISTRIBUTION/MANUFACTURING FACILITY ON 16.86-ACRES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/26/2019 9:30	<Null>	4/8/2020	<Null>
468	Polygon	PP18637	CHASSIS ASSEMBLY FACILITY 54,725 SQ FT BLDG W/PA..	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/20/2003	<Null>	9/15/2003	<Null>
469	Polygon	TR30820	SUBDIVIDE 20 ACRES 72 SINGLE FAMILY RESIDENCES	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/4/2002	<Null>	12/22/2003	<Null>
470	Polygon	TR31301	SUDBIVIDE 18 ACRES INTO 31 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	4/23/2003	<Null>	8/4/2004	6/29/2007
471	Polygon	PP14886	PLOT PLAN FOR INDUSTRIAL MANUFACTURING BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/6/1997	<Null>	4/8/1997	3/24/1999
472	Polygon	PUP00875	SEWER LIFT STATION	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	10/5/2004	<Null>	9/6/2005	6/28/2007
473	Polygon	PP18138	261 UNIT RESIDENTIAL MULTI-FAMILY HOUSING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/9/2002	<Null>	6/13/2003	4/21/2007
474	Polygon	TR30933	DIVIDE 19.8 AC INTO 65 RES LOTS AND 1 DRAINAGE LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/12/2002	<Null>	10/6/2005	3/16/2007
475	Polygon	TR35496E03	3RD EXTENSION OF TIME FOR TR35496E03	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	3/28/2018 10:38	<Null>	8/22/2018 9:30	5/13/2021
476	Polygon	TR35496	SUBDIVIDE 19.54 ACRES INTO 25 LOTS .5 ACRE MIN	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	4/19/2007	<Null>	6/15/2009	5/13/2021
477	Polygon	TR32477E04	FOURTH EXTENSION OF TIME TR32477	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	4/26/2018 14:34	<Null>	8/23/2018 16:11	6/28/2021
478	Polygon	TR31612E02	2ND EXTENSION OF TIME/TTM31612	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	1/3/2018 9:27	<Null>	8/22/2018 11:25	1/9/2021
479	Polygon	PP15982	A 251,332 SQ FT ABD 51,710 SQ FT COLD STORAGE WRHS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/25/1999	<Null>	7/12/1999	<Null>
480	Polygon	PP15645	TWO INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/11/1998	<Null>	11/12/1998	<Null>
481	Polygon	TR33302	DIVIDE 16.7 ACRES INTO 54 SFR (7200SF) LOTS WITH 1 DETENTION BASIN - SCHEDULE A	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/24/2005	<Null>	7/6/2006	6/6/2016
482	Polygon	PM32492	DIVIDE 17.5 AC INTO 4 LOTS FOR CONVEYANCE PURPOSE	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	8/19/2004	<Null>	7/20/2007	1/9/2015
483	Polygon	PUP0525		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
484	Polygon	PP26241	TRUCKING SUPPORT FACILITY INCLUDES A MAINTENANCE BUILDING AND FUEL ISLAND	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/4/2017	<Null>	6/13/2018 14:14	<Null>
485	Polygon	TR28956	SUBDIVIDE 20.7 AC INTO 23 SFR LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/14/1998	<Null>	11/23/1999	11/22/2002
486	Polygon	CUP01458	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/5/2008	<Null>	2/5/2008	<Null>
487	Polygon	CUP01288	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/11/2008	<Null>	2/11/2008	<Null>
488	Polygon	PP17024	BUS MANUFACTURING FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/28/2001	<Null>	9/6/2001	<Null>
489	Polygon	CUP02971R1	EXTEND LIFE OF CUP02971 & ADD 4500SF METAL BLDG	MARES	CUP05 - GENERAL	PLN	APPROVED	2/8/2005	<Null>	12/11/2007	11/20/2009
490	Polygon	PP19589	45' FAUX WATER TOWER WIRELESS TELECOMMUNICATIONS F ACILITY WITH WOODEN FENCE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/6/2004	<Null>	10/7/2005	<Null>
491	Polygon	PM31652	CREATE 4 PARCELS ON 2.5 ACRES	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/7/2003	<Null>	4/12/2004	3/23/2007
492	Polygon	PP16785	TO CONSTRUCT A 345,000 SQ FT IND WAREHOUSE WITH OF FICE SPACE. THE SITE WILL INCLUDE STANDARD CAR PA RKING WITH TRUCK PARKING AND LOADING DOCKS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/25/2000	<Null>	1/22/2002	3/13/2004
493	Polygon	PP23170	DEVELOP A 286,829 SQ.FT. INDUST/DISTRIB/WAREHOUSE INDUSTRIAL / DISTRIBUTION WAREHOUSE BUILDING, "NUE VO BUSINESS PARK I," ON A 16.24 GROSS ACRE SITE WI TH A FLOOR AREA RATIO OF 0.41 (LIGHT INDUSTRIAL RE QUIRES A 0.25-0.60 FLOOR AREA RATIO) CONSISTING OF : 266,829 SQUARE FEET OF WAREHOUSE, 20,000 SQUARE FEET OF OFFICE/ MEZZANINE, 149,216 SQUARE FEET OF LANDSCAPING AREA (21%), 185 PARKING SPACES, AND 63 LOADING DOCKS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/13/2007	<Null>	8/11/2008	6/30/2013
494	Polygon	PP18477	NEIGHBORHOOD SHOPPING CENTER W/SUPERMARKET	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/25/2003	<Null>	9/29/2003	<Null>
495	Polygon	PM24279	DIVIDE 15.87 ACRES INTO 4 PARCELS EA 33421 EXT 338, EXT 559, EXT 986	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/14/1988	<Null>	8/22/1989	8/22/1997
496	Polygon	PP24075	PARKING LOT FOR PROPOSED REC VEHICLE STORAGE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/17/2009	<Null>	12/30/2009	12/14/2011
497	Polygon	PP24075R1	THIS IS A PROPOSAL FOR THE DEVELOPMENT OF A SOLAR POWER PLANT BY ADDING FIXED FLAT PHOTOVOLTAIC (PV) PANELS TO THE ROOF TOPS OF A PREVIOUSLY APPROVED RECREATIONAL VEHICLE (RV) PARKING SHADE STRUCTURES . THE POWER PLANT WILL HAVE A DIRECT CURRENT (DC) OUTPUT OF 1.75 MEGAWATTS (MW), WILL INCLUDE TWO I NVERTER PADS, AND WILL INTERCONNECT TO SOUTHERN CA LIFORNIA EDISON ON SITE. ALL CABLES AND UTILITIES WILL BE UNDERGROUNDED.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/27/2010	<Null>	12/6/2010	11/15/2012
498	Polygon	SP00229	SP ON 981 ACRES WITH 1421 DU'S ON 798 ACRES, 15 AC RES OF COMMERCIAL, 108 ACRES OF OPEN SPACE, * EIR 255, EA 32212, SP 229, CZ 5090, GPA 126, DA 43 CZ 6095	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	12/10/1987	<Null>	10/4/1988	<Null>
499	Polygon	TR23536	DIVIDE 968 ACRES INTO 21 LOTS FOR FINANCING PURPOS ES EA 33313 EXT 474, SP 229	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/15/1988	<Null>	3/27/1990	3/27/1993
500	Polygon	TR32854	9 LOT TRACT RESIDENTIAL SUBDIVISION	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	12/1/2004	<Null>	12/20/2006	10/24/2019
501	Polygon	PP24226	CONSTRUCTION OF 4 METAL BUILDINGS FOR OFFICE AND M ANUFACTURING USES WITH BUILDING SIZES RANGING FROM 15,750 TO 45,600 SQ. FT. THE APPLICANT PROPOSES TO CONSTRUCT THE PROJECT IN 5 PHASES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/27/2009	<Null>	8/20/2013	1/24/2015
502	Polygon	PM36124	SUBDIVIDE 15.02 ACRES INTO 8 COMMERCIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	3/25/2009	<Null>	2/17/2010	10/28/2014
503	Polygon	TR31596	DIVIDE 14.57 ACRES INTO 19 20000 SF MIN LOTS-SCH A	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/15/2004	<Null>	10/16/2007	11/8/2014
504	Polygon	TR24961	DIVIDE 14.57 ACRES INTO 21 LOTS ONE OPEN SPACE EA 34164, CZ 5556 EXT 539	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/8/1989	<Null>	7/17/1990	7/17/1997
505	Polygon	PM31110	DIV 15.24 AC INTO 2 LOTS 1 IN RIV CO 1 IN SB CO THE REMAINDER PARCEL IS IN SAN BERN COUNTY - APPLI CANT WISHES FOR PM TO RECORD FIRST	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/31/2002	<Null>	8/5/2003	6/24/2006
506	Polygon	TR31063	CREATE 47 SFR LOTS ON 14.95 AC	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/17/2002	<Null>	12/12/2003	7/29/2006
507	Polygon	PM33081	SUBDIVIDE THIS PARCELL INTO 4 PARCELLS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/10/2005	<Null>	1/10/2011	8/2/2017
508	Polygon	PM29021	DIVIDE 14.81 ACRES INTO 2 RESIDENTIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/5/1998	<Null>	9/7/1999	9/7/2002
509	Polygon	TR31323	TO DIVIDE 15 AC INTO 59 R-1 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/17/2003	<Null>	11/17/2003	10/21/2006
510	Polygon	TR28698	DVD 15.42 AC INTO 18 SFR/1 ESQUESTN TRAIL LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/18/1997	<Null>	9/1/1998	9/1/2004
511	Polygon	TR28698M1	REV COND 50.PLANNING.28 RE GNATCATCHER MITIGAION	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	1/9/2002	<Null>	9/25/2002	<Null>
512	Polygon	TR32124	SUBDIVIDE 14.8 ACRES INTO 26 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/9/2004	<Null>	9/9/2005	7/26/2008
513	Polygon	TR32124M1	MC TO LOT 9 OF TR32124/LOT 16,681 SF MINIMUM LOT S IZE REQUIRED IS 20,000 SF DUE TO REDESIGN OF CUL-D E-SAC	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	5/2/2006	<Null>	10/11/2006	7/26/2008
514	Polygon	TR33248E01	FIRST EXTENSION OF TIME FOR TR33248	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	3/6/2018 9:21	<Null>	8/23/2018 15:19	3/12/2021
515	Polygon	TR33248	18 AC SPLIT INTO 18 LOTS SFR	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/27/2005	<Null>	4/9/2014	3/12/2018
516	Polygon	PP23063	15'X30' EQUIP SHELTER UNMANNED W/METAL ROOF	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/6/2007	<Null>	10/23/2007	<Null>
517	Polygon	SP00183A1	AMEND SP 183 ON 248 ACRES, W/ 450 DU'S ON 102.8 AC RES, 10 ACRES OF COMMERCIAL, 93 ACRES OPEN SPACE* EA 32294, CZ 5123, DA 13, (CGPA 153 - EA 32880) SP 183	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	6/20/1988	<Null>	10/6/1988	<Null>
518	Polygon	SP00183	SP ON 248 ACRES FOR 450 DU'S ON 56.1 ACRES; 131.4 ACRES OF OPEN SPACE (39.3 ACRES BORROW AREA, * EA 17856	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	9/13/1983	<Null>	9/17/1985	<Null>
519	Polygon	PP25397	64,190 SQ FT MANUFACTURING/WAREHOUSE FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/11/2013	<Null>	10/30/2015	<Null>
520	Polygon	PUP00732R1	EXTENDING THE LIFE OF PUP00732	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	7/25/1998	<Null>	8/21/2000	7/18/2002
521	Polygon	PP25870	THE PLOT PLAN PROPOSES A WAREHOUSE AND DISTRIBUTION FACILITY FOR THE EL DORADO STONE FACILITY THAT WILL INCLUDE THE STORAGE OF MANUFACTURED STONE, CONCRETE PRODUCTS, CARDBOARD BOXES, AND WOOD PALLETS. THE SITE CONSISTS OF AN EXISTING 80,000 SQUARE FOOT BUILDING WHICH WILL BE RENOVATED AND UTILIZED. AN EXISTING 16,000 SQUARE FOOT BUILDING WILL BE DEMOLISHED AND REPLACED WITH A WATER QUALITY BASIN. A 2,000 SQUARE FOOT MODULAR OFFICE BUILDING AND A PARKING LOT WITH LANDSCAPING WILL ALSO BE CONSTRUCTED ON THE SITE. THE REMAINDER OF THE SITE IS PROPOSED TO BE PAVED AND USED FOR STORAGE. THE EXISTING CHAIN LINK ALONG THE EAST, SOUTH, AND WEST OF THE PROPERTY LINE WILL BE REPLACED BY AN EIGHT (8) FOOT HIGH WROUGHT IRON FENCE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/26/2015	<Null>	5/20/2016	<Null>
522	Polygon	CUP03674	TO OPERATE AN AGGREGATE MATERIAL RECYCLING FACILI TY ON 14.5 GROSS ACRES. THE AGGREGATE FACILITY, C ONSISTING OF BROKEN CONCRETE, ASPHALT AND REINFORC ED CONCRETE, IS LOCATED ON 10.8 GROSS ACRES OF THE PROJECT SITE. THE REMAINING PROJECT AREA, WHICH C ONSISTS OF TWO EXISTING VACATED INDUSTRIAL WAREHOU SE BUILDINGS IS NOT A PART OF THIS PROJECT. THE AG GREGRATE FACILITY WILL PROCESS UP TO 100,000 TONS OF MATERIAL ANNUALLY.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/11/2011	<Null>	11/19/2013	9/18/2015

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
523	Polygon	PP23259	12.74 ACRES INDUSTRIAL PARK	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/15/2008	<Null>	11/9/2010	11/4/2011
524	Polygon	PM35882	SUBDIVIDE 12.74 ACRES INTO 6 LOTS/2 LETTER LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/15/2008	<Null>	2/2/2011	11/4/2015
525	Polygon	PUP00849	55' CROSS W/ANTENNAS & EQUIP CABINETS IN ENC	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/19/2001	<Null>	11/26/2003	<Null>
526	Polygon	PP23218	TO REPLACE EXISTING 80' LIGHT STANDARD IN PARK	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/14/2007	<Null>	3/20/2009	2/23/2011
527	Polygon	PP15313	COMM PROJ CONS OF THEATER, RESTAURANT & SHOPS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/28/1998	<Null>	5/26/1998	5/26/2000
528	Polygon	PP26097	MEDICAL CLINIC-OUTPATIENT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/8/2016	<Null>	12/17/2019 8:27	<Null>
529	Polygon	PP15197	3 INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/30/1997	<Null>	12/1/1997	12/1/1999
530	Polygon	PP14485R1	HEAVY EQUIPMENT AUCTION YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/20/2001	<Null>	1/13/2003	<Null>
531	Polygon	PP26174	PLOT PLAN FOR UTILITY STORAGE YARD/CONTRACTOR YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/11/2017	<Null>	3/15/2018 11:14	<Null>
532	Polygon	PP14485	CONSTRUCTION EQUIP AUCTION CONSTRUCTION EQUIPMENT AUCTION EA 36944 COC 4507, COC 4511	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/19/1995	<Null>	2/22/1999	1/22/1999
533	Polygon	PP11677	14 ACRE COMMERCIAL DEVELOMENT A RETAIL SHOPPING CENTER EA 34607 CFG 183, EIR 360, EXT 1043	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/12/1989	<Null>	8/24/1992	8/24/1995
534	Polygon	PP21438	PLOT PLAN NO. 21438 IS A PROPOSAL FOR THE CONSTRUC TION OF A VERIZON WIRELESS TELECOMMUNICATION FACIL ITY DISGUISED AS A 50' HIGH BROADLEAF TREE (55' HIGH WITH TREE FOLIAGE INCLUDED). THE PROJECT WILL A LSO CONSIST OF TWELVE (12) ANTENNA PANELS LOCATED 50' HIGH ABOVE GRADE LEVEL, ONE (1) PARABOLIC DISH , A 40 SQUARE FOOT GENERATOR, AND FOUR (4) GPS ANT ENNAS MOUNTED ONTO FOUR (4) EQUIPMENT CABINETS WIT HIN A 600 SQUARE FOOT NET LEASE AREA. THE PROPOSED FACILITY SHALL BE LOCATED ALONG THE RIDGE OF THE NORTHWEST QUADRANT OF THE SITE.PLOT PLAN NO. 21438 IS A PROPOSAL FOR THE CONSTRUC TION OF A VERIZON WIRELESS TELECOMMUNICATION FACIL ITY DISGUISED AS A 50' HIGH BROADLEAF TREE (55' HI GH WITH TREE FOLIAGE INCLUDED). THE PROJECT WILL A LSO CONSIST OF TWELVE (12) ANTENNA PANELS LOCATED 50' HIGH ABOVE GRADE LEVEL, ONE (1) PARABOLIC DISH , A 40 SQUARE FOOT GENERATOR, AND FOUR (4) GPS ANT ENNAS MOUNTED ONTO FOUR (4) EQUIPMENT CABINETS WIT HIN A 600 SQUARE FOOT NET LEASE AREA. THE PROPOSED FACILITY SHALL BE LOCATED ALONG THE RIDGE OF THE NORTHWEST QUADRANT OF THE SITE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/21/2006	<Null>	10/2/2008	9/17/2010
535	Polygon	PP20520	PROJECT IS 4 INDUSTRIAL BUILDINGS WITH OFFICE SPACE. THE PROJECT WILL REQUIRE A PARCEL MERGER, AND LOTLINE ADJUSTMENT PRIOR TO ANY BUILDING PERMIT ISSUANCE. EACH BUILDING WILL BE SITUATED ON ITS OWN LOT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/10/2005	<Null>	5/24/2006	4/3/2008
536	Polygon	PP23193	50' MONOPINE UNMANNED 12 ANTENNATHIS PLOT PLAN IS A PROPOSAL FOR THE CONSTRUCTION OF AN UNMANNED T-MOBILE WIRELESS TELECOMMUNICATION S FACILITY. THE PROJECT SHALL CONSIST OF A 50' HIG H MONOPOLE DISGUISED AS A MONOPINE WITH 12 ANTENNA PANELS MOUNTED ONTO 3 SECTORS AND LOCATED 47' HIG H ABOVE GRADE LEVEL. ADDITIONALLY THE PROJECT SHAL L INCLUDE 6 EQUIPMENT CABINETS AND 1 GPS ANTENNA W ITHIN A 7' HIGH WROUGHT IRON FENCE ENCLOSURE ON A 581 SQUARE FOOT LEASE AREA.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/28/2007	<Null>	2/20/2009	12/15/2010
537	Polygon	PP23193E01	FIRST EXTENTION OF TIME FOR PP23193	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPROVED	11/20/2018 15:59	<Null>	6/6/2019 14:59	12/15/2028
538	Polygon	RTA25896	REVERSION TO ACREAGE & PP FOR BIG BLDG REVERSION TO ACREAGE - COMBINE 6 LOTS ON 24 ACRES OF INDUSTRIAL PROPERTY EA 35240 PP 12082, PP 13916, EXT 788	REVERSION TO ACREAGE (RTA)	RTA01 - REVERSION TO ACREAGE	PLN	APPROVED	6/18/1990	<Null>	2/26/1991	2/26/1996
539	Polygon	TR30785	SUBD 12.93 AC INTO 41 RES LOTS W/1 AC PARK SITE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/26/2002	<Null>	4/6/2005	<Null>
540	Polygon	PP26198	RENOVATION OF EXISTING BLDG FOR RV/BOAT STORAGE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/16/2017	<Null>	8/30/2018 13:30	<Null>
541	Polygon	PP26048	FOR A CHURCH, MULTI-USE BLDG OFFICES/CLASSRM/HALL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/16/2016	<Null>	1/24/2018	<Null>
542	Polygon	PP25768	THE PROJECT PROPOSES TO CONSTRUCT A NEW 54,450 SQU ARE FOOT ANIMAL FOOD PRODUCTION FACILITY ON AN EXI STING FEED MILL SITE. THE PROJECT PROPOSAL INCLUDE S UTILIZING A PORTION OF THE EXHISTING MILLING OPE RATION LOCATED ON THE SOUTHERN SECTION OF THE PROJ ECT SITE. EXISTING GRAIN STORAGE BINS LOCATED IN T HE NORTHERN AND SOUTHERN PORTION OF THE PROJECT WI LL BE REMOVED.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/26/2015	<Null>	1/23/2018	<Null>
543	Polygon	PP18440	4 SPEC BUILDINGS ON 12.83 AC RANGING 51,575-70,235	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/6/2003	<Null>	8/12/2003	<Null>
544	Polygon	PPT190006	NEW INDUSTRIAL BUILDING 289,556 SQ FT WAREHOUSE ON 12.96 ACRES GROSS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/26/2019 9:39	<Null>	4/13/2020 17:13	<Null>
545	Polygon	TR34420	SCH "A" DIVISON-12.45 AC INTO 1LOT/111UNIT COND0 111 TWO-STORY DETACHED CONDOMINIUM UNITS INCLUDING 3 FLOOR PLANS RANGING FROM 1,586 SQ. FT. TO 1,791 SQ. FT. THE PROPOSAL ALSO INCLUDES A RECREATION AREA WHICH CONSISTS OF A POOL AND TOT- LOT, 202,989 SQ. FT. OF LANDSCAPING, AND 284 PARKI NG SPACES INCLUDING SIX (6) ACCESSIBLE PARKING SPA CES FOR PERSONS W/ DISABILITIES.	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	5/3/2006	<Null>	2/11/2009	10/21/2013
546	Polygon	PP24098	CONSTRUCT NEW SALVATION ARMY RETAIL STORE 39,000SF	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/5/2009	<Null>	4/12/2010	3/22/2012
547	Polygon	TR34592	PROPSD SUBDVISION OF 11.7 AC INTO 97 RES LOTS. SINGLE FAMILY CONDOMINIUMS.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/2/2006	<Null>	2/16/2010	3/27/2018
548	Polygon	SP00323A1	MINOR ALTERATIONS TO THE DENSITY/GEN PLAN.	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	8/2/2006	<Null>	2/16/2010	<Null>
549	Polygon	TR26366	TRACT SUBDIVISION 19.17 ACRES INTO 31 LOTS DIVIDE 19.17 ACRES INTO 31 LOTS EA 35445 GEO 801	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/22/1990	<Null>	2/11/1992	2/11/2001
550	Polygon	PP21813	PLOT PLAN NO. 21813 PROPOSES THE CONSTRUCTION OF ELEVEN (11) INDUSTRIAL BUILDINGS TOTALING 191,411 SQ. FT. (FAR 0.38) , 9 WATER DETENTION BASINS, 37 PARKING STALLS AND 88,497 SQ. FT. OF LANDSCAPING.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/6/2006	<Null>	11/16/2007	6/12/2011
551	Polygon	PM34128	PARCEL MAP NO. 34128 PROPOSES A SCHEDULE E SUBDIVI SION OF A 12.53 ACRE LOT INTO TEN (10) PARCELS RAN GING IN SIZE FROM 28,963 SQ. FT. TO 96,373 SQ. FT.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/6/2006	<Null>	11/16/2007	6/12/2013
552	Polygon	PUP00790	CELL SITE-35' MONOPOLE W/ANTENNAS&EQUIP ENC	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	1/16/1998	<Null>	9/15/1998	<Null>
553	Polygon	PM25427	DIVIDE APPROX 12 ACRES INTO 4 PARCELS DIVIDE 12 ACRES INTO 4 PARCELS EA 34404 EXT 759	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/19/1989	<Null>	1/22/1991	1/22/1996
554	Polygon	PP14759	217,495 SQ FT WAREHOUSE/DIST FAC FOR SPORTING GDS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/13/1996	<Null>	10/28/1996	10/21/1998
555	Polygon	PP18022	INDUSTRIAL BUILDING IN PM30626	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/12/2002	<Null>	6/13/2005	<Null>
556	Polygon	PM30626	SCHED E DIVISION OF 8.7AC INTO 4 INDUSTRIAL PARCEL	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	7/12/2002	<Null>	6/13/2005	7/27/2016
557	Polygon	PUP00871	WATER RESERVOIR	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	6/8/2004	<Null>	8/2/2005	6/28/2007
558	Polygon	PUP00697	CHURCH FACILITY CHURCH FACILITY EA 34651 N/A	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/22/1989	<Null>	8/16/1994	8/15/1996
559	Polygon	PP15861R1	REV. PP15861R1 TO ADD 345,235 SQ. FT. TO WAREHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/25/1999	<Null>	9/28/1999	<Null>
560	Polygon	TR36894	SCHED B SUBDIV 14 ACRES INTO 22 LOTS & 2 OPEN SPAC	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/25/2015	<Null>	3/15/2016	2/9/2019
561	Polygon	PP14271R01	REQUEST FOR REMOVAL OF AN EXISTING CONDITION OF APPROVAL SETTING A PERMIT LIFE OF 20 YEARS FOR AN EXISTING OUTDOOR RECEPTION VENUE FOR WEDDINGS AND PRIVATE PARTIES. (THE ?PROJECT?). THE APPLICANT WILL CONTINUE THE EXISTING USE OF WEDDING AND PRIVATE EVENT USE WITHOUT ANY FURTHER SPECIFIED TIME LIMIT.	MARES	PPA04 - REVISED CEQA EXEMPT/NOT TRANSMITTED	PLN	APPROVED	1/25/2018 10:10	<Null>	8/16/2018 11:13	<Null>
562	Polygon	PP14271	OUTDOOR RECEPTION VENUE OUTDOOR RECEPTION VENUE EA 36847, CZ 6254 PP 12817	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/26/1995	<Null>	2/13/1998	2/3/2000
563	Polygon	CUP03227	RESINS MANUFACTURING FACILITY RESINS MANUFACT FACILITY INCL. OFFICE BLDG, MAINT. BLDG., WAREHOUSE, TRUCK MAINT. & CONTROL ROOM/LAB EA 36982, CZ 6289 NONE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/1/1996	<Null>	6/4/1996	6/4/1998
564	Polygon	CUP03718R1	EXIST HEAVY DUTY EQUIP LOT PROPOSES ADDITIONAL LOT	MARES	CUP05 - GENERAL	PLN	APPROVED	10/7/2016	<Null>	7/31/2017	<Null>
565	Polygon	PP24596	122,585 SF MANUFACTURING BUILDING FOR DELL CORNING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/10/2010	<Null>	6/21/2011	6/6/2013
566	Polygon	PP23342	MULTI USE INDUSTRIAL PARK WAREHOUSE BUILDINGS CONSISTING OF 24,868 SQ. FT./52,274 SQ. FT/41,614 SQ. FT WAREHOUSE BUILDINGS. THE PROJECT PROPOSES A TOTAL OF 180,551 SQ. FT OF BUILDING AREA, 104,437 SQ.FT. OF LANDSCAPING AND 377 PARKING SPACES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/20/2008	<Null>	12/9/2008	10/28/2013
567	Polygon	PP18877	8 INDUSTRIAL BUILDINGS 144,594 TOTAL SQ FT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/11/2003	<Null>	7/21/2011	6/14/2013
568	Polygon	PP23277	CONSTRUCT 116,164 SQ FT INDUSTRIAL FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/30/2008	<Null>	2/9/2010	12/22/2011
569	Polygon	PM35712	PROPOSE A 1 LOT CONDO MAP WITH 11 UNITS FOR FUTURE SALE OF BUILDINGS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	7/1/2008	<Null>	2/9/2010	12/22/2012
570	Polygon	PP15189R1	CO-LOCATE ANT'S/EXPAND LEASE AREA-SEE DESCRIPTION REPLACE EXISTING 70 FT MONOPOLE WITH A 69 FT MONOP INE, WITH PINE BRANCHES EXTENDING 7 FT ABOVE THE P ROPOSED ATENNAS FOR A TOTAL HEIGHT OF 75 FT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/28/2002	<Null>	9/25/2002	<Null>
571	Polygon	PP18045	10 RETAIL BLDGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/26/2002	<Null>	12/31/2002	<Null>
572	Polygon	PM30133	SUBDIVIDE 10.9 AC PARCEL INTO 3 IND PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	3/2/2001	<Null>	5/8/2001	<Null>
573	Polygon	PP16978	PLOT PLAN FOR TWO INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/2/2001	<Null>	5/8/2001	<Null>
574	Polygon	CUP03370	TRUCK/GASSTATION COMM CTR SEVERAL BLDGS @ 32,000SF	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/3/2002	<Null>	7/16/2003	7/1/2006
575	Polygon	CUP03370R1	ADD ADDITIONAL ABC LICENSE TYPE 21 1. REVISE CUP03370 COND OF APPRVL 10.PLANNING 27 TO INCLUDE HARD LIQUOR. 2. DELETE CUP03370 COND OF APPROVAL 10. PLANNING 41 AND REPLACE WITH ABC TYPE 21, HARD LIQUOR., CONDITION NO. 3-MODIFY 11,800 SF C-STORE TO INCLUDE 2000SF TENANT LEASE.	MARES	CUP05 - GENERAL	PLN	APPROVED	5/17/2016	<Null>	8/29/2017	<Null>
576	Polygon	PP14823	TRUCKING/STORAGE/LAYOVER/TRAINING FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/27/1996	<Null>	4/23/1997	1/13/1999
577	Polygon	TR25674	SUBDIVIDE 7.44 ACRES INTO 26 LOTS DIVIDE 7.44 ACRES INTO 26 LOTS EA 34990, CZ 5765	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/4/1990	<Null>	1/15/1998	11/4/2001
578	Polygon	PM36283	TENTATIVE MAP TO SUBDIVIDE TO 9 RETAIL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	12/23/2009	<Null>	4/12/2010	3/16/2013
579	Polygon	PP16379	236,708 SF TILT-UP WAREHOUSE/DISTRIBUTION BLDG.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/26/2000	<Null>	7/10/2000	7/10/2005
580	Polygon	PP14241	CONSTRUCT 238,443 SQ. FT. WAREHOUSE CONSTRUCT 238,443 SQUARE FOOT WAREHOUSE EA 36832 PM 26513, PP 11015	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/28/1995	<Null>	5/8/1995	5/8/1997
581	Polygon	PM33617	SCHEDULE E SUBDIVISION OF 11.3 ACRES INTO 7 INDUST RIAL / COMMERCIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	5/26/2005	<Null>	4/1/2009	3/4/2012
582	Polygon	TR24912	SUBDIVIDE 39 ACRES INTO 27 LOTS DIVIDE 39 ACRES INTO 26 LOTS EA 34643, CZ 5677 CFG 121, UPH 73	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	12/21/1989	<Null>	1/27/1998	11/19/2001
583	Polygon	TR28669	DIVISION OF 10.46 AC INTO 37 SFR LOTS AND 1 OS LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/9/1997	<Null>	2/25/1998	2/23/2001
584	Polygon	SP00144A2	CHANGE P. A. 3 FROM COMMERCIAL TO RESIDENTIAL	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	10/9/1997	<Null>	2/24/1998	<Null>
585	Polygon	CUP03718	REPLACE 20,623 SF. BLDG W/ 40,611 SF. BLDG CONTAIN ING OFFICES, SHOP SPACE, PARTS & STORAGE FOR A HEA VY DUTY EQUIP. SALES & RENTAL FACILITY. 2 EXISTIN G BLDGS IDENTIFIED AS MAIN SHOP (7,720 SF. & TRUCK SHOP (9,735 SF. WILL REMAIN. THE PROJECT WILL HAV E 2 PHASES.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/16/2015	<Null>	5/19/2015	5/12/2023
586	Polygon	PM30699	SCHED H DIVISION-10 AC. INTO 4 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/9/2003	<Null>	5/26/2005	5/26/2008
587	Polygon	TR23119	DIVIDE 103 ACRES INTO 94 RESIDENTIAL LOTS EXT 297, EXT 613, EXT 989, SP 198	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/2/1988	<Null>	8/22/1989	8/22/1997
588	Polygon	PP16979	200,731 SQ FT TILT-UP INDUSTRIAL BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/2/2001	<Null>	7/21/2011	6/14/2013
589	Polygon	TR29160	DVD 10.15 AC/2 LOTS/42 CONDO UNITS	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	1/22/1999	<Null>	6/29/1999	6/29/2002
590	Polygon	PP19215	CONSTRUCT INDUSTRIAL WAREHOUSE BLDG 130,220	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/18/2004	<Null>	9/14/2004	8/30/2006
591	Polygon	TR32973	SCHEDULE A SUBDIVISION OF 27.5 ACRES INTO 103 SFR 14 INTO 108 RESIDENTIAL LOTS & 3 OPEN SPACE LOTS. A TOTAL OF FIVE RESIDENTIAL LOTS WITH A MINIMUM SI ZE OF 7,000 SQUARE FEET AND ONE 2,006 SQUARE FOOT OPEN SPACE LOT SHALL BE DEVELOPED IN PA 13 AND 103 RESIDENTIAL LOTS WITH A MINIMUM SIZE OF 5,000 SQUARE FEET AND TWO OPEN SPACE LOTS SHALL BE DEVELOPED IN PA 14.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/12/2004	<Null>	4/4/2007	12/6/2014
592	Polygon	PP14149R1	ADD 270000 SQ FT WAREHOUSE & 30555 SQ FT OFFICE SP	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/1/2000	<Null>	1/17/2001	<Null>
593	Polygon	PP16756	SHOPPING CENTER (ALBERTSON/FAST FOOD/MISC. STORES)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/5/2000	<Null>	1/29/2001	<Null>
594	Polygon	TR30895	SUBDIVIDE 10 AC PARCEL INTO 39 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/12/2002	<Null>	12/22/2003	12/2/2006

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
595	Polygon	PP18309R2	ADD 12000SF BLDG-SHOP AND STORAGE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/27/2010	<Null>	4/12/2011	3/28/2013
596	Polygon	PP18309	4000 SF FACILITY FOR TRUSS MFG & ASSEMBLY ON 10 AC	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/26/2002	<Null>	3/10/2003	7/1/2028
597	Polygon	PM35726	SUBDIVIDE 10ACRES INTO 2 PARCELS PARCEL 1 4.0 ACRES AND PARCEL 2 6.0 ACRES	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	12/8/2008	<Null>	9/23/2009	7/22/2012
598	Polygon	PM31526	SUBDIVIDE 11.27 ACRES INTO SIX LOTS (SP00300)	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	8/28/2003	<Null>	6/29/2004	6/8/2007
599	Polygon	CUP03407S2	MODIFYING FLOOR AND ELEVATIONS FOR 7-ELEVEN	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/14/2005	<Null>	3/20/2006	<Null>
600	Polygon	CUP03407	9.3 AC RETAIL/COMMERCIAL SHOPPING CENTER	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/28/2003	<Null>	6/28/2004	6/8/2006
601	Polygon	TR33465	SUBDVD INTO 1 COMM LOT 14 SF LOTS & 2 O/S LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/3/2005	<Null>	9/20/2006	7/26/2010
602	Polygon	TR28885	DIVIDE 10 ACRES INTO 9 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	8/20/1998	<Null>	7/20/1999	7/19/2002
603	Polygon	PP23871	DISGUISED 69' CELL TOWER,6PANEL ANTENNAS,6EQUIP CA BINETS, ONE 2' MICROWAVE DISH	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/6/2008	<Null>	10/19/2009	9/14/2011
604	Polygon	PP20116	SELF STORAGE FACILITY W/MANAGER OFFICE & RES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/2004	<Null>	4/26/2006	11/8/2007
605	Polygon	PUP00820S2	ADDING EQUIP. SHELTER TO EXISTING UNMANNED WIRELES	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/19/2006	<Null>	2/28/2007	<Null>
606	Polygon	PP25779	NEW WIRELESS FACILITY FOR VERIZON WIRELESS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/12/2015	<Null>	8/21/2017	9/26/2026
607	Polygon	PM28121	SUBDIVIDE 10 AC PAR INTO 2 2.5 AC & 1 5 AC PAR	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/5/1996	<Null>	3/11/1997	2/11/2005
608	Polygon	TR30725	TO SUBDIVIDE 10.22 ACRES INTO 13 SINGLE FAMILY LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/22/2002	<Null>	12/16/2003	9/23/2006
609	Polygon	PP14659	470,600 SQ FT IND. WAREHOUSE & 2O,000 SQ FT OFFICE S 470,600 SQ FT IND WAREHOUSE & 20,000 SQ FT OFFICES EA 37003 EA 37003, CFG 1023	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/22/1996	<Null>	7/16/1996	7/1/1998
610	Polygon	PM27389	SUBDIVIDE 10 ACRES INTO 2-5 AC LOTS DIVIDE 10 ACRES INTO 2 PARCELS EA 36378 N/A	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/30/1992	<Null>	10/24/1995	10/24/1999
611	Polygon	PM27696	SUBDIVIDE 10.08 ACRES INTO TWO-5 AC PARCELS DIVIDE 10.08 ACRES INTO 2 RESIDENTIAL PARCELS WITH A 5 ACRE MINIMUM PARCEL SIZE EA 36537. N/A.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/14/1993	<Null>	3/29/1994	3/29/1998
612	Polygon	PM32223	SCHED H DIVISION OF 10 AC INTO THREE PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/25/2004	<Null>	3/30/2016	6/26/2017
613	Polygon	PM28031	DIVIDE 9.8 ACRES INTO TWO-3.15 AC. ONE-2.17 & ONE- 1.00 AC. PARCEL DIVIDE 9.8 ACRES INTO 4 RESIDENTIAL PARCELS RANGIN G IN SIZE FROM 1 ACRE TO 3.5 ACRES. EA 36740. N/A. SEE FILE	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/14/1994	<Null>	1/31/1995	1/31/1999
614	Polygon	TR34440	SCHED B SUBDVD 9.83 ACRES INTO 9 RES LOTS.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/17/2006	<Null>	10/4/2007	9/18/2015
615	Polygon	TR30567	SUBDIVISION FOR 38 SFR LOTS ON 10 AC	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/28/2002	<Null>	6/13/2003	4/22/2006
616	Polygon	PM27870	DIVIDE APPROX 10 ACRES INTO 2 PARCELS DIVIDE 10 ACRES INTO TWO-5 ACRE PARCELS. EA 36682. N/A.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/21/1994	<Null>	8/15/1996	6/18/1999
617	Polygon	TR29712	SUBDIVIDE 10 ACRES INTO 5 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/9/2000	<Null>	2/13/2002	<Null>
618	Polygon	PP17080	LA RUE SENIOR HOUSING PROJECT (200 UNITS)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/25/2001	<Null>	2/28/2002	<Null>
619	Polygon	PP24201	50' WIRELESS MONOPINE 18 PANEL ANTENNA,EQUIPSHELTR	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/30/2009	<Null>	3/1/2011	1/3/2013
620	Polygon	TR30904	SUBDIVIDE 10 ACRES INTO 36 SINGLE FAMILY LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/8/2003	<Null>	12/29/2003	12/2/2006
621	Polygon	CUP02354	PROPOSED LIVE STOCK SALES AND AUCTION YARD	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/23/2008	<Null>	1/23/2008	4/28/1980
622	Polygon	TR31322	CREATE 9 PARCELS ON 9.48 AC	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	8/5/2003	<Null>	8/17/2004	5/5/2007
623	Polygon	PPT180023	PROPOSAL TO CONSTRUCT A 203,445 SQ. FT. SINGLE-STORY CONCRETE TILT UP INDUSTRIAL BUILDING (RIDER COMMERCE CENTER) WITH A MAXIMUM HEIGHT OF 44 FT. APPROXIMATELY 7,000 SQ. FT. OF OFFICE SPACE WOULD BE PROPOSED AT GROUND LEVEL AND ON A MEZZANINE IN THE NORTHWEST AND NORTHEAST CORNER OF THE BUILDING. IN ADDITION, A GATED TRUCK COVER IS PROPOSED ALONG THE NORTHERN AREA OF THE SITE THAT WOULD PROVIDE ACCESS TO 28 LOADING DOCKS ON THE NORTH SIDE OF THE BUILDING. A TOTAL OF 126 PARKING STALLS ARE PROPOSED FOR THE 9.58 SITE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/17/2018 13:22	<Null>	7/11/2019 13:32	<Null>
624	Polygon	PM34252	SCHED H DIVISION OF 10.53 AC INTO TWO PARCELS. OF 5.00 ACRES. PARCEL ONE IS 5.17 GROSS ACRES AND PARCEL TWO IS 5.36	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/5/2006	<Null>	9/30/2009	10/22/2020
625	Polygon	TR32546	DIV 9.7 ACRES INTO 15 1/2 AC RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/24/2004	<Null>	10/31/2007	7/31/2015
626	Polygon	TR32180	DIVIDE 10 ACRES INTO 9 LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	4/27/2004	<Null>	12/20/2006	10/3/2016
627	Polygon	TR29725	DIVIDE 22.89 AC INTO 119 RES & 5 OPEN SPACE LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/26/2000	<Null>	5/7/2002	7/17/2005
628	Polygon	PP14967	WAREHOUSE & DIST FAC FOR CONVERTING PAPER STOCK	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/22/1997	<Null>	6/4/1997	6/2/1999
629	Polygon	TR31220	SUBDIVIDE 9.86 ACRES INTO 39 SINGLE FAMILY RESIDEN	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	2/20/2003	<Null>	12/23/2003	10/7/2006
630	Polygon	PP10693R1	TO ADD 27,297 SF. STORAGE/1680 OFFICE/1892 MANU	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/10/2000	<Null>	9/11/2000	<Null>
631	Polygon	PP23815	PLOT PLAN FOR EXISTING UNMANNED WIRELESS/UNDISGUIS ED CELL TOWER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/6/2008	<Null>	7/27/2010	7/14/2012
632	Polygon	TR25801	DIVIDE 10 ACRES INTO 10 LOTS DIVIDE 10 ACRES INTO 10 LOTS EA 34937, CZ 5752 CFG 262, EXT 849	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	3/23/1990	<Null>	7/2/1991	7/2/1998
633	Polygon	PUP00801	PUP FOR A RANCH HOME/EDUCATIONAL CENTER FOR KIDS	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	4/23/1999	<Null>	1/25/2000	<Null>
634	Polygon	PP26080	PLOT PLAN NO. 26080 ALLOWS FOR THE CONSTRUCTION OF A NEW 139,800 SQ.FT. INDUSTRIAL WAREHOUSE BUILDING ON A 9.21 ACRE SITE LOCATED AT THE NORTHWEST CORNE R OF KNABE ROAD AND BEDFORD MOTORWAY. THE INDUSTRIAL BUILDING WILL INCLUDE APPROXIMATELY 5,000 SQ. FT OF OFFICE AREA AND 134,800 SQ.FT. OF WAREHOUSING. A TOTAL OF 90 PARKING SPACES AND 8 ADDITIONAL PARKING SPACES AT THE REAR OF THE BUILDING WILL BE PROVIDED FOR TRAILERS. THE STRUCTURE WILL HAVING A VARYING ROOF LINE AND RANGES IN HEIGHT FROM 42 FT - 46 FT.PLOT PLAN FOR INDUSTRIAL BUILDING 140K SQ. FT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/15/2016	<Null>	5/19/2017	<Null>
635	Polygon	CUP01634	PROPOSAL TO REPLACE RESIN PROCESSING SYSTEM	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/1/2008	<Null>	2/1/2008	<Null>
636	Polygon	TR34096	PROPSD 9.37 GROSS ACRES SPLIT INTO 9 (1) ACRE PARC	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	7/24/2006	<Null>	8/14/2008	3/11/2018
637	Polygon	TR34096E02	SECOND EXTENSION FOR TR34096	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	3/9/2018 11:10	<Null>	8/22/2018 9:41	3/11/2021
638	Polygon	TR32530	DIV 9.22 AC TO 9 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	9/15/2004	<Null>	9/8/2006	6/14/2016
639	Polygon	TR29170	DIVIDE 10 ACRES INTO 17 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	2/16/1999	<Null>	9/11/2000	8/15/2004
640	Polygon	TR36910	SCHED B 9.90 ACRES IN TO 9 SFR LOTS/1 OPEN SPACE	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	7/2/2015	<Null>	7/15/2016	5/24/2019
641	Polygon	PM25555	INDUSTRIAL PARCEL MAP - DIVIDE 183.72 ACRES INTO 1 7 LOTS DIVIDE 183.72 ACRES INTO 17 INDUSTRIAL PARCELS EA 34698 EXT 639	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/9/1990	<Null>	10/30/1990	10/30/1995
642	Polygon	PM32405	SUBDIVIDE 4 PARCELS INTO 5 PARCELS FOR 5 WAREHOUSE	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/13/2004	<Null>	10/13/2004	8/24/2007
643	Polygon	TR32989E03	3RD EXTENSION OF TIME FOR TR32989	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	6/12/2018 14:13	<Null>	9/17/2018 13:31	6/27/2021
644	Polygon	TR32989	CREATE 29 LOTS FROM 10 ACRE PARCELL	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	3/21/2005	<Null>	3/22/2007	6/27/2018
645	Polygon	CUP03762	PROPOSED 105' LATTICE WIRELESS FACL.FOR SPRINT/VZW	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	10/27/2016	<Null>	2/8/2018 11:38	<Null>
646	Polygon	PM27280	SUBDIVIDE 9.06 ACRES INTO 4 LOTS DIVIDE 9.05 ACRES INTO 4 PARCELS. EA 36077 SC 175, ASA 79, BSA 75, CFG 217, SUP 388	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/18/1991	<Null>	6/9/1992	6/9/1998
647	Polygon	PM34696	PROPOSAL FOR A SCHEDULE H SUBDIVISION OF 9.98 GROS S ACRES FROM SIXTEEN RESIDENTIAL AND COMMERCIAL PA RCELS INTO 2 RESIDENTIAL PARCELS. PARCEL 1 WITH 4. 17 GROSS ACRES AND PARCEL 2 WITH 5.81 GROSS ACRES.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/12/2006	<Null>	7/1/2008	3/11/2011
648	Polygon	TR29768	SUBDIVIDE 9.15 AC INTO 17 20000 SQ FT MIN LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	9/6/2000	<Null>	3/27/2001	<Null>
649	Polygon	TR23962	DIVIDE APPROX 9 ACRES INTO 15 LOTS DIVIDE 8.87 ACRES INTO 15 LOTS EA 35230 EXT 875	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	6/14/1990	<Null>	6/4/1991	6/4/1997
650	Polygon	TR28957	DIVIDE 8.86 ACRES INTO 36 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/11/1999	<Null>	2/21/2006	1/11/2017
651	Polygon	TR31875	DIVIDE 8.05 ACRES NTO 14 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/26/2003	<Null>	7/26/2005	4/19/2008
652	Polygon	TPM37463	TENTATIVE PARCEL MAP 1 LOT INTO 2 SEPARATE LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/16/2018 12:10	<Null>	1/16/2020 13:45	<Null>
653	Polygon	PUP00773R1	EXPAND EXISTING CHILD CARE FACILITY TO CREATE ... AN ELEMENTARY CAMPUS W/FOUR MODULAR CLASS ROOM UNI TS AND A MOBILE TOILET UNIT.	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	6/10/2003	<Null>	6/1/2004	3/23/2006
654	Polygon	CUP03425	(4)CONCRETE TILT-UP BUILDINGS(TRUCKING OPERATIONS) BUILDING A: 15,092 SQ. FT. BUILDING B: 17,028 SQ. FT. BUILDING C: 14,642 SQ. FT. BUILDING D: 20,192 SQ. FT. (PROPOSED)	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/19/2004	<Null>	2/19/2008	11/14/2009
655	Polygon	TR31199	SCHED B DIVISION 8.8 ACRES INTO 15 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/15/2003	<Null>	5/31/2005	1/5/2016
656	Polygon	PP23168	PROPOSE TO CONTRUCT 133,782 SQ FT INDUSTRIAL USE FACILITY SONSISTING O 6 BUILDINGS TO INCLUDE STORA GE, MANUFACTURING AND OFFICE USES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/7/2007	<Null>	2/9/2010	12/22/2011
657	Polygon	PM35710	SUBDIVIDE 8.84 ACRES INTO 8 COMMERCIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	11/7/2007	<Null>	2/9/2010	12/22/2012
658	Polygon	PP19856	LUMBER & WOOD PRODUCT STORAGE & DISTRIBUTION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/13/2004	<Null>	8/29/2005	7/25/2008
659	Polygon	PM35933	SCHEDULE E SUBDIVISION OF 14.09 GROSS ACRES INTO T EN (10) COMMERCIAL LOTS.	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	2/14/2008	<Null>	12/29/2008	10/1/2013
660	Polygon	PP18074	TWO INDUSTRIAL BUILDINGS - FTA2002-08	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/14/2002	<Null>	12/23/2002	<Null>
661	Polygon	PP18879	155,480 SQ FT INDUSTRIAL WAREHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/11/2003	<Null>	7/21/2011	6/14/2013
662	Polygon	PP14187	FENCE COMPANY - SALES & STORAGE STORAGE AND SALE OF CHAIN LINK FENCING PRODUCTS WI TH A 6,000 SF OFFICE, 30,000 SF COVERED STORAGE EA 36814	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/9/1995	<Null>	3/27/1995	3/27/1995
663	Polygon	TR30231	SCHEDULE "B" SUBDIVISION OF 8.70 ACRES INTO 5 LOTS RANGING IN SIZE BETWEEN 1.0 AND 2.2 ACRES.	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	10/13/2005	<Null>	11/15/2011	9/6/2016
664	Polygon	PP14633	TO CONSTRUCT A 185,774 SQ. FT. WAREHOUSE DISTRIBUT ION FACILITY 185,774 SQ. FT. WAREHOUSE DISTRIBUTION FACILITY ON 10.39 ACRES EA 36994 NONE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/2/1996	<Null>	6/3/1996	6/3/1998
665	Polygon	PP25407	CELL SITE-VISTA TOWERS W/ 50FT MONOPINE, 3 CARRIER SPACES (VERIZON, AT&T,& FUTURE CARRIER) INSIDE PRO POSED LEASE AREA	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/31/2013	<Null>	6/4/2014	5/5/2016
666	Polygon	PP15797	46,000 SQ FT BLDG OFFICES, WAREHOUSE, LOADING DOCK	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/31/1998	<Null>	3/5/1999	<Null>
667	Polygon	CUP03566	PERMIT THE SALE OF BEER & WINE FOR OFF PREMISES CO NSUMPTION (ABC LICENSE TYPE 20 - OFF SALE BEER & WINE (PACKAGE STORE)) WITHIN AN EXSITING 1,853 SQ. FT. UNIT OF A MULTI-TENANT COMMERCIAL BUILDING. N O ADDITIONAL IMPROVEMENT ARE CURRENTLY PROPOPSE.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/24/2007	<Null>	1/29/2008	12/5/2017
668	Polygon	TR34592E02	2ND EXTENSION OF TIME FOR TR34592	MARES	EOT01 - EXTENSION OF TIME - ORD NO. 460	PLN	APPROVED	2/7/2018 14:16	<Null>	2/21/2019 10:20	3/27/2021
669	Polygon	PP24778	TWO STORY APARTMENTS, 89 UNITS AT 13.26 DU/AC THE APPLICANT PROPOSES AN 89-UNIT LOW INCOME HOUSI NG APARTMENT COMPLEX INCLUDING A TOT-LOT, PARKING, TRASH ENCLOSURES, AND PEDESTRIAN PATHWAYS ON A 6. 71 ACRE SITE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/16/2010	<Null>	8/12/2011	8/12/2013
670	Polygon	CUP03392	PROPANE RECYCLING FACILITY	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/13/2003	<Null>	8/11/2003	<Null>
671	Polygon	PM33314	SUBDIVIDE 7.9 AC INTO 2 PARCELS TO BE INCORPORATED INTO TR32972 AND FURTHER FUTURE SUBDIVISIONS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/14/2005	<Null>	11/14/2005	11/1/2008
672	Polygon	PP19213	2 WAREHOUSE/OFFICE BLDGS W/DOCKING AREA AND PARKIN	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/18/2004	<Null>	9/13/2004	8/30/2006
673	Polygon	TR32128	SCH A SUBDIVISION (28) RESIDENTIAL R-1 LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	2/3/2004	<Null>	4/21/2005	2/15/2008
674	Polygon	PM30328	DIVIDE 7.66 AC INTO 2 INDUSTRIAL PARCELS SCH. E	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/8/2002	<Null>	6/1/2005	2/15/2008
675	Polygon	PM30328R1	CHANGE IS TO THE DETERMINATION OF CEQA	MARES	TPM06 - REVISED COMMERCIAL/INDUSTRIAL W/IN 2 YRS	PLN	APPROVED	11/6/2006	<Null>	1/3/2007	12/19/2009
676	Polygon	PM26836	SUBDIVIDE 8.23 AC INTO 12 PARCELS DIVIDE 8.9 ACRES INTO 12 INDUSTRIAL PARCELS WITH A 0.45 ACRE MINIMUM PARCEL SIZE EA 35827	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/16/1991	<Null>	1/26/1993	1/26/1999
677	Polygon	PP14240	CONSTRUCT 180,780 SQ FT. WAREHOUSE CONSTRUCT A 180,780 SQUARE FOOT WAREHOUSE EA 36831 PM 26513, PP 11015 SEE FILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/28/1995	<Null>	5/8/1995	5/8/1997
678	Polygon	PUP0536		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
679	Polygon	PP16823	TO CONSTRUCT A 22,000 SQ FT MANUFACTURING FACILITY BUILDING TO MANUFACTURE,STORE AND LEASE CONCRETE F ORMING MATERIAL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/17/2000	<Null>	3/12/2001	2/8/2006
680	Polygon	PM22043	DIVIDE 7.56 ACRES INTO 4 PARCELS EA 31207, CZ 4818 EXT 238, EXT 836	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/9/1986	<Null>	3/15/1989	3/15/1996
681	Polygon	TR31635	SUBDIVIDE 7.49 ACRES INTO 13 SINGLE FAMILY RES LOT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/17/2003	<Null>	1/27/2005	11/17/2007
682	Polygon	TR23181	DIVIDE 7.5 ACRES INTO 12 SINGLE FAMILY LOTS EA 33742, CZ 5451 EXT 585, EXT 969	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/13/1989	<Null>	7/24/1990	7/24/2000

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
683	Polygon	PP14689	MANUFACUTING/WAREHOUSE BUILDING 145,475 SQ. FT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/26/1996	<Null>	8/6/1996	7/29/1998
684	Polygon	PM23554	DIVIDE 7.14 ACRES INTO 4 PARCELS EA 33632 EXT 749	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/2/1989	<Null>	1/29/1991	1/29/1996
685	Polygon	TR31630	SUBDIVIDE 7.14 ACRES INTO 6 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	10/30/2003	<Null>	4/11/2005	2/8/2016
686	Polygon	CUP03739	PROPOSAL FOR A CONVENIENCE STORE/CARWASH/GAS STN	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/16/2016	<Null>	12/10/2017 8:50	<Null>
687	Polygon	TR28380	SUBDIVIDE 7.58 ACRES INTO 30 RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 7,200 SQUARE FEET. EA 36989 HISTORIC CASES: TR 24682, CZ 5489	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	4/25/1996	<Null>	5/28/1997	12/17/1999
688	Polygon	TR28380M1	MC TO TR 28380 ROAD CONDITIONS FOR BELLEGRAVE AVE	MARES	TTM14 - MINOR CHANGE	PLN	APPROVED	2/25/1997	<Null>	7/9/1997	6/17/1999
689	Polygon	TR22730	DIV 147.04 AC INTO 8 GOLF COURS,CLUB HSE 1 REMAIND , RESIDENTIAL AND COMMERCIAL LOTS AND 1 REMAINDER EA 33432, CZ 5366 SP 123, DA 8	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/20/1988	<Null>	5/30/1989	5/30/1991
690	Polygon	PP15595	EXPANSION OF ST JOHN MISSIONARY BAPTIST CHURCH.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/6/1998	<Null>	6/26/2001	<Null>
691	Polygon	PM34049	SUBDIVISION OF ONE PARCEL INTO TWO PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	12/7/2005	<Null>	10/11/2006	8/23/2012
692	Polygon	PP21376	62'FT HIGH MONO-PLAM W/SHELTER (NEXTEL)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/31/2006	<Null>	7/13/2006	6/30/2008
693	Polygon	PM37135	SUBDIVIDE 7AC LOT INTO 4 1AC LOT AND 1 REMAIN LOT	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/22/2016	<Null>	7/19/2018 13:46	6/11/2021
694	Polygon	PUP00872	RESERVOIR ZONE 2	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	6/17/2004	<Null>	8/3/2005	6/28/2007
695	Polygon	TR29281R1	ADD TWO LOTS TO EXISTING TENTATIVE TRACT	MARES	TTM12 - SFR REVISED NOT IN R-2 R-4 R-6 W/IN 2 YRS	PLN	APPROVED	6/15/2001	<Null>	5/31/2002	2/1/2004
696	Polygon	TR29282	DIVIDE 7.7 ACRES INTO 24 SINGLE FAMILY LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/6/1999	<Null>	7/5/2001	<Null>
697	Polygon	PM33756	SCHED H DIVISION OF 8.11 ACRES INTO 3 PARCELS WITH MIN. SIZE OF 2 GROSS ACRES; LOT 1, 3.81 GROSS ACRE LOT 2, 2.00 GROSS ACRES, AND LOT 3 2.3 GROSS ACRES . THERE ARE TWO EXISTING BUILDINGS, AND ONE EXISTING RESIDENCE ON PARCEL 1 WHICH SHALL REMAIN.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/17/2006	<Null>	5/8/2018 17:07	<Null>
698	Polygon	PP15042	RESTAURANT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/18/1997	<Null>	12/16/1998	12/16/2001
699	Polygon	TR32721	THE PROPOSAL HEREBY CONSIDERED IS A SCHEDULE A SUB DIVISION OF 6.94 GROSS ACRES INTO 22 SINGLE FAMILY RESIDENTIAL LOTS WITH A 7,200 SQUARE FOOT MINIMUM LOT SIZE. THE PROPOSAL INCLUDES ONE EASEMENT LOT (LOT A) PROVIDING ACCESS TO CELL TOWER EASEMENT L OT B AND TO THE RUBIDOUX COMMUNITY SERVICES DISTRI CT WATER TANK. THE PROJECT SITE IS LOCATED ON THE NORTH EAST CORNER OF LA CANADA DRIVE AND MURIEL D RIVE. THE GENERAL PLAN LAND USE DESIGNATION IS MD R WITH A CONSISTENT ZONING DESIGNATION OF R-1.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/28/2004	<Null>	10/3/2007	7/25/2017
700	Polygon	PUP00777	PUP FOR 75' MONOPOLE FOR WIRELESS COMMUNICATION PUP TO CONSTRUCT A 75' MONOPOLE WITH ANTENNA ARRAY , & EQUIPMENT CABINETS FOR WIRELESS COMMUNICATION EA 36940, VAR 1631 PAR 27	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/11/1995	<Null>	4/30/1996	4/30/1998
701	Polygon	CUP02734	AUTOMOBILE TOWING,STORAGE AND DISMANTLING YARD	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	10/29/2018
702	Polygon	TR32704	TENTATIVE TRACT MAP NO. 32704 PROPOSES A SCHEDULE A SUBDIVISION OF 7.24 GROSS ACRES INTO 25 SINGLE F AMILY RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 7,200 SQUARE FEET, AND TWO (2) OPEN SPACE DRAINAGE LOTS (LOTS 27 AND 28).	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	7/15/2004	<Null>	2/22/2008	10/16/2013
703	Polygon	TPM37634	SCHEDULE "H" DIVISION OF 7.54 ACRES INTO 4 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/24/2018 12:30	<Null>	2/27/2020 8:36	<Null>
704	Polygon	PP22532	OFFICE AND MANUFACTURING FACILITY TRACT 2006-26	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/9/2007	<Null>	2/4/2008	1/7/2010
705	Polygon	PP17968	3 COMMERCIAL CONCRETE TILT-UP BLDGS - FTA 2002-04	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/17/2002	<Null>	1/23/2003	<Null>
706	Polygon	PP15834	146,100 SQ FT IND.L MANFG PLASTIC FOOD CONTAINERS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/3/1999	<Null>	4/16/1999	<Null>
707	Polygon	TR32723	SCH B MAP SUB-DVD 7.07 GROSS AC INTO 10 SFR	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/7/2005	<Null>	10/4/2007	7/25/2017
708	Polygon	TR32764	SUBDIVIDE 6.74 AC LOT INTO 6 SF RES LOTS - 1/2 AC MIN LOT SIZES/SCHEDULE B MAP REDESIGNED TO A SUBDIVISION OF 6.74 GROSS ACRES IN TO 6-ONE-ACRE SINGLE-FAMILY LOTS/SCHEDULE B MAP	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	8/25/2004	<Null>	9/20/2006	2/22/2017
709	Polygon	PM28039	PM TO DIVIDE PROPERTY INTO 3 PARCELS & REMANDER PA RCEL DIVIDE 6.93 ACRES INTO 3 PARCELS AND ONE REMAINDER PARCEL EA 36808	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/2/1995	<Null>	6/27/1995	6/27/1999
710	Polygon	CUP00404R1	REVISE SURFACE MINING PERMIT	MARES	CUP05 - GENERAL	PLN	APPROVED	3/24/1998	<Null>	6/2/1998	<Null>
711	Polygon	PM32773	SUB-DIV. 6.00 AC INTO (2) 2.5/3.5 AC IN R-1 2 1/2	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/14/2004	<Null>	1/19/2006	10/25/2008
712	Polygon	PP16030	CONSTRUCTION OF THREE INDUSTRIAL SPEC BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/29/1999	<Null>	10/5/1999	10/5/2001
713	Polygon	PM29401	COMMERCIAL MAP TO DIVIDE 83.83 ACRES INTO 4 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/29/1999	<Null>	10/5/1999	10/5/2002
714	Polygon	PP18876	12 INDUSTRIAL BUILDINGS 97,010 TOTAL SQ FT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/11/2003	<Null>	7/21/2011	6/14/2013
715	Polygon	PUP00802R1	ADD 88 SEATS TO EXISTING SANCTUARY ADD 99 PARKING SPACES PLAN FOR PROPOSED HALL AND CLASSROOMS BUILD ING TO REPLACE EXISTING CLASSROOMS AND OFFICES IN SANCTUARY.	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	1/25/2008	<Null>	4/14/2009	2/4/2011
716	Polygon	PUP00802	CONVERT OFFICES TO CHURCH/OFFICES/MEETING ROOMS	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	5/14/1999	<Null>	10/5/1999	10/5/2024
717	Polygon	PP10147R1	PLOT PLAN NO. 10147, REVISED PERMIT NO. 1 PROPOSES TO CONSTRUCT A 16,131 SQ. FT. STRUCTURE FOR OFFIC E, TRUCK MAINTENANCE SHOP, AND PARTS STORAGE ON A 6.36 GROSS ACRE PARCEL. THE PROPOSAL CONSISTS OF 4 ,943 SQ. FT. OF OFFICE SPACE, 9,270 SQ. FT. OF SHO P AREA, 1,918 SQ. FT. OF STORAGE AREA, A 4,688 SQ. FT. TRUCK WASH AND EQUIPMENT ROOM, 50 TRUCK PUMPING PARKING SPACES, 41,806 SQ. FT. (15%) OF LANDSCAPING, A 12,000 GALLON ABOVE_GROUND DIES EL FUEL TANK, AND 66 PARKING SPACES INCLUDING THRE E (3) ACCESSIBLE PARKING SPACES FOR PERSONS WITH D ISABILITIES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/10/2004	<Null>	3/2/2009	11/3/2010
718	Polygon	PUP00890	A 12,460 SQ. FT. FACILITY FOR RELIGIOUS WORSHIP AND PRIVATE TUTORING ON 6.30 GROSS ACRES. THE MAIN WORSHIP BUILDING IS 11,500 SQ. FT. AND INCLUDES A 5,000 SQ. FT. WORSHIP HALL, A 3,250 SQ. FT. CLASSROOM, 1,125 SQ. FT. OF OFFICE SPACE, 812 SQ. FT. FOR RESTROOMS AND A 1,312 SQ. FT. KITCHEN. THE PROPOSAL ALSO INCLUDES A 960 SQ. FT. PORTABLE SECURITY OFFICE, 20,100 SQ. FT. OF LANDSCAPING, AND 151 STANDARD PARKING SPACES WITH SIX (6) ACCESSIBLE PARKING SPACES FOR PERSONS WITH DISABILITIES FOR A TOTAL OF 157 SPACES.	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	7/9/2007	<Null>	3/19/2009	2/4/2012
719	Polygon	PP25866	RECREATIONAL VEHICLE STORAGE FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/20/2015	<Null>	6/9/2016	<Null>
720	Polygon	PM33454	SCHED H DIVISION OF 6.36 ACRES INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/6/2005	<Null>	10/17/2007	8/27/2016
721	Polygon	PP22636	CONSTRUCT EIGHT INDUSTRIAL/MANUFACTURING BLDGS CON SISTING OF CONCRETE TILT-UP DESIGN. EACH BLDG INC LUDES A 750 SQ. FT. MEZZANINE AREA FOR STORAGE USE 750 SQ. FT. FOR OFFICE USE & 11,000 SQ. FT. FOR MA UFACTURING USE. THE PROPOSAL CONSISTS OF 50,680 SQ. FT. OF LANDSCA PING & 168 PARKING SPACES INCLUDING 8 ACCESIBLE PA RKING SPACES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/14/2007	<Null>	5/12/2011	4/26/2013
722	Polygon	PM35267	TENTATIVE PARCEL MAP NO. 35267 PROPOSES A SCHEDULE 'E' SUBDIVISION OF 6.37 GROSS ACRES INTO 8 PARCEL S WITH A MINIMUM PARCEL SIZE OF 27,982 SQ. FT.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	3/14/2007	<Null>	5/11/2011	4/26/2014
723	Polygon	TR28634	DIVIDE 6.22 AC. INTO 10 RES. LOTS W/ 20,000 SQ FT	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/3/1997	<Null>	4/27/1998	3/31/2001
724	Polygon	TR29281	DIVIDE 6.2 ACRES INTO 8 SINGLE FAMILY LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/6/1999	<Null>	2/1/2000	1/31/2003
725	Polygon	CUP03418	CUP03418 PROPOSES TO CONSTRUCT A CONCRETE AND ASPH ALT RECYCLING FACILITY ON 7.3 GROSS ACRES (6.04 NE T ACRES) WITH A 1,440 SQUARE FOOT OFFICE FACILITY, 27,102 SQUARE FEET OF LANDSCAPING (10.3%), AND 11 PARKING SPACES.CUP03418 PROPOSES TO CONSTRUCT A CONCRETE AND ASPH ALT RECYCLING FACILITY WITH A 1,440 SQUARE FOOT OF FICE, A 500 GALLON ABOVE GROUND FUEL TANK, 27,102 SQUARE FEET OF LANDSCAPING (10.3%), AND 11 PARKING SPACES ON A 7.3 GROSS (6.04 NET) ACRE SITE.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/13/2003	<Null>	10/17/2008	6/11/2010
726	Polygon	PM29590	DIVIDE 5.64 ACRES INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/30/1999	<Null>	1/17/2002	<Null>
727	Polygon	PP16922	CELL SITE,123.1 FT TOWER AND 5 EQUIP CABINETS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/31/2001	<Null>	1/8/2002	<Null>
728	Polygon	PP23096E01	FIRST EXTENSION OF TIME FOR PP23096	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPROVED	11/30/2018 16:41	<Null>	6/6/2019 15:20	1/15/2029
729	Polygon	PM29591	DIVIDE 6.12 ACRES INTO FOUR PARCELS/ONE REMAINDER	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/16/2000	<Null>	2/7/2001	<Null>
730	Polygon	PP22442	PLOT PLAN NO. 22442 IS A PROPOSAL FOR THE INSTALLA TION AND CONSTRUCTION OF A 50' HIGH UNMANNED T-MOB ILE TELECOMMUNICATIONS FACILITY CONCEALED AS A FLA G POLE, WITH 6 PANEL ANTENNA'S AND A 2' PARABOLIC WIRELESS ANTENNA MOUNTED INSIDE THE POLE. ADDTIONA LLY, THE PROJECT SHALL CONSIST OF A GPS ANTENNA AN D 6 EQUIPMENT CABINETS (1 PROPOSED AND 5 FOR FUTUR E USE) WITHIN A 280 SQUARE FOOT LEASE AREA.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/4/2007	<Null>	12/6/2007	12/6/2009
731	Polygon	PP18592	PROPOSE A 107,837 SQ FT IN THE AQUA MANSA AREA	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/24/2003	<Null>	8/6/2004	7/19/2006
732	Polygon	PP16876	79'3" ANTENNA/CABINETS-SPRINT WIRELESS TELECOM FAC	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/29/2000	<Null>	2/28/2002	<Null>
733	Polygon	PP21140	99,939 SQUARE FOOT MINI SELF STORAGE FACILITY ON A 4.73 GROSS ACRE SITE WITH A FLOOR AREA RATIO OF 0 .48. THE SELF STORAGE FACILITY CONSISTS OF THE FOL LOWING: A 2,123 SQUARE FEET OFFICE WITH A CARETAKE RS UNIT; NINE (9) BUILDINGS - BUILDING A WITH 12,3 47 SQUARE FEET, BUILDING B WITH 10,480 SQUARE FEET , BUILDING C WITH 11,700 SQUARE FEET, BUILDING D W ITH 6,500 SQUARE FEET, BUILDING E WITH 13,110 SQUA RE FEET, BUILDING F WITH 8,370 SQUARE FEET, BUILDI NG G WITH 11,025 SQUARE FEET, BUILDING H WITH 14,8 49 SQUARE FEET AND BUILDING I WITH 8,679 SQUARE FE ET	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/21/2005	<Null>	2/22/2008	1/28/2012
734	Polygon	CUP03277	WAREHOUSE MINI-STORAGE WITH ONSITE MANAGER	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/9/1998	<Null>	12/26/2002	<Null>
735	Polygon	PP22699	INSTALL 12 ANTENNAS ON 70' MONOPINE/6 EQUIP CABS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/9/2007	<Null>	6/1/2010	4/19/2012
736	Polygon	TR32722	SCH A DIVISION OF 5.66 AC INTO 16 SFR LOTS & 1 REM A SUBDIVISION OF 5.66 ACRES INTO 16 SINGLE FAMILY RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 7,200 SQUARE FEET AND ONE (1) 9,227 SQUARE FOOT REMAINDE R LOT.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/16/2004	12/9/2010	12/10/2007	10/3/2017
737	Polygon	PM28168	DIVIDE 5.40 ACRES INTO 2 RESIDENTIAL PARCELS. WITH A MINIMUM LOT SIZE OF 1.75 ACRES. PAR 98	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/11/1996	<Null>	1/7/1997	1/7/2000
738	Polygon	PP22443	80' LIGHT STANDARD PWR POLE 12 ANTENNA EQUIP CAB THIS PROPOSAL HAS BEEN DETERMINED TO BE A CONCEALE D WIRELESS TELECOM FACILITY.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/4/2007	<Null>	12/6/2007	12/6/2009
739	Polygon	PM23448	DIVIDE 13 ACRES INTO 6 COMMERCIAL PARCELS EA 31601, CZ 4919 EXT 166, EXT 356, EXT 688	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/29/1988	<Null>	2/7/1989	2/7/1996
740	Polygon	PP24327	SWAP EXIST 55'MONOPALM WITH NEW 65'MONOPINE/4EQUIP ACTUALLY REPLACING MONOPINE 5' FROM ORIG MONOPAL M SITE. NOT INCREASING LEASED AREA. ALSO PROPOSING 3 SECTORS OF ANTENNA W/ 3 ANTENNAS EACH.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/19/2009	<Null>	11/16/2010	5/17/2012
741	Polygon	CUP03315	GAS STATN/CONV STORE/2 FAST FOOD/1 DINE IN RESTRNT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/18/2000	<Null>	8/7/2000	<Null>
742	Polygon	PM29716	SUBDIVIDE 4.45 ACRES INTO 4 COMMERCIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	5/18/2000	<Null>	8/7/2000	7/25/2004
743	Polygon	PM33115	A SCHEDULE H SUBDIVISION OF 5.39 GROSS ACRES INTO FOUR (4) SINGLE FAMILY RESIDENTIAL LOTS WITH A MIN IMUM LOT SIZE OF ONE (1) GROSS ACRE.SUBDIVIDE 5.4 ACRES INTO 4 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/27/2005	<Null>	3/23/2009	7/15/2011
744	Polygon	PM35977	SCHED E PM OF 5.53 GROSS AC INTO 4 PARCELS & 3 LTR SCHEDULE E SUBDIVISION OF 5.53 GROSS (4.78 NET) AC RES INTO FOUR PARCELS AND THREE LETTER LOTS FOR RO W DEDICATION.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/22/2009	<Null>	4/16/2009	3/31/2012
745	Polygon	CUP03587	4 RETAIL BLDGS ADDING LIQUOR LIC FOR SALE OF BEER WINE & DISTILLED SPIRITS	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/27/2008	<Null>	7/8/2009	12/16/2011
746	Polygon	PP19728	CONTRACTORS STORAGE YARD, VEHICLE MAINT AND ADMIN	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/1/2004	<Null>	5/1/2007	2/27/2009
747	Polygon	TR32725	CREATE 9 SFR LOTS FROM 5.27 ACRES	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	2/23/2005	<Null>	2/14/2007	12/6/2016
748	Polygon	CUP03480R1	ADD BEER AND WINE TO MINI MART GAS STATION	MARES	CUP05 - GENERAL	PLN	APPROVED	9/3/2008	<Null>	12/23/2008	11/5/2011
749	Polygon	CUP03480	NGHBRHD SHPPNG CNTR W/ 5 BLDGS TOTALING 35,600 SF 39,918 SQ FT OF LANDSCAPING. THE PROJECT CONSISTS OF 1 5,000 SQ FT SIT-DOWN RESTAURANT, A 3,500 SQ F T CONVENIENCE STORE WITH A 1,300 SQ FT CARWASH AN D A 950 SQ FT GAS FUELING AREA, A 1,670 SQ FT DRIV E-THRU COFFEE SHOP, 3,360 SQ FT OF OFFICES, 5,710 SQ FT OF FOOD SALES, 11,660 SQ FT OF RETAIL AND A 2,450 SQ FT DRIVE THRU.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/21/2005	<Null>	2/22/2008	11/27/2009
750	Polygon	PM32162	SUBD 4.05 ACRES INTO 3 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/18/2004	<Null>	9/24/2004	<Null>

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
751	Polygon	CUP03663	CONSTRUCT THREE COMMERCIAL RETAIL BUILDINGS, CONSI STING OF ONE RITE AID PHARMACY AND TWO COMMERCIAL SHELL BUILDINGS TOTALING 52,672 SQ.FT. IN TWO PHAS ES ON 6.4 GROSS ACRES	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/1/2011	<Null>	8/20/2013	6/4/2015
752	Polygon	PP14082	CONSTRUCT METAL SLITTING FACILITY CONSTRUCT AN 83,354 SQUARE FOOT METAL COIL SLITTIN G FACILITY. EA 36758. PM 26365. SEE FILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/5/1994	<Null>	11/7/1994	11/7/1996
753	Polygon	CUP03552	TO PERMIT AN EXISTING TRUCKING AND EQUIPMENT STORA GE OPERATION. THE PROPOSAL CONSISTS OF TWO SINGLE- STORY CARETAKER UNITS, AN OFFICE, AND TWO STRUCTUR ES FOR STORAGE. THE PROPOSAL ALSO CONSISTS OF SIX (6) PARKING SPACES.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/16/2007	<Null>	7/19/2010	6/22/2012
754	Polygon	PP19763	11 INDUSTRIAL BUILDINGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/14/2004	<Null>	10/21/2005	9/13/2007
755	Polygon	PM32173	11 INDUSTRAIL PARCELS (PAR00498)	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	9/14/2004	<Null>	10/21/2005	9/13/2011
756	Polygon	PP15889	IND BLDG W/OFFICE/WAREHS/DISPLAY FOR COMM VEHICLES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/17/1999	<Null>	6/22/1999	<Null>
757	Polygon	PP25719	THE PLOT PLAN PROPOSES TO CONSTRUCT TWO (2) INDUST RIAL BUILDINGS TOTALING 84,892 SQUARE FEET (49,817 SQUARE FEET AND 35,075 SQUARE FEET EACH) WITH 158 PARKING SPACES, 28,645 SQUARE FEET OF LANDSCAPING , AND ONE (1) WATER QUALITY BASIN ON 5.06 GROSS AC RES. THE PROJECT SITE IS VACANT AND WAS PREVIOUSLY GRADED PURSUANT TO THE WILD ROSE SPECIFIC PLAN (S P 176) AND TENTATIVE PARCEL MAP NO. 28834. THE PR OJECT SITE IS LOCATED NORTHERLY OF PULSAR COURT, S OUTHERLY OF LEROY ROAD, EASTERLY OF TEMESCAL CANYO N ROAD.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/7/2015	<Null>	8/26/2016	<Null>
758	Polygon	PM36114	SUBDIVIDE 5.0 AC INTO TWO SFR LOTS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/1/2010	<Null>	1/30/2020 11:05	<Null>
759	Polygon	PP15604	27,360 SQ FT PARTS/SVC FACILITY FOR COACH MFR	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/14/1998	<Null>	12/11/1998	<Null>
760	Polygon	PM32443	SUBDIVIDE 5.04 ACRES INTO 4 PARCELS (1 AC MIN)	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/27/2004	<Null>	3/14/2006	2/7/2009
761	Polygon	PM35988	SUBDIVDE 4.94 ACRES INTO FOUR (1) ACRE PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/17/2008	<Null>	12/1/2011	6/6/2022
762	Polygon	PM27875	DIVIDE APPROX 5 ACRES INTO 4 LOTS DIVIDE 4.94 ACRES INTO 4 RESIDENTIAL PARCELS WITH A MINIMUM PARCEL SIZE OF 1 ACRE. EA 36695. TR 27130, CZ 6134, PM 5983.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/25/1994	<Null>	11/1/1994	11/1/1998
763	Polygon	PP18875	104,210 SQ FT INDUSTRIAL WAREHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/11/2003	<Null>	7/21/2011	6/14/2013
764	Polygon	PP14130R1	REV PP14130 ADD 126,000 SQ FT OF WAREHOUSE BLDG AR	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/13/1998	<Null>	3/31/1998	<Null>
765	Polygon	PP13666	CONSTRUCT CONCRETE TILT-UP DISTRIBUTION BUILDING CONSTRUCT A 442,247 SQ. FT. WAREHOUSE/13,000 SQ. F T. OFFICE BUILDING. EA 36530 PM 26365	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/13/1993	<Null>	1/24/1994	1/24/1996
766	Polygon	PM34561	SCHED H DIVISION OF 5.28 AC. INTO 2 RES PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/1/2006	<Null>	11/30/2007	10/22/2013
767	Polygon	PP23798	CONCEALED WIRELESS FACILITY IN LIGHT POLE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/29/2008	<Null>	3/15/2010	2/8/2012
768	Polygon	PM37277	SUBDIVIDE 2 PARCELS INTO 5 PARCELS 5.07 ACRES. SCHEDULE 'E'	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/11/2017	<Null>	11/21/2017	6/21/2020
769	Polygon	PP25719R1	CHANGE SQFT TO 2 IND BLDGS AND ADD 2 NEW IND BLDGS PLOT PLAN FOR 2 IND BLDGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/11/2017	<Null>	10/20/2017	<Null>
770	Polygon	PM25629	DIVIDE ONE 5.02 ACRE PARCEL INTO 2 PARCELS DIVIDE 5.02 INTO 2 COMMERCIAL PARCELS EA 34959, PP 11889 CUP 3061, EXT 796, APP 14	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	4/2/1990	<Null>	10/8/1991	10/8/1998
771	Polygon	PP11889	SELF SERVICE GAS STATION, APN 277-220-002 SELF SERVICE GAS STATION EA 34959 APP 14, CUP 3061, EXT 796, EXT 1073	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/27/1990	<Null>	10/8/1991	10/8/1996
772	Polygon	PM34430	A SCHEDULE "H" SUBDIVISION OF 4.89 ACRES INTO FOUR (4) RESIDENTIAL PARCELS RANGING IN SIZE FROM 1 ACRE TO 1.89 ACRES. THERE IS AN EXISTING DWELLING ON PARCEL 1 WHICH SHALL REMAIN. NOTE: NO GRADING IS BEING PROPOSED FOR THIS PROJECT.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/8/2006	<Null>	9/20/2018 13:39	<Null>
773	Polygon	PP25765	VERIZON 50' MONOPINE, 12 PANELS, 12 RRU, 3 GPS, 1 STANDBY GENERATOR, EQUIPMENT SHELTER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/25/2015	<Null>	5/4/2017	<Null>
774	Polygon	PM33838	SCHED H DIVISION OF 5AC INTO 3 1AC PARCELS & ONE 2	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/28/2005	<Null>	5/16/2007	12/11/2016
775	Polygon	PP14420	STORAGE,WAREHOUSE & DISTRIBUTION FACILITIES TO CONTSTRUCT DRY STORAGE & COLD STORAGE FACILITIE S TOTALLING 1,049,891 SQ. FT. & 368,941 SQ. FT EA 36916, CZ 6269	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/26/1995	<Null>	10/3/1996	1/2/1998
776	Polygon	PP16839	UNMANNED COMM. FACILTY/SHELTER/105' MONOPOLE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/30/2000	<Null>	6/11/2001	<Null>
777	Polygon	PM33206	SCHED H DIVISION OF 5.1 AC INTO 4 PARCELS W/1 REMAI	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/8/2006	<Null>	5/13/2008	9/10/2020
778	Polygon	PM22951	DIVIDE 5 ACRES INTO 4 RESIDENTIAL PARCELS WITH A 1 ACRE MINIMUM PARCEL SIZE EXT 664, EXT 390, EXT 79	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/9/1988	<Null>	10/11/1988	10/11/1995
779	Polygon	PM33879	SBDVD 5 AC INTO TWO 1 AC PARCELS & ONE 3 AC PARCEL	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/10/2005	<Null>	4/9/2007	11/21/2009
780	Polygon	PM26185	DIVIDE 5 ACRES INTO 2 LOTS DIVIDE 5 ACRES INTO 2 LOTS. EA 35309, VAR 1573 CFG 213	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/5/1990	<Null>	3/31/1992	3/31/1998
781	Polygon	PUP00820	UNMANNED TELE. FACILITY/SHELTER/67' MONO POLE	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	11/30/2000	<Null>	8/7/2001	<Null>
782	Polygon	PP19909	PPT FOR WIRELESS TELECOMM. FACILITY (DISGUIESDED)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/26/2004	<Null>	2/2/2006	1/31/2008
783	Polygon	PM32430	DIVIDE 5 ACRES INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/6/2004	<Null>	8/3/2005	7/12/2005
784	Polygon	PM34382	SCHED G DIVISION OF 4.90 ACRES INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/10/2006	<Null>	3/10/2008	2/5/2015
785	Polygon	PP23186	52,988 SQUARE FOOT MANUFACTURING BUILDING TO MANUF ACTURE VITAMIN SUPPLEMENTS INCLUDING 32,896 SQUARE FEET (15%) OF LANDSCAPING AREA, 125 PARKING SPACE S AND 2 LOADING DOCKS ON A 4.9 ACRE SITE WITH A FL OOR AREA RATIO OF 0.25 (LIGHT INDUSTRIAL REQUIRES A 0.25-0.60 FLOOR AREA RATIO). THE PROPOSED BUILDI NG IS AN EXPANSION OF AN EXISTING PHARMACEUTICAL M ANUFACTURING FACILITY, "WAKUNAGA OF AMERICA CO., L TD." THAT IS LOCATED IMMEDIATELY TO THE SOUTH OF T HE PROPOSED SITE AND UNDER THE SAME OWNERSHIP AS T HE PROJECT SITE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/21/2007	<Null>	12/14/2009	11/30/2011
786	Polygon	CUP03336	SERVICE STATION W/MARKET,MINI-STORAGE & FAST FOOD	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	3/12/2001	<Null>	7/30/2002	3/26/2005
787	Polygon	PP16977	59 FT MONO-PALM/EQUIP. SHELTER/15 ANTENNAS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/1/2001	<Null>	8/8/2001	<Null>
788	Polygon	PM27105	SUBDIVIDE 5.07 ACRES INTO ONE-2.00 ACRE AND ONE-3. 07 ACRE PARCELS DIVIDE 5.07 ACRES INTO 2 PARCELS WITH A 2 ACRE MIN IMUM PARCEL SIZE EA 35975 N/A SEE FILE	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/18/1991	<Null>	2/16/1993	2/16/1999
789	Polygon	PM32334	SCHED H DIVISION OF 4.95 AC INTO 4 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/7/2004	<Null>	10/21/2005	9/6/2015
790	Polygon	PP15562	DIST WAREHOUSE 95,527 SF	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/15/1998	<Null>	10/1/1998	<Null>
791	Polygon	PP07399R1	MOVE EXISTING 105' LATICE TELECOMMUNICATIONS FAC.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/4/1998	<Null>	6/22/1998	<Null>
792	Polygon	PM27060	SUBDIVIDE 4.99 ACRES INTO 3 PARCELS DIVIDE 4.99 ACRES INTO 3 PARCELS EA 35951 CFG 36, APP 54	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/3/1991	<Null>	2/4/1992	2/4/1998
793	Polygon	PP24077	NEW UNMANNED DISGUISED 70' MONOPINE,4EQUIP CABS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/21/2009	<Null>	4/11/2011	2/7/2021
794	Polygon	PP14506	60' MONOPOLE WIRELESS COMMUNICATION INSTALLATION INSTALL 60' MONOPOLE/ANTENNA WITH 6 PANEL & 6 LNA ANTENNAS, & 2 EQUIP. CABINETS. EA 36952. CZ 4150, CZ 2321, PP 7860, CZC 909, CZC 910.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/10/1996	<Null>	3/25/1996	3/25/1998
795	Polygon	SP00210A1	CZ FROM R-A TO M-SC TO SP210 IN PLANNING AREA 4	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	9/21/2006	<Null>	2/19/2009	<Null>
796	Polygon	PUP0325		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
797	Polygon	PUP00765	PUBLIC USE PERMIT FOR 32-BED RESIDENTIAL CARE FACI LITY RESIDENTIAL CARE FACILITY FOR THE ELDERLY WITH 32 BEDS EA 36840 PUP 325	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	3/31/1995	<Null>	9/5/1995	9/5/1997
798	Polygon	PUP00325		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
799	Polygon	PP15744R1	RENEW PP15744 WIRELESS UNMAN TELECOM 90 FT MONOPOL E, AT CALTRANS PARK & RIDE FACILITY.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/5/2001	<Null>	5/3/2002	<Null>
800	Polygon	PP15744	105' WIRELESS TELECOMMUNICATION FACILITY.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/13/1998	<Null>	2/22/1999	<Null>
801	Polygon	PP15646	PLOT PLAN FOR POWER POLE CLIMBING TRAINING SCHOOL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/14/1998	<Null>	10/25/1999	11/24/2004
802	Polygon	PP15646R1	ADD OFFICE/CLASSROOM BUILDING TO TRAINING SCHOOL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/19/2001	<Null>	5/22/2002	<Null>
803	Polygon	PM29950	SUBDIVIDE 5 ACRES INTO 4 RESIDENTIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/14/2000	<Null>	6/3/2002	5/14/2008
804	Polygon	PM32404	SUBDIVIDE 4.784 ACRES INTO 4 LOTS COMMERCIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/13/2004	<Null>	10/6/2004	8/24/2007
805	Polygon	PM32944	SCHED H DIVISION OF 5.0 AC 4 1-AC PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/25/2005	<Null>	7/11/2006	5/1/2010
806	Polygon	PM33510	SUBDIVIDE 4.84 ACRES INTO (4) 1 ACRE LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/16/2005	<Null>	12/10/2017 11:09	4/17/2013
807	Polygon	CUP03541	CONSTRUCT TRAILER AND BOAT STORAGE FACILITY	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/15/2006	<Null>	4/14/2009	3/4/2012
808	Polygon	PP25155	VERIZON 50 FT MONOEUCALYPTUS WIRELESS FACILITY/12A NTS/1 MICROWAVE DISH/1 EQPMT SHELTER/1 GENERATOR/2 GPS/6 FT DECORATIVE BLOCK WALL ENCLOSURE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/26/2012	<Null>	10/3/2013	8/19/2015
809	Polygon	PP20908	FIVE (5) INDUSTRIAL BUILDINGS (BLDG. 1 - 4,000 SQ. FT. GROUND FLOOR OFFICE/4,000 SQ. FT. 2ND FLOOR O FFICE/ 9,975 MANUFACTURING/25,953 SQ. FT. WAREHOUS E) (BLDG. 2 - 1,200 SQ. FT. OFFICE/4,476 SQ. FT. M ANUFACTURING/5,676 SQ. FT. WAREHOUSE) (BLDG. 3 - 1 ,200 SQ. FT. OFFICE/4,476 SQ. FT. MANUFACTURING/5, 676 SQ. FT. WAREHOUSE) (BLDG. 4 - 1,200 SQ. FT. OF FICE/4,476 SQ. FT. MANUFACTURING/5,676 SQ. FT. WAR EHOUSE) (BLDG. 5 - 1,200 SQ. FT. OFFICE/4,476 SQ. FT. MANUFACTURING/5,676 SQ. FT. WAREHOUSE) 160 PAR KING STALLS, AND 24,194 SQ. FT. OF LANDSCAPING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/29/2005	<Null>	2/1/2010	11/30/2011
810	Polygon	PM33806	PARCEL MAP NO. 33806 PROPOSES A SCHEDULE "E" SUBDI VISION OF 4.72 ACRES INTO FIVE (5) INDUSTRIAL PARC ELS. THE PARCELS RANGE IN SIZE FROM 2.26 ACRES TO 0.54 ACRES	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/10/2008	<Null>	2/1/2010	9/30/2014
811	Polygon	TR33020	SUBDIVIDE 5 GROSS ACRES INTO 6 SFR LOTS	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	11/3/2004	<Null>	8/29/2005	5/25/2018
812	Polygon	PM32184	SCHED H DIVISION OF 4.7 AC. INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/12/2004	<Null>	8/1/2006	5/15/2014
813	Polygon	PM33749	SUBDIVIDE 4.71 ACRES INTO FOUR SNGL FMLY LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/13/2006	<Null>	10/18/2007	9/4/2013
814	Polygon	TR26113	DIVIDE APPROX 4.5 ACRES INTO 20 LOTS DIVIDE 4.5 ACRES INTO 20 LOTS EA 35221, CZ 5832 CFG 526, PP 13551, EXT 845, FM 26113, ECS 26113	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/11/1990	<Null>	4/23/1991	4/23/1996
815	Polygon	PP11036R1	3150 SF CANOPY, 2-BAY EQUIPMENT WASH AREA, WASHING EQUIPMENT, SLUM SULFATE TANK, 3 MASONRY BINS, 530 SF CANOPY OVER EXISTING CONTAINMENT AREA FOR STOR AGE OF NEW & USED MOTOR OIL AND OTHER FLUID CONTAI NERS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/9/2009	<Null>	6/14/2010	5/17/2012
816	Polygon	PP09090R1	ADD SHOP AREA, BREAKROOM, RESTROOMS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	2/18/1998	<Null>
817	Polygon	PUP00884	PUBLIC USE PERMIT NO. 884 PROPOSES TO DEVELOP AN 11,142 SQUARE FOOT CHURCH FACILITY AND TWO (2) 2,880 SQUARE FEET ONE STORY PORTABLE BUILDINGS. THE DEVELOPMENT PROPOSES TO PROVIDE 40,570 SQUARE FEET OF LANDSCAPING, 121 PARKING SPACES (107 SPACES FOR REGULAR PARKING, 9 SPACES FOR COMPACT PARKING AND 5 SPACES FOR HANDICAPPED PARKING), AND 78,930 SQU ARE FEET OF UNDEVELOPED AREA.	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/18/2006	<Null>	3/20/2008	11/14/2009
818	Polygon	PM25129	DIVIDE 5.02 ACRES INTO 2 PARCELS EA 34165 EXT 407, EXT 755	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/8/1989	<Null>	1/16/1990	1/16/1996
819	Polygon	CUP03251	ARCO GAS/MINI MART/BEER & WINE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/10/1997	<Null>	8/18/1998	8/18/2018
820	Polygon	PM28705	DIVIDE 4.57 ACRES INTO 4 COMML LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	11/12/1997	<Null>	8/18/1998	<Null>
821	Polygon	PP20378	2 IND WAREHOUSES/OFFICES/MEZZANINES ON 2 LOTS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/23/2005	<Null>	6/22/2005	6/13/2007
822	Polygon	PUP0387		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
823	Polygon	PUP00883	RANCH FACILITY FOR MEN W/DRUG ADDICTION EXSTG FAC	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	5/22/2006	<Null>	5/30/2014	6/1/2032
824	Polygon	PP17002	PLOT PLAN FOR SENIOR HOUSING PROJECT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/13/2001	<Null>	7/12/2002	<Null>
825	Polygon	TR31881	SCHED "A" SUBDIVISION TO ONE LOT & 158 RES CONDOS SES. THE PROPOSAL INCLUDES 188 PARKING STALLS, 158 UNITS, 9,986 SQUARE FEET OF STRUCTURAL AMENITIES, AND TWO OPEN COURTYARDS, ON 4.65 ACRES FOR SENIOR HOUSING PURPOSES.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	11/6/2003	<Null>	4/20/2005	12/15/2015
826	Polygon	PP26142	PLOT PLAN FOR CLASS II KENNEL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/10/2016	<Null>	10/26/2017	<Null>
827	Polygon	PP15880	CONSTRUCTION FO AN ACETYLENE GAS MANUFACTURING FAC	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/5/1999	<Null>	6/21/1999	6/21/2001
828	Polygon	PUP00380		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
829	Polygon	PUP0380		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
830	Polygon	PP22456	PROPOSAL TO DEVELOP A THREE (3) STORY, 86,422 SQU ARE FEET, 102-UNIT SENIOR APARTMENT DEVELOPMENT "M ISSION VILLAGE SENIOR APARTMENTS," ON A 4.17 GROSS ACRE (3.95 NET ACRE) SITE WITH 18% BUILDING LOT C OVERAGE, 86,870 SQUARE FEET (50%) OF COMMON AREA, 103 PARKING SPACES, AND 42,033 SQUARE FEET (24%) O F LANDSCAPING WITHIN THE PROPOSED PARCEL 1 OF PM34 696.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/8/2007	<Null>	7/1/2008	3/11/2010
831	Polygon	PM27094	DIVIDE 527.8 ACRES INTO 4 FINANCING LOTS IN SP 227 DIVIDE 527.8 ACRES INTO 4 PARCELS FOR FINANCING PU RPOSES COVERING SP 227 AND SURROUNDING AREAS EA 36039 FM 27094, ECS 27094, SP 227	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/7/1991	<Null>	9/1/1992	9/1/1998
832	Polygon	PM31471	SUBDIVIDE 4.4 ACRES INTO 4 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/24/2003	<Null>	7/26/2004	6/29/2007
833	Polygon	PP14974	STEEL BUILDING FABRICATION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/25/1997	<Null>	7/14/1997	6/30/1999
834	Polygon	PM36925	SUBDIVIDE PARCEL INTO 2 PARCELS SCHEDULE H MAP	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/27/2015	<Null>	12/11/2015	12/11/2018
835	Polygon	PUP0508		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
836	Polygon	PM31080	CREATE 4 PARCELS ON 4.559 AC	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/24/2002	<Null>	9/15/2004	8/24/2007
837	Polygon	PP17990	VERIZON TELECOM FAC W/70'CO-LO MONOPINE&EQUIP BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/1/2002	<Null>	6/20/2005	<Null>
838	Polygon	PP21597	SEE DESCRIPTION FIELD FOR FULL INFO ON CELL SITE CONSTRUCT OPERATE AND MAINTAIN AN UNOCCUPIED WIREL ESS FACILITY MOUNTED ON 75' HIGH WINDMILL POLE AND 4 OUT-DOOR EQUIPMENT CABINETS AT GROUND LEVEL. TH E PROPOSED SITE WILL REPLACE THE EXISTING WINDMILL STRUCTURE, AND THE EQUIPMENT IS PROPOSED TO BE ENC LOSED IN A 6' CHAIN LINK FENCE WITH COLORED SLATS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/31/2006	<Null>	6/22/2006	6/2/2006
839	Polygon	PM32872	SCHED H DIVISION OF 4.41 AC. INTO 4 1-AC PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/24/2004	<Null>	8/24/2006	4/17/2016
840	Polygon	PM31939	SCHED H DIVISION 4.18 ACRES INTO 4 RES. PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/7/2004	<Null>	4/19/2005	2/15/2008
841	Polygon	PP16932R1	ADD RECYCLING COLLECTION CENTER TO A 12,000 S.F. P RE-MANUFACTURED STEEL BUILDING FOR THE MANUFACTURE OF SHEET METAL PRODUCTS. THE BUILDING CONTAINS 1 ,620 S.F. OF OFFICE AREA, A 936 S.F. MEZZANINE, SH EET METAL SHOP FABRICATION AREA, AND STORAGE AREA.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/17/2008	<Null>	8/30/2011	7/12/2013
842	Polygon	PP16932	SHEET METAL MANUFACTURING, 12,000 SQ FT STEEL BLDG WITH OFFICES,MEZZANINE, SHOP AND STORAGE AREA.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/2/2001	<Null>	5/23/2001	<Null>
843	Polygon	PM28908	DIVIDE 4.24 ACRES INTO 3 COMMERCIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/30/1998	<Null>	2/1/1999	1/19/2002
844	Polygon	PP15107	3 NEW TILT-UP BLDG 72,151 SQ FT INDUSTRIAL BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/21/1997	<Null>	12/1/1997	<Null>
845	Polygon	TR37169	DIVIDE 4.16 AC INTO 65 RESIDENTIAL LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/13/2016	<Null>	12/16/2017	10/17/2020
846	Polygon	PP26347	DIVIDE 4.16 AC INTO 65 RESIDENTIAL LOTS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/12/2017	<Null>	4/19/2018 10:16	<Null>
847	Polygon	PUP00858	TO EXPAND EXISTING CHILDREN'S HOME	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	9/16/2002	<Null>	5/1/2003	4/15/2006
848	Polygon	PP16486	OLIVE BRANCH COMM. CHURCH, BLDGS AND MONUMENT SIGN	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/31/2000	<Null>	11/7/2000	<Null>
849	Polygon	CUP03592	TO EXTEND THE LIFE OF EXISTING DOG KENNEL 15 YEARS AND ADD ADDITIONAL 22 PARKING SPACES FOR A TOTAL O F 37.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/23/2008	<Null>	10/17/2008	6/25/2010
850	Polygon	PM33660	4 PARCEL SUBDIVION SCHEDULE H	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/26/2006	<Null>	4/23/2008	3/25/2013
851	Polygon	CUP03555	CONSTRUCT A MINI-WAREHOUSE FACILITY CONSISTING OF TWO (2) TWO-STORY BUILDINGS & FOUR (4) SINGLE STOR Y BUILDINGS INCLUDING AN OFFICE AND CARETAKERS RES IDENCE; THE PROJECT INCLUDES A TOTAL OF 141,458 SQ FT. & INCLUDES 4 PARKING SPACES. BUILDING A CONSISTS OF 16,422 SQ. FT., BUILDING B- 1 CONSISTS OF 4,973 SQ. FT., BUILDING B-2 CONSISTS OF 8,794 SQ. FT., BUILDING B-3 CONSISTS OF 9,169 S Q. FT., & BUILDING C CONSISTS OF 49,700 SQ. FT.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/11/2007	<Null>	1/11/2010	6/16/2011
852	Polygon	PUP00693	BUILD A CHURCH	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	11/17/1989	<Null>	<Null>	1/8/1993
853	Polygon	PP26117	GRAVEL AND HARDSCAPE MATERIAL STORAGE YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/6/2016	<Null>	12/21/2017	<Null>
854	Polygon	PP17157	4000 SQ FT 1 STORY OFFICE/8000 SF REPAIR FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/31/2001	<Null>	11/27/2001	<Null>
855	Polygon	PM33466	SCH E MAP SUBDIVIDE 4.18 AC INTO 2 COMMERCIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	8/31/2005	<Null>	8/11/2006	7/25/2009
856	Polygon	PP16580	TRAILER MANUFACTURING FACILITY W/OFFICE/LANDSCPNG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/5/2000	<Null>	9/1/2000	<Null>
857	Polygon	PM36984	SCHED H DIVISION: 5 AC INTO 1 AC PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/20/2016	<Null>	8/30/2018 13:39	<Null>
858	Polygon	PM29676	DIVIDE ONE PARCEL INTO FOUR PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/8/2000	<Null>	2/5/2001	12/19/2007
859	Polygon	PM35285	TENTATIVE PARCEL MAP NO. 35285 PROPOSES A SCHEDULE E SUBDIVISION OF TWO EXISTING PARCELS, WITH A TOT AL OF 4.22 NET ACRES, INTO THREE PARCELS WITH A MI NIMUM SIZE OF .93 NET ACRES. PARCEL 1 IS 1.96 NET ACRES WITH NO NEW DEVELOPMENT PROPOSED; PARCEL 2 IS 0.93 NET ACRES WITH AN EXISTING INDUSTRIAL BU ILDING TO REMAIN; PARCEL 3 IS 1.32 NET ACRES WITH AN EXISTING INDUSTRIAL BUILDING TO REMAIN. THE PR OJECT SITE IS LOCATED WITHIN THE AGUA MANSA INDUST RIAL CORRIDOR(SPECIFIC PLAN NO. 210), IN THE JURUP A AREA PLAN; MORE SPECIFICALLY, EASTERLY OF MARKET STREET, WESTERLY OF VIA CERRO AND NORTHERLY OF 24T	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	12/4/2006	<Null>	9/13/2007	8/28/2010
860	Polygon	PM25051	DIVIDE APPROX 4 ACRES INTO 4 PARCELS DIVIDE 4.15 ACRES INTO 4 PARCELS EA 34759 EXT 873	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/25/1990	<Null>	5/14/1991	5/14/1996
861	Polygon	PP18204	2 CONCRETE TILT-UP BUILDINGS - BLDGS 7 & 8	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/7/2002	<Null>	2/27/2003	<Null>
862	Polygon	SP00182A2	AMEND PA 8 FROM OS TO RESIDENTIAL	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	1/22/1999	<Null>	3/14/2000	<Null>
863	Polygon	PUP0342		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
864	Polygon	CUP03402	FERTILIZER PRODUCTION FACILITY ON 4.18 AC	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/26/2003	<Null>	1/22/2004	12/23/2005
865	Polygon	PP26133	PLOT PLAN FOR POLE SIGN MAGNOLIA AUTOMOTIVE PARK	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/3/2016	<Null>	12/18/2017 9:58	<Null>
866	Polygon	PP23089	WIRELESS FACILITY FOR ROYAL STREET COMMUNICATIONS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/21/2007	<Null>	12/12/2008	<Null>
867	Polygon	PM25448	SUBDIVIDE 4.09 ACRES INTO 4 LOTS SUBDIVIDE 4.09 ACRES INTO 4 LOTS. EA 35882 COC 3774, ASA 44, BSA 43	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/17/1991	<Null>	1/28/1992	1/28/2001
868	Polygon	CUP03508	GAS STN 2000SF BLDG AND CANOPIES FRONT & BACK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/27/2006	<Null>	8/13/2008	2/6/2010
869	Polygon	PP14489	AUTO LUBE FACILITY MINI-LUBE AND SERVICE BUILDING ON 4.13 ACRES EA 36945 PAR 22	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/22/1995	<Null>	2/26/1996	2/26/1998
870	Polygon	PM36547	SCHEDULE H SUBDIVISION OF 4.06 ACRES INTO 4 RESIDE NTIAL LOTS WITH 1-ACRE GROSS MIN	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/19/2013	<Null>	3/6/2015	10/6/2017
871	Polygon	TR28897	DIVIDE 8.46 ACRES INTO 11 SFR LOTS & 1 OS LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	6/22/1998	<Null>	1/5/1999	1/4/2002
872	Polygon	PP25045	CLASS II KENNEL 11-25 DOGS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/27/2011	<Null>	11/19/2012	<Null>
873	Polygon	PP18258	95' MONO-PALM W/EQUIPTMENT SHELTER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/4/2002	<Null>	4/21/2003	<Null>
874	Polygon	PP22362	ROYAL STREET 70' MONOPALM	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/30/2006	<Null>	7/29/2009	6/1/2011
875	Polygon	PP15976	INDUSTRIAL BUILDING - PARCEL 5	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/20/1999	<Null>	9/25/2000	9/11/2003
876	Polygon	PM30391	SUBDIVIDE 4.05 AC INTO 4 1-AC LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/7/2001	<Null>	1/22/2003	<Null>
877	Polygon	PP10269R1	CONVERT 22,011 SQ. FT. INDUST.BLDG INTO CHURCH	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/17/2008	<Null>	5/5/2009	4/20/2011
878	Polygon	PP22513	2 CONCRETE TILTUP INDUSTRIAL BUILDINGS PLOT PLAN NO. 22513 PROPOSES TWO (2) INDUSTRIAL BU ILDINGS TOTALING 73,878 SQUARE FEET ON A 4.42 GROS S ACRE SITE WITH A FLOOR AREA RATIO OF 0.38 (HEAVY INDUSTRIAL REQUIRES A 0.15-0.50 FLOOR AREA RATIO) CONSISTING OF: 2,000 SQUARE FOOT MEZZANINES, 45,6 47 SQUARE FEET OF LANDSCAPING AREA, 75,037 SQUARE FEET OF PAVED AREA, AND 126 PARKING SPACES. THE T OTAL BUILDING SQUARE FOOTAGE PROPOSED IS 73,878 SQ UARE FEET.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/30/2007	<Null>	12/14/2007	11/19/2011
879	Polygon	TR27017	SUBDIVIDE 4.03 ACRES INTO 6 LOTS DIVIDE 4.03 ACRES INTO 6 LOTS. EA 36117 CFG 126	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	10/31/1991	<Null>	5/19/1992	5/19/1998
880	Polygon	PP20157	24000 SF SINGLE STORY OFFICE/WAREHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/11/2005	<Null>	9/1/2005	8/8/2007
881	Polygon	PP07817R3	325,490 SQ FT EXPANSION TO EXISTING FLEETWOOD OPER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/25/2003	<Null>	9/15/2003	<Null>
882	Polygon	PM34010	SUBDIVIDE 4 AC INTO 2 TWO AC LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/23/2007	<Null>	11/5/2008	5/20/2013
883	Polygon	PM34377	DIVIDE 4.66AC INTO TWO 2 ACRE PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/11/2007	<Null>	1/26/2009	12/16/2017
884	Polygon	PM34294	SCHED H DIVISION OF 4.05AC INTO 2 PARCELS FOR SFR	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/27/2006	<Null>	5/22/2008	3/24/2015
885	Polygon	PP26332	ADD 12 NEW ATENNAS W/NEW 144 SQFT LEASE AREA WILL BE ADDED TO EXISTING SITE LOCATION AND TO EXISTING 88.6 MONOPOLE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/23/2017	<Null>	2/7/2019 10:21	<Null>
886	Polygon	PP26204	50 FT TALL MONOPINE CELL SITE FOR T MOBILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/21/2017	<Null>	6/6/2019 13:06	<Null>
887	Polygon	PM25916	DIVIDE APPROX 46 ACRES INTO 30 LOTS DIVIDE 46 ACRES INTO 30 INDUSTRIAL LOTS EA 35281 EXT 581, EXT 1001, MC 43 2	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/28/1990	<Null>	9/25/1990	9/25/1997
888	Polygon	CUP03537	HOUR OPERATION RETAIL SHOP BUILDING WITH EIGHT (8) MULTI TENANT SPACES, OUTDOOR SEATING, FOR RETAIL, AUTOMOTIVE, OFFICE AND FOOD USES; 177 PARKING SPA CES; AND 17,501 SQUARE FEET (11%) OF LANDSCAPING. THE USE PERMIT ALSO PROPOSES A SIGN PROGRAM FOR TH E MISSION PEDLEY PLAZA, WHICH INCLUDES TWO (2) 20 FOOT HIGH MULTI-TENANT PYLON SIGNS, ONE (1) 7 FOOT HIGH MONUMENT SIGN, AND AFFIXED SIGNAGE ON ALL ME NTIONED BUILDINGS PURSUANT TO THE ATTACHED SIGN PR OGRAM.HOUR OPERATION RETAIL SHOP BUILDING WITH EIGHT (8) MULTI TENANT SPACES, OUTDOOR SEATING, FOR RETAIL, AUTOMOTIVE, OFFICE AND FOOD USES;RE SITE WITH A P ROJECT FLOOR AREA RATIO OF 0.21 (COMMERCIAL RETAIL REQUIRES A 0.20-0.35 FLOOR AREA RATIO). THE PROJE CT CONSISTS OF THE FOLLOWING: A 17,369 SQUARE FOOT , 24-HOUR RITE AID PHARMACY WITH A 750 SQUARE FOOT MEZZANINE, A PRESCRIPTION DRIVE-THRU WINDOW AND T HE SALES OF ALCOHOLIC BEVERAGES (TYPE 21) FOR OFF PREMISES CONSUMPTION;A 2,869 SQUARE FOOT 24-HOUR O PERATION FAST FOOD RESTAURANT WITH A DRIVE-THRU WI NDOW AND OUTDOOR SEATING; A 11,542 SQUARE FOOT 24-	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/20/2006	<Null>	6/5/2008	4/2/2011
889	Polygon	PM35273	SCHEDULE E SUBDIVISION OF 4.97 GROSS ACRES INTO TH REE (3) COMMERCIAL PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	12/12/2006	<Null>	6/5/2008	4/2/2013
890	Polygon	TR22639	DIVIDE 3.8 ACRES INTO 12 LOTS EA 32277, VAR 1509 EXT 421, EXT 575, EXT 819	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/23/1987	<Null>	3/6/1990	3/6/1996
891	Polygon	PM33144	DIVIDE 5AC INTO 4 ONE ACRE LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/19/2006	<Null>	3/10/2009	12/1/2015
892	Polygon	CUP03434	CONCRETE/GUNITE BATCH PLANT & RELATED TRUCKING OPE RATION AND MAINTENANCE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	7/1/2004	<Null>	11/14/2005	11/1/2008
893	Polygon	PP23327	TO LEGALIZE FEED AND GRAIN SALES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/5/2008	<Null>	10/26/2017	<Null>
894	Polygon	CUP03264	MINI STORAGE, JACK-IN-THE-BOX, ARCO STATION/MART	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/11/1998	<Null>	1/11/2000	1/11/2003
895	Polygon	PP19128	TO USE LOT FOR TRUCK AND RV STORAGE RENTAL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/16/2004	<Null>	1/26/2007	12/11/2008
896	Polygon	CUP03524	INDOOR GO-KART RACING IN EXISTN 48,000 SF INDU BLG SEE ATTACHMENT FOR MORE DETAILS	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/30/2006	<Null>	5/8/2007	4/27/2009
897	Polygon	PP15977	INDUSTRIAL BUILDING - PARCEL 6	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/20/1999	<Null>	9/25/2000	9/11/2004
898	Polygon	TR30671	SUBDIVIDE 3.94 ACRES INTO 14 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	8/12/2002	<Null>	4/29/2003	<Null>
899	Polygon	SP00182A1	AMD SP 182 BY COMBINING PLAN AREAS 5 & 6 INTO AREA 5, REDUCE FROM 218 DU TO 195, & DELETE COMMERCIAL EA 34553, TR 25547, CZ 5657 SP 182	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	11/29/1989	<Null>	7/9/1991	<Null>
900	Polygon	PP18340	TONGAN MINISTRY MULTI PURPOSE & OFFICE BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/17/2002	<Null>	1/16/2008	1/16/2010
901	Polygon	PP26135	PLOT PLAN FOR POLE SIGN FOR STORQUEST	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/3/2016	<Null>	1/5/2018 9:49	<Null>

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
902	Polygon	PM34344	IRCLE.IVE TRACT PARCEL MAP NO. 34344 PROPOSES A SC HEDULE E SUBDIVISION OF 3.54 GROSS ACRES INTO ONE (1) COMMERCIAL/INDUSTRIAL SUBDIVISION TO ALLOW SEP ARATE PARCELS FOR CONDOMINIUM PURPOSES. THE PROJEC T SITE WAS PREVIOUSLY ENTITLED UNDER PLOT PLAN NO. 21040 WHICH ALLOWED THE CONSTRUCTION OF THREE (3) MULTI-TENANT INDUSTRIAL BUILDINGS. THE PROPOSED S UBDIVISION IS FOR INDUSTRIAL CONDOMINIUM PURPOSES ONLY. THE PROPOSED SUBDIVISION IS LOCATED IN THE C OMMUNITY OF GLEN AVON OF THE JURUPA AREA PLAN OF W ESTERN RIVERSIDE COUNTY; MORE SPECIFICALLY, SOUTHE RLY OF GALENA STREET AND WESTERLY OF BROOKHOLLOW C	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/7/2006	<Null>	12/4/2007	9/18/2010
903	Polygon	PP21040	3 SGL-STY INDUS BLDGS (50,750 SF) ON 3 LOTS (PAR00727)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/1/2005	<Null>	9/7/2006	8/10/2008
904	Polygon	PM30329	TO DIVIDE PARCEL INTO 4 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/26/2002	<Null>	11/25/2002	<Null>
905	Polygon	PP22794	LEGALIZE AN EXISTING TRUCK AND EQUIPMENT STORAGE A REA WITHIN A 4.00 GROSS ACRE PARCEL. THE PROPOSAL CONSISTS AN EXISTING 3,562 SQ. FT. STORAGE AND MAI NTENANCE STRUCTURE, A 484 SQ. FT. OFFICE, A 2,938 SQ. FT. CARE TAKER RESIDENCE, A 695 SQ. FT. GARAGE , AND A 802 SQ. FT. STORAGE CONTAINER AND ADDITION AL AREAS OF OUTDOOR STORAGE AND ANCILLARY STRUCTUR ES. THE PROPOSAL INCLUDES 25 PARKING SPACES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/16/2007	<Null>	8/30/2010	<Null>
906	Polygon	PP15152	CONSTRUCT SALES & SERV.FAC. FOR LRG TRUCKS & TRLRS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/23/1997	<Null>	1/6/1998	<Null>
907	Polygon	PUP00726	OFFICES AND DAY CARE CENTER OFFICES & DAY CARE CENTER EA 36012 SEE FILE	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	7/26/1991	<Null>	10/15/1991	10/15/1993
908	Polygon	PP22415	PLOT PLAN NO. 22415 PROPOSES TO CONSTRUCT TWO (2) CONCRETE TILT-UP WAREHOUSE BUILDINGS THAT INCLUDE OFFICE SPACE AND MEZZANINE SPACE THAT TOTAL 85,204 SQ. FT. (0.52 FLOOR AREA RATIO) OF BUILDING AREA ON A 3.75 NET ACRE LOT. BUILDING 'A' IS A 50,836 S Q. FT. STRUCTURE THAT CONSISTS OF 1,423 SQ. FT. OF MEZZANINE SPACE AND 1,675 SQ. FT. OF OFFICE SPACE ; BUILDING 'B' IS A 34,368 SQ. FT. STRUCTURE THAT CONSISTS OF 1,460 SQ. FT. OF MEZZANINE SPACE AND 1 ,708 SQ. FT. OF OFFICE SPACE. THE PROPOSAL ALSO CO NSISTS OF 15% OF LANDSCAPING, AND 91 PARKING SPACE S INCLUDING 4 ACCESSIBLE PARKING SPACES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/15/2006	<Null>	12/6/2007	11/19/2009
909	Polygon	PM35752	TENTATIVE PARCEL MAP NO. 35752 PROPOSES A SCHEDULE 'E' SUBDIVISION OF 5.5 GROSS ACRES INTO 2 INDUSTR IAL PARCELS, PARCEL 1 IS 2.0 GROSS ACRES (1.46 NET ACRES) AND PARCEL 2 IS 3.2 GROSS ACRES (2.39 NET ACRES).	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	9/28/2007	<Null>	5/20/2008	4/8/2011
910	Polygon	PP24217	PAVED CAR CARRIER PARKING LOT/LIGHTING/TRASH ENCLO	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/18/2009	<Null>	6/1/2011	5/9/2013
911	Polygon	RTA26151	COMBINE 7 PARCELS INTO 1 REVERSION TO ACREAGE - COMBINE 7 PARCELS INTO 1 CO MMERCIAL LOT EA 35225, CUP 3098 SC 315	REVERSION TO ACREAGE (RTA)	RTA01 - REVERSION TO ACREAGE	PLN	APPROVED	6/13/1990	<Null>	9/24/1991	9/24/1997
912	Polygon	CUP03468	PROPOSED GAS STATION,FASTFOOD,CARWASH, STORE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/15/2005	<Null>	5/21/2008	3/11/2010
913	Polygon	PP14252	98 UNIT ALZHEIMERS CARE FACILITTY AND ADMINISTRATI ON CENTER 98 UNIT ALZHEIMERS CARE FACILITY WITH AN ADMINISTR ATIVE CENTER EA 36842 SP 123	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/31/1995	<Null>	5/22/1995	5/22/1997
914	Polygon	PP22852	T-MOBILE TELECOMM FACILTY/50' DISGUISED PALM TREEPLOT PLAN NO. 22852 IS A PROPOSAL FOR THE CONSTRUC TION OF AN UNMANNED T-MOBILE WIRELESS TELECOMMUNIC ATION FACILITY DISGUISED AS A 50' HIGH PALM TREE. THE PROJECT WILL INCLUDE TWELVE (12) ANTENNA ARRAY S MOUNTED ONTO THREE (3) SECTORS, FOUR (4) EQUIPME NT CABINETS, ONE (1) GPS ANTENNA, AND ONE (1) PARA BOLIC DISH ENCLOSED WITHIN A 260 SQ. FT. NET LEASE AREA.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/12/2007	<Null>	7/17/2008	6/2/2010
915	Polygon	PUP00749	CONSTRUCT LIBRARY AND CHILD CARE FACILITY CONSTRUCT A LIBRARY AND CHILD CARE FACILITY. NON-EA N/A	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	6/8/1993	<Null>	8/16/1993	8/16/1995
916	Polygon	PP18844	41027 SQ FT WAREHOUSE BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/27/2003	<Null>	9/22/2004	8/30/2006
917	Polygon	PP25699	FARMER BOYS/RETAIL SHOP. CNR 4 BLDGS/19,558 SF TOT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/7/2014	<Null>	3/25/2016	<Null>
918	Polygon	TPM37625	SCHEDULE "H" SUBDIVISION OF 3.4 ACRES INTO 3 RESIDENTIAL LOTS WITH A MINIMUM LOT SIZE OF 1 ACRE.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/1/2018 8:03	<Null>	1/30/2020 11:09	<Null>
919	Polygon	PM26534	SUBDIVIDE 3.09 ACRES INTO FOUR LOTS DIVIDE 3.09 ACRES INTO 4 PARCELS EA 35443	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/22/1990	<Null>	9/3/1991	9/3/1997
920	Polygon	CUP03178R1	EXPANDING RECYCLING BUSINESS TO ADJACENT LOT	MARES	CUP05 - GENERAL	PLN	APPROVED	2/22/2010	<Null>	5/25/2011	9/29/2043
921	Polygon	CUP180016	CUP TO CONSTRUCT A 18,800 SQ. FT. RETAIL COMMERCIAL BUILDING, (TRACTOR SUPPLY COMPANY) THAT IS 30 FEET IN HEIGHT. CONTIGUOUS TO THE BUILDING WILL BE 15,000 SQ. FT. OF FENCED-IN OUTDOOR DISPLAY THAT INCLUDED A 1,000-GALLON PROPANE TANK FOR THE SALE OF BULK PROPANE AND A 2,000 SQ. FT. FUTURE FORAGE SHED. IN ADDITION, THERE WILL BE 6,257 SQ. FT. OF UNENCLOSED OUTDOOR DISPLAY, A REAR LOADING DOCK FOR MERCHANDISE DELIVERY, DUMPSTER ENCLOSURE, PARKING LOT TO ACCOMMODATE UP TO 99 VEHICLES, SIGNAGE, ALL NECESSARY ONSITE STORM WATER FACILITIES, ALL PROPOSED LANDSCAPING, AS WELL AS REQUIRED OFF-SITE IMPROVEMENTS. ACCESS TO THE SITE IS PROVIDED FOR VIA THE EXISTING DRIVEWAY ON VAN BUREN BLVD. EARTHWORK WILL CONSIST OF BALANCING THE SITE, THERE WILL BE NO IMPORT OR EXPORT OF SOIL MATERIAL.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	7/25/2018 8:39	<Null>	6/6/2019 13:59	<Null>
922	Polygon	CUP03534	50,340 SF MINI-WAREHSE/18 SPACE RV STORAGE FACILIT F.A.R. OF 0.34, CONSISTING OF 3 BULIDINGS, WITH BL DG A BEING 12,790 SF (INCLUDING OFFICE), BLDG B BE ING 17,555 SF. & BLDG C BEING 20,000 SF; AND 18 OU TDOOR RV STORAGE SPACES, 8 FOOT WIDE LOADING AREAS ALONG BLDGS A THRU C, 1 PARKING SPACE & 1 ADA PAR KING SPACE & 28,026 SF. (19.4%) OF LANDSCAPING.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	10/12/2006	<Null>	12/26/2008	12/12/2009
923	Polygon	PM35884	SCHED E 1 LOT CONDO SUBDIVISON FOR 91 STORAGE UNIT S & 18 RV PARKING STALLS.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	6/17/2008	<Null>	12/2/2008	11/5/2015
924	Polygon	PM28689	DIVIDE 17.67 ACRES INTO 8 COMMERCIAL LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	1/26/1998	<Null>	5/26/1998	5/26/2001
925	Polygon	SP00123A5	SP AMD TO SP 123 TO REV. BOUND. BET PA 27A & 27B	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	1/26/1998	<Null>	6/5/2001	<Null>
926	Polygon	PM26207	DIVIDE APPROX 3.3 ACRES INTO 4 LOTS DIVIDE 3.3 ACRES INTO 4 LOTS EA 35367	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/24/1990	<Null>	10/29/1991	10/29/1997
927	Polygon	PP16371	CONSTRUCTION YARD AND OFFICE COMPLEX	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/21/2000	<Null>	8/28/2001	<Null>
928	Polygon	PM26654	DIVIDE 3.3 ACRES INTO 2 LOTS IN SP 210 DIVIDE 3.3 ACRES INTO 2 INDUSTRIAL PARCELS EA 35522 EXT 866, SP 210	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	10/2/1990	<Null>	4/30/1991	4/30/1996
929	Polygon	SP00210	4,465 ACRE INDUSTRIAL CORRIDOR IN CONJUNCTION W/CO UNTY OF SAN BERNARDINO, CITIES OF RIALTO & COLTON*	SPECIFIC PLAN (SP)	SP01 - SPECIFIC PLAN	PLN	APPROVED	11/22/1985	<Null>	6/3/1986	<Null>
930	Polygon	CUP03590	CUP03590 PROPOSES TO CONSTRUCT A 13,969 SQUARE FOO T FRESH AND EASY (TESCO) FOOD MARKET ON A 3.2 GROS S ACRE SITE WITH 70 TOTAL PARKING SPACES (54 EXIST ING AND 16 NEW STALLS) INCLUDING THREE (3) SPACES FOR PERSONS WITH DISABILITIES, 2,968 SQUARE FEET (21%) OF LANDSCAPING, AND THE SALE OF ALCOHOLIC BEV ERAGES (TYPE 21) FOR OFF PREMISE CONSUMPTION.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/1/2008	<Null>	8/12/2008	7/29/2010
931	Polygon	PM33328	SCHED G DIVISION OF 2.83AC INTO 3 PARCELS E G SUBDIVISION OF 2.83 ACRES INTO 3 PARCELS: PARCEL 1 WITH 0.84 ACRES, PARCEL 2 WITH 0.84 ACRES , AND PARCEL 3 WITH 1.15 ACRES. PARCEL 3 ALSO INCL UDES TWO SINGLE FAMILY RESIDENCES THAT ARE TO REMA IN. TO PROVIDE ACCESS TO PARCEL 1 AND 2, A 32 FEET WIDE PRIVATE ROAD HAS BEEN PROPOSED WITH ITS ACCE SS POINT FROM TYROLITE STREET.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/15/2006	<Null>	12/10/2007	11/5/2013
932	Polygon	PM35814	SCHEDULE "E" SUBDIVISION OF 3.28 GROSS ACRES INTO THREE (3) COMMERCIAL PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	10/17/2007	<Null>	10/20/2010	10/28/2016
933	Polygon	PP23128	PROPOSES A 18,223 SQ. FT. NEIGHBORHOOD SHOPPING CENTER CONSISTING OF A TOTAL OF THREE (3) BUILDINGS: ONE (1) IS A 11,800 S.F. GENERAL COMMERCIAL BUILDING, ONE (1) IS A 3 ,103 S.F. FAST FOOD DRIVE THRU BUILDING, AND ONE (1) 1,145 S.F. GAS STATION/CONVENIENCE STORE WITH A 2,184 S.F. FUEL CANOPY. THE PROJECT PROPOSES 107 PARKING SPACES. THE PROPOSAL ALSO INCLUDES SIGNAGE FOR THE NEIGHBORHOOD SHOPPING CENTER.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/17/2007	<Null>	10/20/2010	1/11/2012
934	Polygon	PP20204	UNMANNED CELL SITE/52FT MONOPALM (VERIZON)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/26/2005	<Null>	7/14/2006	5/30/2008
935	Polygon	CUP03599	TO CONSTRUCT A THREE-STORY 52,798 SQ.FT. HOTEL WI H 103 ROOMS AND A DETACHED ANCILLARY ONE-STORY 8,9 37 SQ.FT. BANQUET HALL ON 3.1 GROSS ACRES	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/25/2008	<Null>	9/26/2015	6/2/2017
936	Polygon	PP24431	NEW MONOPINE WIRELESS FACILITY W/ATTNDANT RADIOEQU	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/2/2010	<Null>	3/15/2011	1/26/2013
937	Polygon	PUP00830	70 FT MONOPALM, DISH & ATENNAS, EQUIP CABINET	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	3/1/2001	<Null>	8/27/2002	<Null>
938	Polygon	PP24161	WOOD PALLET MANUF/PALLET STORE&REPAIR PP24161 PROP OSES TO PERMIT THE OPERATION OF A WOOD PALLET STOR AGE, MANUFACTURE AND REPAIR OF PALLETS. THE PROJEC T PROPOSES TO CONSTRUCT 20 TRUCK PARKING SPACES AN D 30 STANDARD SPACES INCLUDING 14,191 SQUARE FEET (10%) OF NEW LANDSCAPING AREA ON A 3.27 GROSS (3.2 4 NET) ACRE SITE. THE EXISTING PERMITTED 1,300 SQU ARE FOOT CARETAKER'S RESIDENCE AND 4,050 SQUARE FO OT STORAGE AND MANUFACTURING METAL BUILDING WILL R EMAIN.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/30/2009	<Null>	5/20/2010	4/19/2012
939	Polygon	CUP03599R01	REVISED PERMIT FOR REVISION OF APPROVED 6'-0' HIGH MASONRY WALL TO PROPOSED 6'-0' HIGH	MARES	CUP05 - GENERAL	PLN	APPROVED	11/9/2018 16:31	<Null>	6/21/2019 15:20	<Null>
940	Polygon	PP14995	90,370 SQFT WAREHOUSE/DISTRIBUTION/OFFICE BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/12/1997	<Null>	6/16/1997	6/16/1999
941	Polygon	PP16512	PARTS BUSINESS/AUTO STORAGE/880SF SHOWROOM/SALES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/21/2000	<Null>	9/19/2000	<Null>
942	Polygon	PM23914	DIVIDE 48 ACRES INTO 15 COMMERCIAL PARCELS EA 33145, CZ 5289 EXT 192, EXT 418, EXT 694, FM 23914, UPH 82	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/6/1988	<Null>	2/7/1989	2/7/1996
943	Polygon	TR33569	THE LAND DIVISION HEREBY PERMITTED IS A SCHEDULE A SUBDIVISION OF 3.19 GROSS ACRES INTO 13 SINGLE FA MILY RESIDENTIAL LOTS WITH A 7,200 SQUARE FOOT MIN IMUM LOT SIZE, AND A 16 FOOT REGIONAL TRAIL ALONG BEN NEVIS BOULEVARD.	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	9/29/2005	<Null>	8/13/2007	5/30/2013
944	Polygon	PM26242	DIVIDE APPROX 3 ACRES INTO 3 LOTS DIVIDE 3 ACRES INTO 3 PARCELS EA 35369 CFG 435	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/26/1990	<Null>	10/8/1991	10/8/1997
945	Polygon	PM29891	SUBDIVIDE 3.09 AC INTO THREE 1-ACRE PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/23/2001	<Null>	8/28/2001	<Null>
946	Polygon	PUP00163	FIRST BAPTIST CHURCH OF HIGHGROVE NON-EA PUP 163, PUP 153, RVP 28, RVP 149, PUP 163 MC#1	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	4/28/1966	<Null>	6/2/1966	6/2/1968
947	Polygon	PM37086	THREE SFR PARCELS UNDER SCHEDULE H	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/5/2016	<Null>	1/4/2018	8/29/2020
948	Polygon	PM34039	SCHED H DIVISION OF 3 AC INTO 3 1-AC. MIN PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/3/2005	<Null>	2/26/2007	11/13/2014
949	Polygon	PP19747	3 2-STORY STORAGE BLDGS W/OFFICE & STORAGE BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/9/2004	<Null>	1/4/2006	10/18/2007
950	Polygon	PM35896	SCHEDULE 'G' SUBDIVISION OF 2.97 GROSS (2.36 NET) ACRES INTO FOUR (4) RESIDENTIAL PARCELS WITH A MIN IMUM LOT SIZE OF 20,000 SQUARE FEET. THE PROPOSED SUBDIVISION IS LOCATED IN THE COMMUNITY OF PEDLEY WITHIN THE JURUPA AREA PLAN IN WESTERN RIVERSIDE C OUNTY; MORE SPECIFICALLY, SOUTHERLY OF 60TH STREET AND EASTERLY OF PEDLEY ROAD.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/25/2008	<Null>	5/27/2010	4/20/2015
951	Polygon	PM25641	DIVIDE 3 ACRES INTO 3 PARCELS DIVIDE 3 ACRES INTO 3 PARCELS EA 34657 EXT 631	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/26/1989	<Null>	9/25/1990	9/25/1995
952	Polygon	PM31916	TO DIVIDE 3.05 ACRES INTO THREE ONE ACRE PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/14/2004	<Null>	8/11/2005	5/17/2008
953	Polygon	PP24978	70 FT MONOPINE/12 ANTS/2 GPS/1 MICRO/1 EQUIP SHETR	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/30/2011	<Null>	10/1/2012	8/20/2014
954	Polygon	PP19349	70' MONOPINE W/12 ANT'S & ASSOC EQUIP CABINETS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/5/2004	<Null>	11/23/2004	11/22/2006
955	Polygon	PP24493	NEW CELL SITE W/70 FT TOWER,6PANELS,6 BTS CABINETS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/29/2010	<Null>	11/1/2010	9/13/2012
956	Polygon	PM26399	DIVIDE APPROX 3.4 ACRES INTO 4 PARCELS DIVIDE 3.4 ACRES INTO 4 PARCELS EA 35512 FM 26399, ECS 26399	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/25/1990	<Null>	7/2/1991	7/2/1993
957	Polygon	PM28278	SUBDIVIDE INTO 12 LOTS DIVIDE 320 ACRES INTO 12 LOTS AND A REMAINEDER LOT OF 12 ACRES ON A SCHEDULE I MAP EA 36947, CZ 06277 SP 300, AGP 749, PAR 43	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/3/1996	<Null>	8/14/1996	7/23/1999
958	Polygon	PP17189	PLOT PLAN FOR LAND USE AND DEVELOPMENT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/20/2001	<Null>	1/8/2003	12/2/2007
959	Polygon	PP15739	OFFICE COMPLEX	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/9/1998	<Null>	11/30/1999	<Null>
960	Polygon	PP22203	45' DISGUISED FLAGPOLE W/EQUIP SHELTER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/3/2006	<Null>	8/20/2007	8/9/2007
961	Polygon	PP18499	PROPOSED 4800 SF SERVICE GARAGE & OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/11/2003	<Null>	5/19/2004	<Null>
962	Polygon	PM34621	SUBDIVIDE 3.83 ACRES INTO 2 RESIDENTIAL PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/26/2007	<Null>	2/25/2009	10/6/2017
963	Polygon	PUP0321		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
964	Polygon	PUP00321		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	2/2/2001	<Null>	2/2/2001	<Null>
965	Polygon	PM27393	SUBDIVIDIE 3.01 AC INTO 2 1.42 AC PARCELS DIVIDE 3.01 ACRES INTO 2 RESIDENTIAL PARCELS WITH A 1.5 ACRE MINIMUM PARCEL SIZE EA 36285, VAR 1596 N/A	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/10/1992	<Null>	7/27/1993	7/27/1999

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
966	Polygon	CUP03518	THE USE HEREBY PROPOSED IS A 114,765 SQUARE FOOT SELF STORAGE, RV PARKING, AND POSTAL ANNEX/COPY FACILITY, 48.63% LOT COVERAGE, 6.59% LANDSCAPING, WITH A FLOOR AREA RATIO OF .939 ON 2.87 ACRES. THE PROPOSAL INCLUDES A GENERAL PLAN AMENDMENT, CHANGE OF ZONE, AND CONDITIONAL USE PERMIT.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/23/2006	<Null>	1/17/2008	9/18/2009
967	Polygon	PP15986	CONSTRUCT 60 X 130 METAL BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/25/1999	<Null>	4/24/2000	<Null>
968	Polygon	PM36534	SCHEDULE H SUBDIVISION OF 2.9 GROSS ACRES INTO 2 R ESIDENTIAL PARCELS WITH EACH PARCEL BEING 1.3 ACRE S, AND WITH ONE PROPOSED PARCEL ENCOMPASSING AN EX ISTING SINGLE FAMILY RESIDENCE AND THE OTHER PROPO SED PARCEL ENCOMPASSING AN EXISTING GUEST DWELLING UNIT	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/13/2013	<Null>	10/24/2013	7/22/2016
969	Polygon	PM36183	DIVIDE 4.39 ACRES INTO 4 LOTS AND 1 REMAINDER	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/9/2009	<Null>	3/3/2011	10/5/2013
970	Polygon	PM29428	DIVIDE 2.85 ACRES INTO TWO 1.4 ACRE PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/12/2000	<Null>	3/20/2001	1/8/2003
971	Polygon	PUP0561		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
972	Polygon	CUP03262R1	CONDITIONAL USE PERMIT NO. 3262, REVISED PERMIT NO . 1, PROPOSES THE CONSTRUCTION OF THREE ADDITIONAL STRUCTURES TOTALING 9,361 SQ. FT. OF BUILDING ARE A ON A 3.92 GROSS ACRE LOT. THE PROPOSAL INCLUDES AN 883 SQ. FT. OFFICE, A SINGLE-STORY 2,416 SQ. FT . STRUCTURE FOR RETAIL USES, A SINGLE-STORY 2,100 SQ. FT. STRUCTURE FOR RETAIL USES, A 2,998 SQ. FT. FAST FOOD RESTAURANT, A 964 SQ. FT. CAR WASH, A N EW CANOPY OVER THE EXISTING DIESEL PUMPS, AND 42 A DDITIONAL PARKING SPACES INCLUDING SIX (6) ACCESSI BLE PARKING FOR PERSONS WITH DISABILITIES.	MARES	CUP05 - GENERAL	PLN	APPROVED	3/6/2006	<Null>	4/27/2009	3/4/2011
973	Polygon	PP18095	ROOFING CONTRACTOR STORAGE / OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/21/2002	<Null>	1/28/2003	<Null>
974	Polygon	PP17995	MINI WAREHOUSE STORAGE FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/3/2002	<Null>	3/19/2003	<Null>
975	Polygon	PP20284	WIRELESS TELECOMM FACILITY DISGUISED MONOPALM	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/22/2005	<Null>	1/3/2006	12/30/2007
976	Polygon	PP22337	EQUIP CABINETS/12 ANTENNA/NEW MONOBRDLF POLE 55'	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/20/2006	<Null>	1/23/2008	12/13/2009
977	Polygon	PUP00920	PARKING LOT FOR SANDALS CHURCH LOCATED S/PALMYRITA	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/30/2013	<Null>	7/3/2014	5/21/2016
978	Polygon	PM34011	SUBDIVIDE 2.5 ACRES INTO TWO LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/28/2005	<Null>	2/6/2007	12/12/2016
979	Polygon	TR27069	SUBDIVIDE 2.83 DIVIDE 2.84 ACRES INTO 4 RESIDENTIAL LOTS WITH A 0 .633 ACRE MINIMUM LOT SIZE EA 36081	TENTATIVE TRACT MAP (TTM)	TTM04 - SFR NOT IN R-2, R-4, R-6 ZONES (UNSEWERED)	PLN	APPROVED	9/20/1991	<Null>	1/26/1993	1/26/2001
980	Polygon	PP22027	PLOT PLAN NO. 22027 PROPOSES TO CONSTRUCT A 12,670 SQ. FT., ONE-STORY, CONSTRUCTION OFFICE AND A ELE CTRICAL EQUIPMENT STORAGE YARD COMPOSED OF MULTIPL E STORAGE BINS RANGING IN SIZE FROM 320 SQ. FT. TO 800 SQ. FT. WITHIN 2.87 GROSS ACRES (2.66 NET). T HE PROPOSAL ALSO INCLUDES 8,228 SQ. FT. (13%) OF L ANDSCAPING AND 68 PARKING SPACES INCLUDING 3 ACCES SIBLE PARKING SPACES FOR PERSONS WITH DISABILITIES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/4/2006	<Null>	5/5/2008	4/21/2010
981	Polygon	PM33357	SCHED H DIVISION OF 3 AC INTO 3 ONE AC PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/18/2005	<Null>	5/22/2008	4/21/2015
982	Polygon	PM35529	SCHED H DIVISON OF 3.29 AC. INTO 3 PARCELS. .29 GROSS ACRES INTO THREE (3) SINGLE FAMILY RESID ENTIAL PARCELS WITH A MINIMUM LOT SIZE OF ONE (1) GROSS ACRE.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/1/2007	<Null>	12/26/2008	4/7/2017
983	Polygon	PM37402	SCH H MAP-SUBDIV 2.55 AC LOT INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	9/5/2017	<Null>	1/9/2020 13:38	<Null>
984	Polygon	PP26337	CHILD DAY CARE CENTER W/CLASSRMS AND OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/5/2017	<Null>	1/9/2020 13:36	<Null>
985	Polygon	PP15775	CONSTRUCTION OF 6000 SF BLOCK BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/7/1998	<Null>	12/14/1999	12/14/2001
986	Polygon	PP16818	UNMANNED TELECOMM MONOPOLE WITH 4 SPACES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/16/2000	<Null>	8/7/2001	<Null>
987	Polygon	PM28432	SUBDIVIDE 2.57 AC INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/17/1996	<Null>	3/12/1997	2/11/2000
988	Polygon	PP15523	CONSTRUCT 70X100 TRUCK SVC BLDG FOR TRUCKING CO	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/19/1998	<Null>	9/27/1999	<Null>
989	Polygon	PM31754	SCHED H DIVISION OF 3.08 AC. INTO 2 SFR PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/2/2003	<Null>	5/26/2005	4/5/2008
990	Polygon	PP19171	INDUSTRIAL PARK (4 TILT-UP BLDGS)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/3/2004	<Null>	12/30/2004	12/13/2006
991	Polygon	PM31870	DIVIDE 2.6 INTO 4 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	4/1/2004	<Null>	12/16/2004	12/7/2007
992	Polygon	PM35207	TO SUBDIVIDE 2.5AC INTO 2 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/18/2006	<Null>	2/27/2008	11/27/2013
993	Polygon	CUP03628	EXTEND THE LIFE OF CUP2608/PERMIT OFFSITE ALCHOHOL	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/18/2009	<Null>	2/24/2010	1/13/2013
994	Polygon	CUP03317	GAS STATION, MINI MART, RETAIL BUILDING	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	7/18/2000	<Null>	3/6/2001	1/1/2021
995	Polygon	PP19904	ADDTION OF 8 ANTENNAS TO EXISTING CELL TOWER W/ 23 0 SQ FT - 10 FT TALL EQUIPMENT TOWER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/22/2004	<Null>	10/7/2005	<Null>
996	Polygon	CUP03445	SELF-STORAGE FACILITY W/MANAGERS QUARTERS	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/10/2004	<Null>	11/30/2005	11/15/2007
997	Polygon	PM31403	DIVIDE 2.65 ACRES INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/27/2003	<Null>	1/6/2005	9/28/2008
998	Polygon	PM33534	SCH H MAP SUBDVD 2.55 ACRE PARCEL INTO TWO SFR	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/15/2005	<Null>	4/12/2006	2/6/2009
999	Polygon	CUP02977	OFFICE AND INDOOR AUTOMOBILE STORAGE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/8/2000	<Null>	12/8/2000	4/27/1990
1000	Polygon	PP12904	TRUCK REPAIR SHOP & TRUCK SALES TRUCK REPAIR SHOP AND TRUCK SALES EA 35994, CZ 6067 N/A	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/23/1991	<Null>	6/4/1996	6/4/1998
1001	Polygon	PM27394	SUBDIVIDE 4.12 AC INTO 4 ONE ACRE PARCELS DIVIDE 4.12 ACRES INTO 4 RESIDENTIAL PARCELS WITH 1 AC. MIN. LOT SIZE. EA 36286, VAR 1595 N/A	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/10/1992	<Null>	8/31/1993	8/31/1999
1002	Polygon	PP20909	PLOT PLAN NO. 20909 PROPOSES A 38,468 SQUARE FOOT, SINGLE-STORY, MULTI-TENANT, CONCRETE TILT UP, IND USTRIAL BUILDING ON 2.4 NET ACRES WITH A 0.36 FLOO R AREA RATIO (F.A.R.) WITHIN PLANNING AREA III-3 O F SP176. THE PROPOSED DEVELOPMENT INCLUDES 13,892 SQ. FT. OF LANDSCAPING ONE HUNDRED TWENTY-TWO (122) STANDARD PARKING STALLS AND SEVEN (7) STALLS FOR PERSONS WITH DISABILITIES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/29/2005	<Null>	8/15/2007	7/23/2009
1003	Polygon	PP13351	CONSTRUCT UNMANNED PUBLIC UTILITY SUBSTATION CONSTRUCT UNMANNED PUBLIC UTILITY SUBSTATION. EA 36354 CFG 457, PP 13467, OPP 1194	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/20/1992	<Null>	1/11/1993	1/11/1995
1004	Polygon	PM36749	SCHEDULE H PARCEL MAP TO SUBDIVIDE ONE (1) LOT INT O TWO PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/29/2014	<Null>	8/12/2015	3/23/2018
1005	Polygon	PUP00856	DAY CARE CENTER	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	7/19/2002	<Null>	5/1/2003	<Null>
1006	Polygon	PUP00856R1	RENEWTIME&EXPANSION OF EXISTING DAY CARE FACILITY	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	6/11/2008	<Null>	7/29/2009	6/24/2011
1007	Polygon	PP18039	INSTALL 60 FT MONOPINE TO HOUSE 12 ANTENNAS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/23/2002	<Null>	7/28/2003	<Null>
1008	Polygon	PP18039E01	EXTENSION OF TIME PP18039E01 FOR SPRINT AND METRO PCS	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPROVED	6/19/2019 7:31	<Null>	2/13/2020 14:40	6/4/2029
1009	Polygon	PM27685	SPLIT LOT INTO TWO PARCELS DIVIDE 2.42 ACRES INTO 2 RESIDENTIAL PARCELS, WITH 1.1 ACRE MIN. SIZE. EA 36502, VAR 1606 N/A	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/26/1993	<Null>	11/30/1993	11/30/1997
1010	Polygon	PUP00810	CELL SITE/100' MONOPOLE/EQUIP. SHELTER/12 PANELS	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	6/20/2000	<Null>	3/29/2001	<Null>
1011	Polygon	PM27928	DIVIDE PARCEL INTO TWO LEGAL LOTS DIVIDE 2.45 ACRES INTO 2 RESIDENTIAL PARCELS EA 36913	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/18/1995	<Null>	2/20/1996	2/20/2002
1012	Polygon	PP18683	TELECOMMINICATION FACILITY (70'MONO-PALM) NEXTEL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/12/2003	<Null>	4/13/2004	3/15/2006
1013	Polygon	PP18683E01	FIRST EXTENSION OF TIME FOR TELECOMMUNICATIONS TOWER	MARES	EOT02 - EXTENSION OF TIME - ORD NO. 348	PLN	APPROVED	7/2/2018 15:45	<Null>	11/19/2018 16:18	12/17/2028
1014	Polygon	CUP03288	CONVENIENCE STORE(BEER&WINE)/GAS/FAST FOOD	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/7/1999	<Null>	2/15/2000	12/14/2001
1015	Polygon	CUP03396	LANDSCAPE & EROSION CONTROL CENTER	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	3/27/2003	<Null>	9/24/2003	<Null>
1016	Polygon	PP25767	VERIZON 50'MONOPINE 12 ANTENNAS 2 FIVER BOXES 12 R RU 1 MICROWAVE DISH	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/26/2015	<Null>	5/18/2017	12/5/2026
1017	Polygon	PP15978	INDUSTRIAL BUILDING - PARCEL 7	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/20/1999	<Null>	9/25/2000	9/11/2004
1018	Polygon	PP17004	RETAIL NURSERY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/16/2001	<Null>	2/26/2002	<Null>
1019	Polygon	PM33483	SCHED H DIVISION OF 2.5 AC. PARCEL INTO TWO PARCEL	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/28/2005	<Null>	10/18/2007	8/27/2013
1020	Polygon	CUP03362	LEGALIZE AND EXPAND EXISTING AUTO SALES LOT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/1/2002	<Null>	7/2/2003	6/10/2005
1021	Polygon	PM33048	TENATIVE PARCEL MAP FOR CONDOMINIMUN PP18045	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	9/27/2004	<Null>	7/14/2005	4/5/2008
1022	Polygon	PM33560	SCHED E DIVISION OF 2.49 A INTO 2 LOTS.	TENTATIVE PARCEL MAP (TPM)	TPM02 - COMMERCIAL/INDUSTRIAL (UNSEWERED)	PLN	APPROVED	5/10/2007	<Null>	6/11/2008	3/24/2015
1023	Polygon	PM34187	SCHED G DIVISION OF 2.35 AC. TO 3 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/27/2005	<Null>	2/7/2008	12/17/2013
1024	Polygon	PUP00856R2	ADD 2,596 SQ FT CARE TAKERS QUARTER,ADD 2,400SQ FT METAL GARAGE/WAREHOUSE TO EXISTING CHILD CARE CENT ER. EXISTING FACILITIES CONSIST OF:	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	1/9/2012	<Null>	<Null>	12/29/2014
1025	Polygon	PP12889	54,000 SF CONCRETE TILT UP INDUSTRIAL BLDG 54,000 SF CONCRETE TILT-UP INDUSTRIAL BUILDING EA 35965 CFG 125, EXT 1025, EXT 1052	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/15/1991	<Null>	4/6/1992	4/6/1996
1026	Polygon	PP16711	150' UNMANNED TELECOMMUNICATION MONOPOLE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/1/2000	<Null>	3/12/2002	<Null>
1027	Polygon	PM26873	DIVIDE 2.50 ACRES INTO 4 PARCELS DIVIDE 2.50 ACRES INTO 4 PARCELS EA 35828 CFG 179, ASA 30	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/12/1991	<Null>	7/7/1992	7/7/1998
1028	Polygon	PM26154	SUBDIVIDE INTO 4 LOTS SUBDIVIDE 2.4 ACRES INTO 3 LOTS WITH A 1/2 ACRE MI NIMUM LOT SIZE EA 35344	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/17/1990	<Null>	2/25/1992	2/25/1998
1029	Polygon	PP17406	TRUCK SALES AND SERVICE FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/11/2001	<Null>	10/8/2002	<Null>
1030	Polygon	PP08916R1	12,500 SF. METAL STORAGE SHED TO EXISTING OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/29/2000	<Null>	6/21/2001	<Null>
1031	Polygon	PM27380	SUBDIVIDE 2.58 ACRES INTO 4 LOTS DIVIDE 2.58 ACRES INTO 2 PARCELS WITH A 1.1 ACRE M INIMUM PARCEL SIZE* EA 36206 CFG 514	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/17/1992	<Null>	3/16/1993	3/16/1999
1032	Polygon	PP17793	FENCE MANUFACTURING AND BUILDING MATERIAL SALES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/4/2002	<Null>	10/31/2002	<Null>
1033	Polygon	PM31547	SUBDIVIDE 2.29 AC INTO 2 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/29/2003	<Null>	11/8/2005	10/18/2008
1034	Polygon	PM33007	SCHED H DIVSION OF 2.29 AC PARCEL INTO 2 LOTS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/16/2006	<Null>	4/27/2007	3/26/2015
1035	Polygon	CUP02600		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	<Null>
1036	Polygon	PM32532	SUBDIVIDE 2.41 ACRES INTO 2-1AC+ SFR LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/16/2005	<Null>	11/28/2006	7/11/2010
1037	Polygon	PM30111	TO DIVIDE 2.29 ACRES INTO 2 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/13/2001	<Null>	3/8/2002	2/26/2006
1038	Polygon	PM31068	TO DIVIDE 2.28 AC INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/2/2003	<Null>	9/27/2004	5/11/2007
1039	Polygon	CUP03196	AM/PM MINI MART CONSTRUCTION OF A 3,200 S.F. GASOLINE STATION/CONV ENIENCE MART (AM/PM). EA 36665, VAR 1614, (CZ 6238) APP 123, CZ 4053	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	3/29/1994	<Null>	8/9/1994	8/9/1998
1040	Polygon	PUP00759R1	ADD 3 MEDITATION RMS/2 GAZEBOS/RESTROOM & BRIDGE	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	5/21/1999	<Null>	4/4/2000	4/4/2002
1041	Polygon	PUP0672		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1042	Polygon	PUP00672		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1043	Polygon	PUP00759	PUP FOR MEDITAATION FACILITY ON PROPERTY CONSTRUCT A TWO-STORY MEDITATION CENTER WITH A 5-B EDROOM DORM FACILITY. EA 36644. PUP 672.	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	2/14/1994	<Null>	9/27/1994	9/26/1996
1044	Polygon	PUP00759R2	REMOVE PLAN CONDITION 20.PLANNING.2	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	1/19/2010	<Null>	10/3/2011	6/15/2013
1045	Polygon	PM35546	TENTATIVE PARCEL MAP NO. 35546 PROPOSES A SCHEDULE 'E' SUBDIVISION OF 2.25 GROSS ACRES CONSISTING OF 13 PARCELS INTO 2 PARCELS, PARCEL 1 IS BEING PROP OSED AS 0.66 GROSS ACRES AND PARCEL 2 IS BEING PRO POSED AS 1.59 GROSS ACRES	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	9/26/2007	<Null>	6/9/2008	5/13/2011
1046	Polygon	CUP03567	CONDITIONAL USE PERMIT NO. 3567 PROPOSES TO CONSTR UCT A 20,127 SQ. FT. SINGLE-STORY STRUCTURE FOR A VETERINARY HOSPITAL ON A 2.25 GROSS ACRE LOT. THE PROPOSAL CONSISTS OF AN EXISTING 8,314 SQ. FT. VET ERINARY HOSPITAL TO REMAIN, 13,478 SQ. FT. OF LAND SCAPING (14%), AND 104 PARKING SPACES INCLUDING 5 ACCESSIBLE PARKING SPACES FOR PERSONS WITH DISABIL ITIES.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/26/2007	<Null>	6/9/2008	5/13/2011
1047	Polygon	PM25706	DIVIDE APPROX 5.5 ACRES INTO 4 PARCELS DIVIDE 5.5 ACRES INTO 4 PARCELS EA 34956	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/27/1990	<Null>	7/16/1991	7/16/1997
1048	Polygon	PM37172	SCHEDULE "H" SUBDIVISION OF 2.23 ACRES INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/24/2017	<Null>	1/24/2018 15:07	<Null>
1049	Polygon	PM34916	SCHED H DIVISION OF 2.3 AC. INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/30/2007	<Null>	10/17/2007	9/10/2013
1050	Polygon	PM32106	SUBDIVIDE 2.25 ACRES INTO 4 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/29/2004	<Null>	11/16/2005	7/12/2012
1051	Polygon	PM34971	SCHED H DIVISION OF 2.29 AC INTO 2 SFR PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/31/2007	<Null>	7/29/2008	6/16/2015

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
1052	Polygon	PP15972	INDUSTRIAL BUILDING-PARCEL 1	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/20/1999	<Null>	9/25/2000	9/11/2004
1053	Polygon	PM35557	SCHEDULE H SUBDIVISION OF 2.5AC INTO TWO PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	8/13/2007	<Null>	12/23/2008	7/22/2015
1054	Polygon	PP22888	1 42,409 SQ FT INDUSTRIAL BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/26/2007	<Null>	5/27/2008	5/5/2010
1055	Polygon	PP20276	PP20276 PROPOSES TO CONSTRUCT A TWO-STORY 12,099 S QUARE FOOT BUDDHIST MEDITATION CENTER WITH 30,770 SQUARE FEET (30%) OF LANDSCAPING AND 83 PARKING SP ACES. THE PROJECT SITE ALSO INCLUDES AN EXISTING 3 ,500 SQUARE FOOT DWELLING UNIT, A 150 SQUARE FOOT STORAGE BUILDING, AND A 596 SQUARE FOOT GARAGE TO REMAIN ON A 2.38 GROSS ACRE SITE. THE PROJECT SITE IS LOCATED IN THE COMMUNITY OF GLEN AVON WITHIN T HE JURUPA AREA PLAN IN WESTERN RIVERSIDE COUNTY; M ORE SPECIFICALLY, NORTHERLY OF GRANITE HILL DRIVE, EASTERLY OF HUNTER STREET, AND WESTERLY OF FLEMIN G STREET.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/17/2005	<Null>	8/31/2009	8/10/2011
1056	Polygon	PP14555R1	REVISE EXPIRED PP14555	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/26/1999	<Null>	4/3/2000	<Null>
1057	Polygon	PP14555	CONSTRUCTION EQUIPMENT STORAGE YARD ONLY CONSTRUCTION EQUIPMENT STORAGE YARD EA 36970 PAR 10	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/29/1996	<Null>	3/27/1997	3/24/1999
1058	Polygon	CUP03642	EXISTING USE AS CONVENIENT STORE W/PROPANE &ALCOHO SALES, LANDSCAPE, FACADE RENOVATION, REROOF	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/19/2010	<Null>	4/2/2014	<Null>
1059	Polygon	PM34337	SCHED H DIVISON OF 2.17 AC. INTO 2 1-AC. PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	1/6/2006	<Null>	12/11/2007	10/22/2017
1060	Polygon	PP18873	RELOCATE EXST. MARKET DUE TO HWY 74 EXPANSION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/10/2003	<Null>	12/1/2003	12/1/2005
1061	Polygon	PP25192	TO PERMIT TWO EXISTING SOCCER ARENAS TOTALING 29,4 57 SQ.FT. LOCATED ON AN EXISTING 2.1 ACRE SINGLE F AMILY RESIDENCE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/22/2012	<Null>	11/21/2014	11/10/2016
1062	Polygon	CUP02025	PROPOSAL FOR UNDERGROUND DIESEL/ GASOLINE TANKS	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/29/2008	<Null>	1/29/2008	2/6/1978
1063	Polygon	PM36127	SUBDIVIDE PARCEL INTO 2 ONE ACRE LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/14/2008	<Null>	10/14/2009	7/13/2012
1064	Polygon	PP19922	50' MONOPINE ANTENNAS/EQUIP/BLOCK WALL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/28/2004	<Null>	2/21/2006	2/6/2008
1065	Polygon	PM27445	DIVIDE APPROX 14 ACRES INTO 10 LOTS DIVIDE 14.52 ACRES INTO 10 INDUSTRIAL PARCELS WITH A 1.05 ACRE MINIMUM PARCEL SIZE EA 36214 PM 24110	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	3/25/1992	<Null>	3/16/1993	3/16/1999
1066	Polygon	PP19771	COMMERCIAL FEED STORE (CV042794)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/16/2004	<Null>	7/2/2007	9/12/2008
1067	Polygon	CUP02337		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/25/2008	<Null>	1/25/2008	<Null>
1068	Polygon	PM37268	TENTATIVE PARCEL MAP NO. 37268 IS A SCHEDULE H SUBDIVISION OF 2.06 ACRES INTO TWO (2) RESIDENTIAL PARCELS WITH PARCEL 1 BEING 1.0 ACRES AND PARCEL 2 BEING 1.06 ACRES (?PROJECT?).	TENTATIVE PARCEL MAP (TPM)	TPM03 - RESIDENTIAL (WITH WAIVER OF FINAL MAP)	PLN	APPROVED	11/30/2016	<Null>	9/20/2018 13:32	8/20/2021
1069	Polygon	PP14597	CONSTRUCT A NEW WAREHOUSE/OFFICE BLDG ON SITE. PHA SE 1 20,467 SQ FT PHASE 2 20,760 EA 36984 PAR 18	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/8/1996	<Null>	9/18/1996	8/12/1998
1070	Polygon	CUP03311	CUP FOR AS BUILT RITE AID TO INCLUDE ALCOHOL SALES	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	3/17/2000	<Null>	5/23/2000	<Null>
1071	Polygon	PP15486	CONSTRUCT RITE AID PHARMACY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/28/1998	<Null>	12/24/1999	<Null>
1072	Polygon	PP25125	TO PERMIT AN EXISTING 11,158 SQUARE FOOT RESTAURAN T WITH 61 PARKING SPACES AND ADD A 3,837 SQUARE FO OT CANOPY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/7/2012	<Null>	5/7/2013	<Null>
1073	Polygon	PP14034	UNMANNED CELLULAR FACILITY - 90' MONOPOLE INSTALL AN UNMANNED CELLULAR FACILITY - 90' MONOPO LE. EA 36725. PM 25990.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/16/1994	<Null>	10/17/1994	10/16/1996
1074	Polygon	PM32448	SCHED G DIVISION OF 1.05 AC INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/8/2004	<Null>	6/6/2005	3/21/2016
1075	Polygon	PM26709	SUBDIVIDE 2.14 AC INTO 2 PARCELS DIVID 2.14 ACRES INTO 2 PARCELS EA 35652 CFG 464	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/5/1990	<Null>	2/11/1992	2/11/1999
1076	Polygon	PM28757	PARCEL MAP TO DIVIDE 1.9 ACRES INTO TWO LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/1/1999	<Null>	7/30/2003	<Null>
1077	Polygon	PM34962	SCH H PM 2.05 AC INTO 2 RES LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/16/2007	<Null>	5/26/2010	3/22/2015
1078	Polygon	PM31727	SUBDIVIDE 2.25 ACRES INTO TWO 1.03 ACRE LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/6/2004	<Null>	11/15/2004	10/26/2007
1079	Polygon	PUP0498		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1080	Polygon	PUP00739	ADDITION OF 2800+ SQFT MULTI-PURPOSE ROOM & REMODE L KITCHEN ADD A 2,800 SQ. FT. MULTI-PURPOSE ROOM TO SPANISH SDA CHURCH. EA 36282 N/A	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	6/9/1992	<Null>	9/21/1993	9/21/1995
1081	Polygon	PP20973	MINOR RENOVATION FOR EXISTING CONCRETE STRUCTURE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/20/2005	<Null>	2/7/2006	1/9/2008
1082	Polygon	PM34981	SCHED H DIVISION OF 2.09 AC INTO 2 1-ACRE PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/20/2006	<Null>	12/22/2008	7/14/2015
1083	Polygon	PP12994	PLOT PLAN FOR PLANNED INDUSTRIAL DEVELOPMENT FOR 8 TILT-UP BLDG PLOT PLAN FOR PLANNED INDUSTRIAL DEVELOPMENT FOR 8 TILT-UP BUILDINGS EA 36083 CFG 63, PM 27140 SEE FILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/25/1991	<Null>	3/9/1992	3/9/1994
1084	Polygon	PM27140	3.99AC INTO TEN INDUSTRIAL PARCELS NTO 10 PARCELS DIVIDE 3.99 ACRES INTO 10 PLANNED INDUSTRIAL PARCE LS. EA 36089 CFG 62, PP 12994 SEE FILE	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	9/25/1991	<Null>	5/26/1992	5/26/1998
1085	Polygon	PP12153	16 UNIT APARTMENT BUILDING DEVELOP 4 FOURPLEXES ON 2.04 ACRES ON 4 PARCELS EA 35362, PM 26394 CFG 14, EXT 1026, EXT 1066	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/23/1990	<Null>	7/15/1997	5/19/1998
1086	Polygon	PM26394	DIVIDE 2.04 ACRES INTO 4 PARCEL DIVIDE 2.04 ACRES INTO 4 PARCELS EA 35362, PP 12153 CFG 14, EXT 1026	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/23/1990	<Null>	5/19/1992	5/19/1999
1087	Polygon	PM27588	SUBDIVIDE 2.28 AC PARCEL INTO 2 LOTS DIVIDE 2.28 ACRES INTO 2 PARCELS EA 36998 PAR 68	TENTATIVE PARCEL MAP (TPM)	TPM03 - RESIDENTIAL (WITH WAIVER OF FINAL MAP)	PLN	APPROVED	5/10/1996	<Null>	4/25/1997	4/8/2000
1088	Polygon	TR31552	ONE LOT SUBD FOR 26 CONDO BLDGS ON 2.03 AC	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	7/30/2003	<Null>	5/4/2005	10/19/2007
1089	Polygon	PP17968R2	INCREASE SF FOR BLDG C FRM 29,052 TO 32,430 SQ FT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/10/2014	<Null>	12/8/2015	<Null>
1090	Polygon	PP15273	OFFICE/MFG/WAREHOUSE BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	6/29/1998	<Null>
1091	Polygon	PP21136	LEGALIZE EXISTING PAVING CONTRACTOR FACILITY PP21136 PROPOSES IS TO LEGALIZE AN EXISTING PAVING CONTRACTOR FACILITY LOCATED ON A TWO (2) ACRE PAR CEL. THE PROJECT SITE CONSISTS OF: 2,695 SQUARE FE ET OF MAIN OFFICE BUILDING, 1,094 SQUARE FEET OF S TORAGE AREA, 160 SQUARE FEET DETACHED MOBILE TRAIL ER, TWO (2) 3,488 SQUARE FEET OF STORAGE SHEDS, A WATER TANK, 71,019 SQUARE FEET OF PAVED AREA, 8,90 9 SQUARE FEET OF LANDSCAPING, 1,412 SQUARE FEET OF UNUSED AREA, AND 33 PARKING SPACES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/16/2005	<Null>	11/21/2007	10/22/2009
1092	Polygon	PM35780	SCHED H DIVISION OF 2.02 ACRES INTO TWO PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/20/2007	<Null>	7/30/2008	6/30/2015
1093	Polygon	PM32865	SCHED H DIVISION OF 2 AC. INTO 2 1AC PARCELS. H MAP	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	9/28/2004	<Null>	11/3/2005	7/25/2013
1094	Polygon	PP20821	MONOPALM CELL TOWER DISGUISED ONE LOT/PARCEL 1UNIT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/26/2005	<Null>	4/27/2007	2/21/2009
1095	Polygon	CUP03521	CUP03521 PROPOSES TO CONSTRUCT A SELF STORAGE FACI LITY CONSISTING OF FIVE (5) BUILDINGS WITH A TOTAL BUILDING AREA OF 70,896 SQUARE FEET INCLUDING 14, 443 SQUARE FEET (17%) OF LANDSCAPING AND FIVE (5) PARKING SPACES ON A 2.30 GROSS (1.93 NET) ACRE SIT E. THE PROJECT SITE IS LOCATED IN THE COMMUNITY OF GLEN AVON OF THE JURUPA AREA PLAN OF WESTERN RIVE RSIDE COUNTY; MORE SPECIFICALLY, NORTHERLY OF WILD PONY ROAD, SOUTHERLY OF MISSION BOULEVARD, EASTER LY OF AGATE STREET, AND WESTERLY OF VERNON AVENUE.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/9/2006	<Null>	8/31/2009	6/24/2011
1096	Polygon	CUP03526	CONDITIONAL USE PERMIT NO. 3526 PROPOSES A 7,575 S QUARE FOOT FIRESTONE COMPLETE AUTO CARE STATION ON A 2.46 GROSS ACRE SITE WITH 1.08 ACRES OF PROJECT LEASE BOUNDARY WITH A FLOOR AREA RATIO OF 0.13 (B USINESS PARK 0.25-0.60 FLOOR AREA RATIO) CONSISTIN G OF: A 953 SQUARE FOOT SHOWROOM, 4141 SQUARE FEET OF SERVICE AREA, 2,032 SQUARE FEET OF INVENTORY A REA, 449 SQUARE FEET OF STORAGE AREA, 58 STANDARD PARKING SPACES, 2 ADA PARKING SPACES, AND 21,373 S QUARE FEET OF LANDSCAPING. THIS IS A PAD SITE WITH IN DE ANZA MARKETPLACE SHOPPING CENTER.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/6/2006	<Null>	2/7/2008	8/29/2009
1097	Polygon	PM30847	SCHED H DIVISION OF 2.13 AC. INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM03 - RESIDENTIAL (WITH WAIVER OF FINAL MAP)	PLN	APPROVED	3/12/2003	<Null>	3/29/2006	2/21/2009
1098	Polygon	SP00144A3	SPECIFIC PLAN AMENDMENT FROM COMM TO RESIDENTIAL	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	6/4/1999	<Null>	1/10/2001	1/9/2005
1099	Polygon	TR29339	DIVIDE 1.92 ACRES INTO 8 RES LOTS	TENTATIVE TRACT MAP (TTM)	TTM01 - MULTI-FAMILY RESIDENTIAL CONDO (SEWERED)	PLN	APPROVED	6/4/1999	<Null>	1/10/2001	10/3/2003
1100	Polygon	PM26697	SUBDIVIDE 2.12 ACRES INTO TWO PARCELS. DIVIDE 2.12 ACRES INTO 2 RESIDENTIAL PARCELS WITH A MINIMUM SIZE OF 1 ACRE. EA 35852. N/A.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/2/1991	<Null>	3/26/1997	2/11/2000
1101	Polygon	CUP02817		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/21/2000	<Null>	12/21/2000	<Null>
1102	Polygon	PM29311	DIVIDE 2.17 AC INTO TWO PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/7/1999	<Null>	12/11/2000	<Null>
1103	Polygon	PP16763	19500 SQ FT IND BUILDING (18,570 WAREHOUSE 930 OFF ICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/11/2000	<Null>	1/3/2001	12/12/2002
1104	Polygon	PP16191	25,175 SQ. FT. COMMERCIAL WAREHOUSE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/1/1999	<Null>	5/1/2000	<Null>
1105	Polygon	PP15974	INDUSTRIAL BUILDING - PARCEL 3	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/20/1999	<Null>	9/25/2000	9/11/2004
1106	Polygon	PP21874	PROPSD 27,456 SF 2-STY OFFICE BLDG W/PKG/LANDS/IMP SITE PLAN (PP) FOR 21,928 SF LEASABLE SPACE (27,456 GROSS SF) OFFICE BUILDING. PROJECT INCLUDE TWO (2) STORY OFFICE BUILDING, WITH RELATED PKG LANDSCAPING, AND SITE IMPROVEMENTS.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/20/2006	<Null>	9/12/2007	7/16/2011
1107	Polygon	PM33685	SUBDIVIDE TWO ACRES INTO TO LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/5/2006	<Null>	1/14/2009	10/20/2015
1108	Polygon	PUP0468		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1109	Polygon	PP19521	HAY AND FEED STORE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/11/2004	<Null>	12/5/2006	11/13/2008
1110	Polygon	CUP03262	GAS/CONVENIENCE/BEER & WINE/DRIVE THRU RESTAURANT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/23/1998	<Null>	8/18/1998	<Null>
1111	Polygon	PM26102	DIVIDE 2 ACRES INTO 2 LOTS DIVIDE 2 ACRES INTO 2 PARCELS EA 35214	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/7/1990	<Null>	6/2/1991	6/2/1993
1112	Polygon	PP19738	UNMANNED AUTOMATED FUELING STATION (CFN)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/3/2004	<Null>	9/19/2005	8/8/2008
1113	Polygon	PP12814	20,000 SQ FT WAREHOUSE FACILITY/ FAST TRACT AUTH. 004-91	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/4/1991	<Null>	<Null>	7/8/1993
1114	Polygon	PP12814R1	ADD PALLET MANUFACTURING FACILITY BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/3/1999	<Null>	1/10/2000	<Null>
1115	Polygon	PP21014	PLOT PLAN NO. 21014 PROPOSES TO CONSTRUCT A 11,506 SQ. FT. TWO-STORY OFFICE & WAREHOUSE BUILDING CON SISTING OF A 4,478 SQ. FT. WAREHOUSE, 6,187 SQ. FT . OF OFFICE SPACE, AND A 441 SQ. FT. MEZZANINE ON A 1.81 GROSS ACRE LOT WITHIN THE MIRA LOMA WAREHOU SE DISTRIBUTION POLICY AREA IN THE JURUPA AREA PLA N. THE PROPOSAL ALSO INCLUDES 7,845 SQ. FT. (10%) OF LANDSCAPING, 34 PARKING SPACES, 9 TRUCK STALLS, AND ONE (1) 12,000 GALLON ABOVE GROUND FUEL TANK WITH CONTAINMENT CURB, FOR AUTO TRANSFER PURPOSES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/27/2005	<Null>	7/1/2008	10/22/2009
1116	Polygon	PP24775	WIRELESS COMMUNICATION FACILITY (50' FLAGPOLE)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/15/2010	<Null>	1/5/2012	12/7/2013
1117	Polygon	CUP03477	CUP FOR EXISTING STRUCT FOR OFFICE SP/VEHICLE STOR	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/14/2005	<Null>	11/19/2008	4/2/2010
1118	Polygon	PUP0499		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1119	Polygon	PUP00499		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1120	Polygon	PM34790	SCHED G DIVISION OF 1.8 AC. INTO 3 PARCELS. VISION OF 2.15 GROSS ACRES INTO THREE (3) RESIDENT IAL PARCELS. PARCEL ONE (1) CONSISTS OF 0.67 GROSS ACRES, PARCEL TWO (2) CONSISTS OF 0.94 GROSS ACRE S, AND PARCEL THREE (3) CONSISTS OF 0.53 GROSS ACR ES.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/18/2006	<Null>	12/18/2007	11/5/2013
1121	Polygon	PM32058	DIVIDE 1.75 ACRES INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	11/16/2004	<Null>	5/25/2006	11/22/2016
1122	Polygon	TR28387	DIVISION OF 26.8 ACRES INTO 121 LOTS (PAR 168)	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/15/1997	<Null>	1/12/1998	12/2/2000
1123	Polygon	PP16683	TWO DISTRIBUITON/GENERAL BLDGS. (TOTAL 30,000 SF.)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/10/2000	<Null>	11/16/2000	<Null>
1124	Polygon	PM27307	DIVIDE 1.67 ACRES INTO 2 PARCELS DIVIDE 1.67 ACRES INTO 2 PARCELS EA 36185 CFG 254	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	2/24/1992	<Null>	8/25/1992	8/25/1998
1125	Polygon	CUP03167R1	ARCO GAS STATION, MINI-MART, SMOG PRO CENTER	MARES	CUP05 - GENERAL	PLN	APPROVED	10/8/1996	<Null>	5/6/1997	5/6/2017
1126	Polygon	CUP02481	USED CAR SALES AND EQUIPMENT RENTAL	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	5/31/1986
1127	Polygon	PM27418	DIVIDE 1.68AC INTO THREE PARCELS DIVIDE 1.68 ACRES INTO 3 PARCELS WITH A 21,216 SF MINIMUM PARCEL SIZE EA 36234 FM 27418, ECS 27418	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/20/1992	<Null>	2/16/1993	2/16/1999
1128	Polygon	PP15275	2 OFFICE/MFG WAREHOUSE BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	6/29/1998	<Null>
1129	Polygon	PM33478	SCHED H DIVISION OF 2.35AC INTO TWO 1-AC PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/21/2006	<Null>	10/19/2007	7/30/2013
1130	Polygon	CUP03649	ADD BEER/WINE OFFSITE SALES TO WALGREENS	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/16/2010	<Null>	1/27/2011	12/1/2012

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
1131	Polygon	PP18847	PROPOSED WALGREENS DRUG STORE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/28/2003	<Null>	1/27/2004	<Null>
1132	Polygon	PP23756	INSTALL 70' WATER TOWER WIRELESS TELECOM FACILITY WITH AN 11'6"X16' PREFABRICATED SHELTER AND A 5'X8 ' CONCRETE PAD FOR A FUTURE 30KILO WATT GENERATOR ENCLOSED IN A 6' CMU WALL	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/12/2008	<Null>	12/12/2008	<Null>
1133	Polygon	PM36004	DIVIDE LOT INTO TWO 1 AC LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/4/2008	<Null>	11/30/2010	9/13/2013
1134	Polygon	PP13350	FAST FOOD RESTURANT W/DUNE THRU WINDOW DRIVE THRU FAST FOOD RESTAURANT AND 11,624 SF. FT. LITE INDUST. BLDG. EA 36353 SP 123	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/20/1992	<Null>	9/13/1993	9/13/1995
1135	Polygon	PP17861	PLOT PLAN FOR TELECOMMUNICATIONS MONOPOLE/CABINETS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/29/2002	<Null>	2/28/2003	<Null>
1136	Polygon	PM29681	SUBDIVIDE 2 AC INTO 2 RES LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/22/2000	<Null>	12/8/2000	<Null>
1137	Polygon	PP17538	58' MONOPINE W/DISH/ANT'S/SHELTER/GENERATOR/FENCE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/11/2001	<Null>	12/18/2002	<Null>
1138	Polygon	PP21598	70' WIRELESS FACILITY MOUNTED ON MONOPINE(DECRIP) MAINTAIN AND UNOCCUPIED WIRELESS FACILITY MOUNTED ON MONOPINE (70') AND 4 OUTDOOR EQUIP CABINETS AT GROUND LEVEL AND THE UTILITY RUNS THE EQUIP WILL BE ENCLOSED IN A 6' CHAIN LINK FENCE W/BARBED WIRE ON TOP.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/31/2006	<Null>	1/31/2007	1/10/2009
1139	Polygon	CUP03697	CLASS IV KENNEL(PET HOTEL)/DOG DAY CARE/GROOMING SERVICES(SPA AND SALON) AND RELATED RETAIL	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	10/25/2013	<Null>	12/23/2013	<Null>
1140	Polygon	CUP03433	ARCO AM/PM GAS STATION/CAR WASH/BEER AND WINE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/20/2004	<Null>	10/23/2006	<Null>
1141	Polygon	PP15276	OFFICE/MANUFACTURING/WAREHOUSE BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	7/22/1998	<Null>
1142	Polygon	PP21927	DISGUISED 50' CYPRESS MONOPOLE W/CHAINLINK FENCE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/30/2006	<Null>	5/16/2007	3/26/2009
1143	Polygon	PP20283	WIRELESS TELECOMM FACILITY DISGUISED MONOPALM	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/22/2005	<Null>	12/28/2005	12/12/2007
1144	Polygon	PP15274	OFFICE/MANUFACTURING/WAREHOUSE BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	6/29/1998	<Null>
1145	Polygon	CUP03320R1	ALLOW LIQUOR SALES USE WITHIN EXISTING GAS STATION AND CONVENIENCE STORE.	MARES	CUP05 - GENERAL	PLN	APPROVED	12/21/2005	<Null>	2/18/2016	<Null>
1146	Polygon	CUP03320	CONVENIENCE STORE/FAST FOOD RESTAURANT/CAR WASH/ BEER & WINE SALES/GAS STATION/OFF-SITE SIGNAGE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/15/2000	<Null>	3/2/2001	6/1/2030
1147	Polygon	PM29493	SUBIDIVDE 1.51 ACRES INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/11/2001	<Null>	7/27/2004	5/18/2007
1148	Polygon	PP19515	RETAIL BLDG & FAST FOOD W/DRIVE THRU. SITE PLAN AM ENDED TO SUBSTITUTE A BANK W/ ATM FOR FAST FOOD US E	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/8/2004	<Null>	12/16/2005	10/31/2007
1149	Polygon	CUP03463	REQUEST TO LEGALIZE AN EXISTING AUTO DEALERSHIP	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/8/2005	<Null>	6/5/2008	7/25/2009
1150	Polygon	PP18348	TRUCK & TRAILER SALES RENTAL YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/24/2002	<Null>	10/28/2003	<Null>
1151	Polygon	PP13312	EXISTING BOAT REPAIR & BUILDINGS EXISTING BOAT REPAIR & BUILDINGS EA 36328 CFG 495	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/10/1992	<Null>	1/25/1993	1/25/1995
1152	Polygon	PM26079	TWO LOT SUBDIVISION OF 1.69 AC DIVIDE 1.69 ACRES INTO 2 PARCELS. APP 50, CFG 67	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/12/1990	<Null>	1/21/1992	1/21/1998
1153	Polygon	PP02691R1	REVISED PLOT PLAN 2691 FOR AUTO SALES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/26/2001	<Null>	5/23/2002	<Null>
1154	Polygon	CUP02602		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	<Null>
1155	Polygon	PP19857	UNMANNED DISGUISED WIRELESS FACILTIY WATER TOWER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/13/2004	<Null>	3/15/2007	11/28/2008
1156	Polygon	CUP03564	CUP03564 PROPOSES TO LEGALIZE AN UNPERMITTED AND O PERATING CONTRACTOR'S STORAGE YARD FOR A CONSTRUCT ION AND ROOFING COMPANY TO STORE EQUIPMENT AND MAT ERIALS INCLUDING SIX (6) STANDARD PARKING SPACES A ND 2,025 SQUARE FEET OF EXISTING AND PROPOSED LAND SCAPING AREA ON A 1.4 GROSS ACRE SITE. THE EXISTIN G 1,224 SQUARE FOOT OFFICE BUILDING AND TWO (2) ST ORAGE BUILDINGS TOTALING 1,500 SQUARE FEET WILL BE PERMITTED AND SUBSEQUENTLY REDEVELOPED. THE CONV ERSION OF THE EXISTING SMALL STRUCTURES FROM ONE U SE TO ANOTHER WILL HAVE MINOR MODIFICATIONS IN THE EXTERIOR OF THE STRUCTURE.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/12/2007	<Null>	11/16/2010	6/2/2012
1157	Polygon	CUP00089	PROPOSAL FOR MOBILE HOME PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/25/2008	<Null>	2/25/2008	<Null>
1158	Polygon	CUP01374R1	PROPOSAL TO EXTEND LIFE OF KENNEL PERMIT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/7/2008	<Null>	2/7/2008	7/1/2012
1159	Polygon	PP25847	UNMANNED WIRELESS FACILITY FOR VERIZON	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/9/2015	<Null>	5/23/2017	12/5/2026
1160	Polygon	PM36259	SUBDIVIDE INTO 2 LOTS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/22/2010	<Null>	5/3/2011	2/28/2014
1161	Polygon	PM33016	SCHED G DIVISION OF 1.4 AC. INTO TWO PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM03 - RESIDENTIAL (WITH WAIVER OF FINAL MAP)	PLN	APPROVED	9/10/2004	<Null>	4/19/2005	3/29/2008
1162	Polygon	PP15551	COMM BUILDING FOR AUTO PARTS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/7/1998	<Null>	12/31/1998	<Null>
1163	Polygon	CUP03577	CONVENIENCE STORE AND GAS STATION WITH CANOPY	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/19/2007	<Null>	8/12/2009	7/21/2011
1164	Polygon	PP19202	UNMANNED WIRELESS FACILITY CONSISTING OF 10X16 EQUIPMENT BUILDING AND A 75' MONOPALM W/ASSOCIATED ANTENNAS AND CABLING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/11/2004	<Null>	12/10/2004	10/25/2006
1165	Polygon	PP20784	PLOT PLAN NO. 20784 PROPOSES TO CONSTRUCT A TWO-ST ORY 3,625 SQ. FT. STRUCTURE FOR PROFESSIONAL OFFIC E USE, 4,437 SQ. FT. (19%) OF LANDSCAPING, 18 PARK ING STALLS INCLUDING ONE (1) FOR PERSONS WITH DISA BILITIES, ON .55 GROSS ACRES (.41 NET ACRES) OF A 1.45 GROSS ACRE SITE (1.34 NET ACRES). NO DEVELOPM ENT IS PROPOSED ON THE REAR PORTION OF THE LOT UND ER THIS PERMIT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/10/2005	<Null>	4/16/2008	3/10/2010
1166	Polygon	PP15269	OFFICE/MANUFACTURING/WAREHOUSE BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	7/22/1998	<Null>
1167	Polygon	PP18344	LEGALIZE EXISTING FEED STORE (CV023238)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/19/2002	<Null>	1/20/2004	<Null>
1168	Polygon	PP26350	VERIZON PROPOSES 60' MONOPALM FACILITY 12 ANTENNAS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/25/2017	<Null>	10/4/2018 15:09	<Null>
1169	Polygon	CUP02305		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/28/2008	<Null>	1/28/2008	<Null>
1170	Polygon	PP13720	MEDICAL CLINIC CONSTRUCT ONE-STORY 11,618 SQ. FT. MEDICAL OFFICE BLDG. WITH ANCILLARY PARKING LOT. EA 36571. PM 16858, SP 123, DA 8.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/8/1993	<Null>	2/27/1995	2/27/1997
1171	Polygon	PP15973	INDUSTRIAL BUILDING-PARCEL 2	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/20/1999	<Null>	9/25/2000	9/11/2004
1172	Polygon	PP16536	PLOT PLAN FOR JACK IN THE BOX RESTAURANT/DRIVE THR	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/3/2000	<Null>	10/11/2000	<Null>
1173	Polygon	CUP03620R1	ALLOW BEER&WINE SALES WITHIN GAS STATION/MARKET	MARES	CUP05 - GENERAL	PLN	APPROVED	10/23/2013	<Null>	11/6/2014	<Null>
1174	Polygon	PP13074	RETAIL STORES 3 UNIT COMMERCIAL RETAIL BUILDING. EA 36160 PP 8590 SEE FILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/16/1991	<Null>	7/1/1993	7/1/1995
1175	Polygon	PUP0466		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1176	Polygon	PP23321	CONTRACTOR STORAGE YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/29/2008	<Null>	3/2/2010	3/9/2011
1177	Polygon	PM32658	SCHED G DIVISION OF 1.31 AC INTO 2 PARCELS. G SUBDIVISION OF 1.33 GROSS ACRES (1.18 NET ACRES) INTO TWO (2) PARCELS, PARCEL 1 BEING 0.64 ACRES (0.56 NET ACRES) AND PARCEL 2 BEING 0.69 ACRES (0. 62 NET ACRES).	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/28/2005	<Null>	4/15/2008	3/10/2015
1178	Polygon	PUP00761	CHURCH REMODEL EXISTING BUILDING FOR CHURCH ON 1.08 ACRES EA 36779	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	11/21/1994	<Null>	6/11/1996	6/11/1999
1179	Polygon	PP24608	FEED & GRAIN SALES W/6400 SF HAY BARN, 2880 SF STO RAGE SHED, EXISTING 1,152 SF RESIDENCE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/17/2010	<Null>	9/19/2014	9/8/2016
1180	Polygon	PP25184	CLASS II DOG KENNEL THAT HOUSES 11-25 DOGS FOR OVE RNIGHT BOARDING AND CARE ON 1.2 ACRES. THE PROJECT PROPERTY CONTAINS AN EXISTING 1,186 SQ.FT. RESIDE NCE AND FOUR DETACHED STORAGE BUILDINGS TOTALING 6 57. SQ.FT. WHICH ARE BEING USE AS PART OF THE KENN EL FACILITY. THERE IS 1,600 SQ.FT. OUTDOOR KENNEL CANOPY AND A ABOVE GROUND DOG SWIMMING POOL. THERE ARE TWO SEPARATE OUTDOOR DOG PLAY AREAS; ONE IN T HE NORTHERN PORTION OF THE PROPERTY BEHIND THE MAI N RESIDENCE AND ONE IN THE SOUTHERN PORTION OF THE PROPERTY.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/14/2012	<Null>	8/29/2013	8/19/2015
1181	Polygon	PP12036	KENTUCKY FRIED CHICKEN RETAIL OUTLET SEE FILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/29/1990	<Null>	<Null>	2/25/1993
1182	Polygon	PP22961	PLOT PLAN NO. 22961 PROPOSES TO CONSTRUCT ONE (1) 25,600 SQ. FT. STRUCTURE FOR WAREHOUSE, FABRICATIO N, AND OFFICE USE WITHIN A 1.17 NET ACRE LOT. THE PROPOSAL CONSISTS OF 12,050 SQ. FT. OF WAREHOUSE S PACE, 6,000 SQ. FT. OF FABRICATION SPACE, 6,050 SQ . FT. OF STORAGE SPACE, 1,500 SQ. FT. OF OFFICE SP ACE. THE PROPOSAL ALSO INCLUDES 37 PARKING SPACES INCLUDING TWO (2) ACCESSIBLE PARKING SPACES FOR PE RSONS WITH DISABILITIES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/26/2007	<Null>	2/11/2009	1/5/2011
1183	Polygon	PP25382	10,275 SF COMMERCIAL OFFICE BLDG WITH 5 SUITES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/18/2013	<Null>	5/14/2014	<Null>
1184	Polygon	PM36729	SCH G SUBDIV/1.16 AC INTO 2 PARS W/WAIVER OF FINAL MAP	TENTATIVE PARCEL MAP (TPM)	TPM03 - RESIDENTIAL (WITH WAIVER OF FINAL MAP)	PLN	APPROVED	4/10/2014	<Null>	5/21/2015	4/20/2018
1185	Polygon	PP19030	ADD 10 FT TO EXISTING CELL TOWER AND CO-LOCATION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/26/2003	<Null>	8/4/2004	7/21/2006
1186	Polygon	PP13277	105 FOOT BROADCASTING ANTENNA 105 FOOT BROADCASTING ANTENNA EA 36287 CFG 478	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/11/1992	<Null>	1/11/1993	1/11/1995
1187	Polygon	PM37206	SUBDIVIDE 1.12 ACRES INTO 2 LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/11/2017	<Null>	9/13/2018 13:43	<Null>
1188	Polygon	PP21714	UNMNND WRLSS COMM 65' MONOTREE BROADLEAF/OUTDOOR E QUIPMENT/5X7 PAD FOR FUTURE GENERATOR FOR VERIZON	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/4/2006	<Null>	10/30/2007	9/21/2009
1189	Polygon	PM32152	SCHED G DIVISION 1.09 AC. INTO TWO PARCELS.THE PROJECT PROPOSES A SCHEDULE F SUBDIVISION OF 1 .09 INTO TWO (2) PARCELS; PARCEL 1 WITH 0.59 GROSS ACRES AND PARCEL 2 WITH 0.50 GROSS ACRES. EXISTIN G RESIDENCE ON PARCEL 1 TO REMAIN; NO NEW DEVELOPM ENT PROPOSED. THE PROJECT IS LOCATED IN THE COMMU NITY OF RUBIDOUX OF THE JURUPA AREA PLAN; MORE SPE CIFICALLY, SOUTHERLY OF VALDEZ AVENUE, EASTERLY OF SHARON WAY AND NORTHERLY OF SKYVIEW ROAD.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/28/2006	<Null>	10/3/2007	8/13/2013
1190	Polygon	PP26118	30,000 SQ FT CONTRACTOR'S STORAGE YARD W/ A 528 S. MOBILE OFFICE.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/7/2016	<Null>	12/21/2017 14:53	<Null>
1191	Polygon	PP24153	CAR AND TIRE REPAIR SHOP WITH SIX EXIST STRUCTURES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/19/2009	<Null>	9/22/2014	<Null>
1192	Polygon	CUP03540	THE CONDITIONAL USE PERMIT IS TO ALLOW FOR THE SAL E OF BEER, WINE, AND DISTILLED SPIRITS FOR OFF PRE MISES CONSUMPTION (ABC TYPE 21 - OFF SALE GENERAL) FOR AN EXISTING 2,250 SQ. FT. 7-11 CONVENIENCE ST ORE. THIS CONDITIONAL USE PERMIT APPLICATION IS ON LY TO ALLOW THE SALE OF BEER, WINE, AND DISTILLED SPIRITS FOR OFF PREMISES CONSUMPTION, AND NO ADDIT IONAL IMPROVEMENTS ARE CURRENTLY PROPOSED ON THE 1 .03 ACRE SITE.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/13/2006	<Null>	12/20/2007	10/23/2009
1193	Polygon	PM26789	DIVIDE 1.01 ACRES INTO 2 LOTS DIVIDE 1.01 ACRES INTO 2 LOTS EA 36022 CFG 13	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/26/1991	<Null>	3/31/1992	3/31/1998
1194	Polygon	PP16782	CONVERT RESIDENCE TO OFFICES AND STORAGE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/25/2000	<Null>	5/22/2001	<Null>
1195	Polygon	PP24735	50' MONOPINE/12 PANNL ANTS/1 MICRO/6 EQUIP CABINTS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/30/2010	<Null>	6/11/2012	3/26/2014
1196	Polygon	PP20202	UNMANNED CELL SITE/45FT MONOPALM (VERIZON)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/26/2005	<Null>	3/1/2006	<Null>
1197	Polygon	CUP03254	CONCRETE BATCH PLANT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/24/1997	<Null>	3/29/1999	11/24/2005
1198	Polygon	PP15272	OFFICE/MANUFACTURING/WAREHOUSE BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	7/22/1998	<Null>
1199	Polygon	PP21157	DEV SINGLE STORY BUILD INTO 3 SPACES FOR LEASE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/22/2005	<Null>	8/25/2006	7/10/2008
1200	Polygon	PM34992	SCHEDULE E SUBDIVISION OF 0.97 NET ACRES INTO ONE (1) PARCEL FOR CONDOMINIUM PURPOSES.	TENTATIVE PARCEL MAP (TPM)	TPM01 - COMMERCIAL/INDUSTRIAL (SEWERED)	PLN	APPROVED	9/22/2006	<Null>	11/14/2007	9/19/2013
1201	Polygon	CUP03766	PROPOSAL TO ESTABLISH A 4,820 SQUARE FOOT TWO-STORY BUILDING, CONTAINING A CAR WASH FACILITY/TUNNEL, OFFICE, STORAGE SPACE, AND GUEST WAITING AREA, INCLUDING (18) EIGHTEEN PARKING SPACES, AND (1) ONE ACCESSIBLE SPACE ON A SINGLE PARCEL, TOTALING .97 ACRES.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/20/2017	<Null>	7/19/2018 13:32	<Null>
1202	Polygon	PUP00732	ADD A 7,100 SF MULTI-PURPOSE BLDG TO EXISTING CHUR CH ADD A 7,000 SQ. FT. MULTIPURPOSE BLDG. TO EXISTING CHURCH EA 36147 PP 12866, PP 13579, SC 424, CFG 211	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/5/1991	<Null>	6/2/1992	6/2/1994
1203	Polygon	PM30979	SCHED G DIVISION OF 1 AC. INTO 2 RES. PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	4/2/2003	<Null>	4/26/2004	4/13/2010
1204	Polygon	PM31535	SUBDIVIDE 1.13 ACRES INTO TWO RES LOTS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/27/2004	<Null>	9/13/2006	9/13/2011
1205	Polygon	PP24306	VEHICLE STORAGE AND IMPOUNDMENT FACILITY WITH 320 SQ FT OFFICE TRAILER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/5/2009	<Null>	8/9/2013	<Null>
1206	Polygon	PP23483	NON EMERGENCY AMBULANCE SERVICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/30/2008	<Null>	12/7/2009	11/2/2011
1207	Polygon	PM31507	DIVIDE 1.45 AC LOT INTO TWO PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/17/2003	<Null>	5/26/2004	4/27/2007

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
1208	Polygon	CUP02873		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/19/2000	<Null>	12/19/2000	<Null>
1209	Polygon	CUP02508		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1210	Polygon	PP16954	ADDITIONAL 2 DUPLEX BLDGS SFD 2 STORY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/21/2001	<Null>	4/21/2003	<Null>
1211	Polygon	PM26950	DIVIDE 1.00 ACRE INTO 2 PARCELS DIVIDE 1 ACRES INTO 2 LOTS EA 35895, VAR 1586 CFG 246 SEE FILE	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	5/30/1991	<Null>	3/31/1992	3/31/1998
1212	Polygon	PM30591	DIVIDE ONE LOT INTO TWO (2) PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/24/2002	<Null>	11/7/2003	8/19/2007
1213	Polygon	PP17642	TILT-UP CONCRETE INDUSTRIAL BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/28/2002	<Null>	10/15/2002	<Null>
1214	Polygon	PP14693	INSTALL A 100' WIRELESS COMM. MONOPOLE. THE FACILITY WILL CONSIST OF A MONOPOLE/ANTENNA AR RAY CONTAINING 15 DIRECTIONAL ANTENNAS, WITH A 200 SQUARE FOOT UNMANNED EQUIPMENT BUILDING.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/27/1996	<Null>	12/3/1996	12/2/1998
1215	Polygon	CUP03098	AUTO CARE, CONV STORE, OFFICE, CAR WASH, GAS STATI ON AUTO CARE, CONVENIENCE STORE, OFFICE, CAR WASH AND GAS STATION EA 35225, RTA 26151 SC 315	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/12/1990	<Null>	9/24/1991	9/24/1997
1216	Polygon	PUP00474R3	THE 3RD REVISED PERMIT TO THE APPROVED PUP PROPOSE S TO ADD 3,636 SQ. FT. OF BUILDING AREA, 30 BEDS & 30 PARKING SPACES TO THE EXISTING PERMITTED 5,091 SQ. FT. 30-BED RESIDENTIAL REENTRY CENTER (RRC) F ACILITY FOR A TOTAL BUILDING AREA OF 8,727 SQ. FT. & A TOTAL OF 60 BEDS. THE EXISTING 609 SQ. FT. O FFICE & 2 STORAGE BUILDINGS AT 120 SQ. FT. EACH WI LL REMAIN. THIS REVISED PUP ADDITIONALLY REQUESTS TO HAVE A LIFE SPAN OF 20 ADDITIONAL YEARS ADDED T O THE EXISTING EXPIRATION DATE OF NOVEMBER 22, 201 2, AND WOULD THEREFORE EXPIRE ON NOVEMBER 22, 2032 .	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	4/22/2010	<Null>	7/21/2011	5/18/2013
1217	Polygon	PUP0474		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1218	Polygon	PP16881	CONTRACTOR OFFICE AND STORAGE YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/5/2001	<Null>	6/26/2001	<Null>
1219	Polygon	PP13192	CONVERT 2 EXISTING STRUCTURES INTO COMMERCIAL OFFI CES EXPAND AND REMODEL EXISTING COMMERCIAL OFFICES. EA 36224. N/A.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/3/1992	<Null>	7/25/1994	7/24/1996
1220	Polygon	PUP00508R1	EXTEND LIFE OF PUP00508	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	7/17/2003	<Null>	2/10/2005	<Null>
1221	Polygon	PP25067	VERIZON 65 FT MONOEUCALYPTUS WIRELESS FACILITY/12 ANTS/1 PARABOLIC ANT/1 EQPMT SHELTER/1 GENERATOR/2 GPS/6 FT DECORATIVE BLOCK WALL ENCLOSURE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/22/2011	<Null>	7/30/2013	6/3/2015
1222	Polygon	PM24798	DIVIDE 1 ACRES INTO 2 PARCELS EA 33947 EXT 499, EXT 853	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/1/1989	<Null>	4/17/1990	4/17/1996
1223	Polygon	PP15011	CARD LOCK FUELING FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/22/1997	<Null>	7/28/1997	<Null>
1224	Polygon	CUP03620	GAS STATION/CONV STORE/RETAIL BUILDING	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	3/30/2009	<Null>	3/21/2012	1/18/2014
1225	Polygon	PP17818	TRUCK REPAIR & MAINTENANCE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/12/2002	<Null>	9/10/2004	3/29/2008
1226	Polygon	PM29565	TO DIVIDE .91 AC INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	12/9/1999	<Null>	8/10/2000	<Null>
1227	Polygon	PM31094	SCHED G DIVISION-1.1 AC. INTO 2 PARCELS.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	3/19/2003	<Null>	6/21/2004	6/8/2007
1228	Polygon	CUP03250	ADD BEER AND WINE SALES TO AN EXISTING MEAT MARKET	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/4/1997	<Null>	3/2/1999	3/2/2001
1229	Polygon	CUP02637		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	<Null>
1230	Polygon	PP15271	PROP OFFICE/MFG/WAREHOUSE BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/23/1997	<Null>	7/22/1998	<Null>
1231	Polygon	PP22990	DISG 55' MONOBROADLEAF /12 ANTNS/6 EQUIP SHLTR/1 M /1 GPS ANTENNA SEE ATTACHED DESCRIPTION FOR MORE D ETAILS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/8/2007	<Null>	4/29/2009	3/23/2011
1232	Polygon	PP22718	THE PLOT PLAN PROPOSES TO CONSTRUCT TWO (2) 9,709 SQ. FT. CONCRETE TILT-UP STRUCTURES FOR MANUFACTUR ING AND WAREHOUSE USE. BUILDINGS 'A' AND 'B' PROPO SE 1,000 SQ. FT. OF MANUFACTURING AREA, 6,735 SQ. FT. OF STORAGE, 987 SQ. FT. OF OFFICE SPACE, AND A 987 SQ. FT. MEZZANINE DESIGNATED FOR STORAGE. THE PROPOSED PROJECT CONSIST OF 19,418 SQ. FT. OF TOT AL BUILDING AREA, 4,730 SQ. FT. OF LANDSCAPING, AN D 30 PARKING SPACES INCLUDING TWO (2) ACCESSIBLE P ARKING SPACES FOR PERSONS WITH DISABILITIESTWO 9,673 SF MANUF/WAREHSE BLDGS TOTALING 19,418SF THE CONCRETE TILT-UP BUILDINGS ('A' & 'B') PROPOSE 1,000 SF OF MANUFACTURING AREA , 6,734 SF OF STOR AGE AREA, 987 SF OF OFFICE SPACE & 987 SF OF MEZZA NINE FOR STORAGE. THE PROPOSAL WILL PROVIDE 4,730 SF (13%) OF LANDSCAPING AND 30 PARKING SPACES INC LUDING 2 ACCESSIBLE SPACES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/11/2007	<Null>	3/27/2008	3/10/2012
1233	Polygon	PP19574	19836 SQ FT IND BLDG W/OFC FOR OFC/WRHS/MFG USE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/30/2004	<Null>	12/29/2004	12/6/2006
1234	Polygon	PM34409	SCHED G DIVISION OF 1.33 AC INTO 2 PARCELS. G SUBDIVISION OF 1.33 GROSS ACRES INTO TWO RESIDE NTIAL PARCELS; PARCEL NO. 1 WITH 0.80 GROSS ACRES AND PARCEL NO. 2 WITH 0.53 GROSS ACRES. ONE (1) EXISTING RESIDENTIAL HOME TO REMAIN ON EACH PARCEL ; NO FURTHER DEVELOPMENT PROPOSED. VARIANCE NO. 1819 WILL ALLOW THE CREATION OF A PAR CEL THAT WILL NOT MEET THE DEVELOPMENT STANDARD OF THE LIGHT AGRICULTURAL (A-1) ZONE THAT REQUIRES A MINIMUM AVERAGE PARCEL DEPTH OF 150 FEET AND LOT SIZE OF 20,000 SQUARE FEET.	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	7/17/2006	<Null>	9/13/2007	7/30/2013
1235	Polygon	PP12930	18,934 S.F. WAREHOUSE & 600 S.F. OFFICE/TOTAL 19,5 34 S.F. 18,934 S.F. WAREHOUSE AND 600 S.F. OFFICE/TOTAL 19 ,534 S.F. EA 36034 CFG 158, PP 13326	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/31/1991	<Null>	3/23/1992	3/23/1994
1236	Polygon	SP00123A6	TO PERMIT OFFICE USE ON SUBJECT SITE	MARES	SP02 - SPECIFIC PLAN AMENDMENT	PLN	APPROVED	6/18/1999	<Null>	6/14/2001	6/5/2020
1237	Polygon	PM24710	DIVIDE 8.22 ACRES INTO 3 COMMERCIAL LOTS EA 33972 EXT 965	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/9/1989	<Null>	7/16/1991	7/16/1998
1238	Polygon	PP26253	PLOT PLAN FOR VEHICLE AND TRAILER STORAGE YARD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/4/2017	<Null>	11/20/2017	<Null>
1239	Polygon	PP23022	PLOT PLAN NO. 23022 PROPOSES TO CONSTRUCT A 14,315 SQ. FT. CONCRETE TILT-UP BUILDING FOR MANUFACTURI NG, WAREHOUSE, AND OFFICE USE WITH 27 PARKING SPAC ES. THE PROPOSED BUILDING CONTAINS 5 SUITES RANGI NG IN SIZE FROM 2,183 SQ. FT. TO 4,134 SQ. FT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	8/17/2007	<Null>	1/13/2010	9/21/2011
1240	Polygon	PUP0315	EXPANSION OF FAMILY CARE HOME	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	11/1/1985
1241	Polygon	PP22306	TO CONSTRUCT A 7,253 SQ FT MONTESSORI SCHOOL FOR SQ. FT. STRUCTURE FOR THE PURPOSE OF A MONTESSORI SCHOOL FOR 144 CHILDREN THE AGES 0 - 12 YEARS. THE PROPOSAL WILL CONDUCT BUSINESS FROM 6:00 A.M. TO 6:30 P.M. AND WILL HAVE 6 FULL TIME STAFF MEMBERS AND 6 PART TIME STAFF MEMBERS ON SITE. THE PROJECT CONSIST OF SIX (6) CLASSROOMS RANGING FROM 652 SQ . FT. TO 900 SQ. FT., A 352 SQ. FT. INFANTS SLEEP AREA, A 183 SQ. FT. KITCHEN, A 124 SQ. FT. OFFICE, 10,111 SQ. FT. (32%) OF LANDSCAPING, A 3,527 SQ. FT. SAND-LOT, AND 19 PARKING STALLS ON A 0.80 GROS S ACRE LOT.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/13/2006	<Null>	4/8/2008	3/31/2010
1242	Polygon	PP18740	COMMERCIAL WAREHOUSE W/OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/14/2003	<Null>	11/17/2004	10/28/2006
1243	Polygon	CUP02673		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	<Null>
1244	Polygon	PUP00319		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	2/2/2001	<Null>	2/2/2001	<Null>
1245	Polygon	PUP0319		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1246	Polygon	PUP0382		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1247	Polygon	PUP00323		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1248	Polygon	PUP0323		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1249	Polygon	PP12913	CONSTRUCT A ONE-STORY OFFICE BUILDING CONSTRUCT A ONE-STORY OFFICE BUILDING EA 35998 CFG 151, PP 13323, SC 427 SEE FILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/24/1991	<Null>	4/6/1992	4/6/1994
1250	Polygon	PP19031	UNMANNED WIRELESS TELELOM FACILITY - MONO PALM	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/26/2003	<Null>	9/22/2005	11/8/2006
1251	Polygon	PUP0517		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1252	Polygon	CUP03190	SERVICE STATION W/MIMI MART CONSTRUCT A 12 PUMP AUTO GAS STATION WITH A 1,912 S.F. MINI-MART, 5 BAY CAR WASH... EA 36606, CZ 6211, (CGPA 360 - EA 36263) RVP 157, COC 4544	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/29/1993	<Null>	12/13/1994	12/12/1996
1253	Polygon	CUP03190R1	ADD SALE OF BEER & WINE FOR OFFSITE CONSUMPTION TO	MARES	CUP05 - GENERAL	PLN	APPROVED	4/26/2010	<Null>	11/17/2010	9/15/2012
1254	Polygon	CUP02624		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	<Null>
1255	Polygon	PP22861	PLOT PLAN NO. 22861 PROPOSES TO CONSTRUCT A 2,245 SQ. FT. STRUCTURE FOR A GREASE MONKEY AUTOMOTIVE R EPAIR SHOP. THE PROPOSAL CONSISTS OF 18,330 SQ. FT . OF LANDSCAPING AND 20 PARKING SPACES INCLUDING 1 ACCESSIBLE SPACE FOR PERSONS WITH DISABILITIES. T HE PROJECT PROPOSES TO SHARE A DRIVEWAY WITH THE E XISTING IN-N-OUT RESTAURANT LOCATED TO THE WEST	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/15/2007	<Null>	9/17/2008	8/25/2010
1256	Polygon	TR31622	DIVIDE 26.94 AC INTO 95 R-1 LOTS & 1 PARK SITE	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	12/4/2003	<Null>	12/30/2004	9/14/2007
1257	Polygon	PP19169	UNMANNED CESS SITE W/49'11" MONOPINE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/3/2004	<Null>	9/1/2004	8/16/2006
1258	Polygon	CUP180013	CONSTRUCT A 1,458 SQUARE FOOT OFFICE BUILDING FOR USED AUTOMOBILE SALES LOT WITH 11 PARKING SPACES, NINE (9) FOR AUTOMOBILES SALES, AND TWO (2) EMPLOYEE SPACES - APN 277-081-031.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/5/2018 7:50	<Null>	5/9/2019 13:03	<Null>
1259	Polygon	PP23580	WIENERSCHNITZEL RESTAURANT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/17/2008	<Null>	6/2/2011	5/9/2013
1260	Polygon	CUP01484	PROPOSED RV PARK	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/5/2008	<Null>	2/5/2008	<Null>
1261	Polygon	PP17435	PLOT PLAN FOR AUTO SALES/SMOG CHECK STATION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/25/2001	<Null>	6/26/2006	<Null>
1262	Polygon	PP17671	PLOT PLAN FOR TIRE REPAIR SHOP	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/13/2002	<Null>	1/20/2004	<Null>
1263	Polygon	CUP02555		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1264	Polygon	PP20925	DISGUISED WIRELESS MONOPALM 70' W/GENERATOR PAD	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/29/2005	<Null>	1/2/2007	11/28/2008
1265	Polygon	PP25505	TRUCK SALES FACILITY W/1,952 SF OFFIC/6,000 SF STO ARAGE FOR TRUCKS, & 900 SF COVERED DISPLAY AREA	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/22/2014	<Null>	5/8/2015	<Null>
1266	Polygon	PP22241	BUILD OFFICES,PROF.SRVS SALES BARBER/BEAUTY SHOP	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/17/2006	<Null>	4/16/2008	2/11/2011
1267	Polygon	PP19802	6,843 SQ FT RETAIL CENTER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/27/2004	<Null>	7/27/2010	7/12/2012
1268	Polygon	PP17044	METAL WAREHOUSE BUILDING - 63 X 78	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/6/2001	<Null>	12/13/2001	<Null>
1269	Polygon	CUP02770	PROPOSAL FOR AUTO REPAIR GARAGE AND PARTS STORE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	<Null>
1270	Polygon	PP14664	ADDITION TO EXISTING BLDG FOR COMPUTOR SALES & SER VICE ADDITION TO EXISTING BLDG FOR COMPUTOR SALES & SER VICE EA 37010	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/28/1996	<Null>	11/14/1996	11/4/1998
1271	Polygon	TR09336	DIVIDE 77.23 ACRES INTO 130 RESIDENTIAL LOTS EA 5296 SP 123	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	3/2/1977	<Null>	4/26/1977	4/26/1979
1272	Polygon	PUP0424		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1273	Polygon	PUP00424		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1274	Polygon	PUP0285		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1275	Polygon	PP14320	BURGER KING W/DRIVE THRU & DENNY'S RESTRAUNT BURGER KING RESTAURANT WITH DRIVE-THRU AND DENNYS RESTAURANT EA 36869 NONE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/6/1995	<Null>	7/24/1995	7/24/1997
1276	Polygon	CUP03787	CONVERT THE EXISTING SINGLE FAMILY DWELLING INTO AN ANIMAL HOSPITAL. THE PROJECT INCLUDES A 1,454 SQUARE FOOT ONE-STORY ADDITION TO AN EXISTING 1,514 SQUARE FOOT BUILDING ON APPROXIMATELY .55 ACRES.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/7/2017	<Null>	2/21/2020 10:15	<Null>
1277	Polygon	PP17336	RESTAURANT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/14/2001	<Null>	5/8/2003	<Null>
1278	Polygon	CUP03112R1	REVISED CUP TO ALLOW ALCOHOL SALES AT EX MOBIL GAS	MARES	CUP05 - GENERAL	PLN	APPROVED	4/14/2005	<Null>	11/16/2005	8/9/2007
1279	Polygon	CUP03112	CONSTRUCT NEW GAS STATION/MINI MART/CARWASH CONSTRUCT NEW GAS STATION WITH MINI MART AND CAR W ASH. EA 35424, CZ 5887, VAR 1589 PP 13298	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/15/1990	<Null>	1/21/1992	1/20/1994
1280	Polygon	CUP03478	UPGRADE BEER & WINE LICENSE TO OFF-SALE GENERAL	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/15/2005	<Null>	6/22/2007	6/19/2009
1281	Polygon	PP15353	9,234 SQ FT OFFICE/WAREHOUSE BLDG & ENCLO. STORAGE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/26/1998	<Null>	10/1/1998	<Null>
1282	Polygon	CUP03260	ESTABLISH CONVENIENCE MARKET WITH BEER & WINE SALE S WITHIN AN EXISTING UNOCCUPIED 2,590 SQUARE FOOT RETAIL COMMERCIAL BUILDING.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	4/2/1998	<Null>	9/14/1998	<Null>
1283	Polygon	CUP03580	ADD BEER & WINE TO EXISTING MINI MART/GAS (VALERO) STATION.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	1/7/2008	<Null>	4/1/2008	3/11/2010

COUNTY OF RIVERSIDE APPROVED PLANNING CASES

OBJECTID *	SHAPE *	CASE_ID	CASE_DESCR	CASE_TYPE	CASE_WORK_CLASS	DEPARTMENT	CASE_STATUS	APPLIED_DATE	APPROVED_DATE	COMPLETED_DATE	EXPIRED_DATE
1284	Polygon	PUP00900	PUBLIC USE PERMIT NO. 900 REQUESTS TO OPERATE AN E XISTING CONVALESCENT HOSPITAL CARE FACILITY AND TH E CONVERSION OF A 303 SQ. FT. SECOND-FLOOR OFFICE INTO TWO BEDROOMS AND A BATHROOM. ALL EXISTING BUI LDINGS, STRUCTURES, SEVENTY-SEVEN (77) PARKING SPA CES INCLUDING TWO (2) ACCESSIBLE PARKING SPACES FO R PERSONS WITH DISABILITIES, AND 61,236 SQ. FT. (3 7%) OF LANDSCAPING SHALL REMAIN	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	3/18/2008	<Null>	7/22/2008	4/16/2010
1285	Polygon	PP14413	OFFICE & STORAGE BUILDING OFFICES AND STORAGE SPACE FOR SHOOK BUILDING SYSTE MS/HEADQUARTERS EA 36914	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/19/1995	<Null>	10/25/1995	10/25/1997
1286	Polygon	TR27444	SUBDIVIDE 8.26 ACRES INTO 28 LOTS SUBDIVIDE 8.26 ACRES INTO 28 RESIDENTIAL LOTS W/ A 7,200 SF MINIMUM LOT SIZE EA 36255, CZ 6129 FM 27444, ECS 27444	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	5/7/1992	<Null>	11/17/1992	11/17/1998
1287	Polygon	PP15552	WAREHOUSE FOR ASSOCIATED MACHINE FAC ADJOINING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/8/1998	<Null>	10/21/1998	<Null>
1288	Polygon	PP23225	50'MONOPALM WITH EQUIPMENT CABINET	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/19/2007	<Null>	4/29/2009	3/9/2011
1289	Polygon	CUP01419	PROPOSAL FOR DOG KENNEL	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/6/2008	<Null>	2/6/2008	<Null>
1290	Polygon	PP25396	CONVERT EXIST 1997 SF BLDG TO OFFICE/RETAIL SHOWRO OM FACILITY, ADD 3000 SF WAREHOUSE/STORAGE BUILDIN G	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/11/2013	<Null>	11/13/2015	<Null>
1291	Polygon	PP12532	ADDITION OF 1880 SQ./FT TO EXISTING CHURCH ADDITION OF 1,880 SQUARE FEET TO AN EXISTING CHURC H EA 35678 CFG 289, CPM 843 SEE FILE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/19/1990	<Null>	8/10/1992	8/10/1994
1292	Polygon	CUP03763	GAS STATION W/CONVENIENCE STORE AND WINE LICENSE FOR OFFSITE USE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	10/28/2016	<Null>	10/10/2019 13:59	<Null>
1293	Polygon	CUP03452	ALLOW AUTO SALES, SMOG AND SERVICES	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/2/2005	<Null>	11/17/2005	11/1/2008
1294	Polygon	PUP0488		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1295	Polygon	PP22469	EQUIP SHLTR/ NEW 70' MONOPALM 12 ANTENNAS	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/12/2007	<Null>	2/22/2008	<Null>
1296	Polygon	PP13297	DENTAL OFFICE BUILDING 5000 S.F. DENTAL OFFICE BLDG. EA 36319 PP 12275, CFG 401, PP 13490	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	6/29/1992	<Null>	11/2/1992	11/2/1994
1297	Polygon	PP16362	FAST FOOD RESTUARANT	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/13/2000	<Null>	2/21/2003	<Null>
1298	Polygon	PUP0541		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1299	Polygon	PP16527	60 FT MONOPOLE W/ 12 ANTENNAS & EQUIP SHELTER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/27/2000	<Null>	8/19/2002	<Null>
1300	Polygon	PUP0404		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1301	Polygon	PUP00733	CHRISTIAN SCHOOL PERMIT FOR LAKEVIEW JESUS CENTER CHRISTIAN SCHOOL ON 0.48 ACRES EA 36173 PP 13115, CFG 154 SEE FILE	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	1/29/1992	<Null>	9/22/1992	9/22/1994
1302	Polygon	PP15904	TELECOM FAC W/62' MONOPOLE & EQUIPMENT SHELTER	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/30/1999	<Null>	8/23/1999	<Null>
1303	Polygon	CUP02477		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1304	Polygon	PUP0461		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1305	Polygon	CUP03260R1	CUP03260R1 PROPOSES TO UPGRADE A CURRENT ALCOHOL B EVERAGE CONTROL LICENSE FOR OFF PREMISES CONSUMPTI ON FROM THE SALE OF BEER AND WINE (TYPE 20) TO THE SALE OF BEER, WINE AND DISTILLED SPIRITS (TYPE 21) FOR AN EXISTING 2,590 SQUARE FOOT CONVENIENCE MA RKET INCLUDING OF 13 PARKING SPACES. THIS CONDITIO NAL USE PERMIT IS ONLY FOR ALCOHOL SALES, AND DOES NOT COVER ANY OTHER USES. THE PROJECT SITE IS LOC ATED IN THE COMMUNITY OF RUBIDOUX OF THE JURUPA AR EA PLAN OF WESTERN RIVERSIDE COUNTY; MORE SPECIFIC ALLY, SOUTHERLY OF MISSION BOULEVARD, EASTERLY OF FORMOSA STREET, AND WESTERLY OF BYRNE ROAD.	MARES	CUP05 - GENERAL	PLN	APPROVED	3/3/2009	<Null>	9/14/2009	9/1/2012
1306	Polygon	PM31191	SUBDIVIDE LOT 57 OF TR29386-3 INTO 2 PARCELS	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	6/4/2003	<Null>	11/7/2003	10/21/2006
1307	Polygon	CUP03328	USED CAR SALES LOT	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	11/21/2000	<Null>	4/10/2002	<Null>
1308	Polygon	PP13233	CELLULAR TELECOMMUNICATIONS FACILITY CONSTRUCT A CELLULAR TELECOMMUNICATIONS FACILITY EA 36256 PP 12515, PP 13425, CFG 343	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/7/1992	<Null>	9/14/1992	9/14/1994
1309	Polygon	CUP03750	CUP FOR AUTO SALES AND CAR RENTAL	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	6/21/2016	<Null>	12/21/2017	<Null>
1310	Polygon	TR25757	DIVIDE APPROX 4 ACRES INTO 6 PARCELS DIVIDE 4.04 ACRES INTO 6 LOTS EA 34719 CFG 231, GEO 777	TENTATIVE TRACT MAP (TTM)	TTM03 - SFR NOT IN R-2, R-4, R-6 ZONES (SEWERED)	PLN	APPROVED	1/12/1990	<Null>	5/19/1992	5/19/1998
1311	Polygon	PUP0337		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1312	Polygon	PUP00337		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1313	Polygon	PUP00337R1	EXTEND LIFE OF 15-BED RES CARE FAC FOR ELDERLY	MARES	PUP02 - REVISED PUBLIC USE PERMIT	PLN	APPROVED	5/18/2001	<Null>	6/28/2002	11/14/2011
1314	Polygon	CUP03772	ASSISTED LIVING FACILITY - OLD CASE PUP00337R2	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/4/2017	<Null>	1/25/2018 13:23	<Null>
1315	Polygon	PP25482	GENERAL OFFICES IN 2 EXISTING BLDGS (1020 1622 SF)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/6/2013	<Null>	3/30/2016	<Null>
1316	Polygon	PUP00894	THE PUBLIC USE PERMIT APPLICATION PROPOSES TO CONV ERT AN EXISTING 3,027 SQUARE FOOT SINGLE STORY RES IDENTIAL DWELLING INTO A THREE (3) CLASSROOM PRIVA TE SCHOOL. THE PROJECT PROPOSES 6,180 SQUARE FEEET OF PLAYGROUND AREA, 1,748 SQUARE FEET OF LANDSCAPE D AREA, AND SEVEN (7) STANDARD PARKING STALLS INCL UDING ONE (1) STALL FOR PERSONS WITH DISABILITIES.	PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	9/10/2007	<Null>	12/26/2008	6/11/2010
1317	Polygon	CUP02620		CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	12/22/2000	<Null>	12/22/2000	<Null>
1318	Polygon	PP21272	PLOT PLAN NO. 21272 IS A PROPOSAL TO LEGALIZE AN E SITING 1,523 SQUARE FOOT AUTO REPAIR SHOP ON 0.37 ACRES WITH A FLOOR AREA RATIO OF 0.09. THE IMPROVEMENTS SHALL INCLUDE 3,552 SQUARE FEET OF NEW ASPHALT CONCRETE PAVING, A SIX (6) FOOT CO NCRETE BLOCK (C.M.U) GARDEN WALL ALONG THE WESTERN PROPERTY LINE, 2,956 SQUARE FEET OF LANDSCAPING, FIVE (5) STANDARD PARKING STALLS AND ONE (1) PARKI NG STALL FOR PERSONS WITH DISABILITIES	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/28/2005	<Null>	11/9/2009	<Null>
1319	Polygon	PP22423	THE PLOT PLAN PROPOSES TO CONVERT AN EXISTING 1,41 3 SQ. FT. SINGLE FAMILY RESIDENCE INTO AN AFTER SC HOOL DAY CARE CENTER FOR A MAXIMUM OF 25 CHILDREN, AGES K - 8. THE PROPOSED PROJECT CONSISTS OF A 30 0 SQ. FT. GYM ROOM, 407 SQ. FT. OF CLASSROOM SPACE , A 198 SQ. FT. OFFICE, A 208 SQ. FT. KITCHEN, AN 892 SQ. FT. SWIMMING POOL, A 180 SQ. FT. BATHROOM/ RINSING FACILITY, 7,775 SQ. FT. (51%) OF LANDSCAPI NG, AND 9 PARKING STALLS ON A .35 ACRE LOT - APN: 167-250-011	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	12/22/2006	<Null>	11/27/2007	10/22/2009
1320	Polygon	CUP190008	COMMERCIAL CANNABIS RETAIL STORE LOCATED WITHIN AN EXISTING 2,365 SQ. FT. BUILDING AND THE ACCOMPANYING OFFICE SPACE WILL BE LOCATED WITHIN THE ADJACENT, EXISTING 1,437 SQ. FT. BUILDING.	CONDITIONAL USE PERMIT (CUP)	CUP09 - CANNABIS	PLN	APPROVED	7/2/2019 16:32	<Null>	12/12/2019 13:50	<Null>
1321	Polygon	PUP00423		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1322	Polygon	PUP0423		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1323	Polygon	PP18182	65' MONOPINE W/ASSOC CABINETS (SPRINT PCS)	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	9/27/2002	<Null>	7/28/2003	<Null>
1324	Polygon	PP23976	CO-LOCATE 9 PANEL ANTENNA,1 PARABOLIC,1 GPS, 4 EQU LOCATED ON A RES. PROPERTY IN A-1-1 ZONE CONSISTIN G OF A 65' MONOPINE AND 3 ANTENNA SECTORS WITH EAC H SECTOR HAVING 3 ANTENNAS 9 ANTENNAS TOTAL TO BE LOCATED AT 57' ON THE TREE. THE RADIO EQUIPMENT WI LL BE SURROUNDED WITHIN A CMU WALL. ALL WILL BE CO NTAINED WITHIN A 50'X20' LEASE AREA	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/4/2009	<Null>	4/12/2010	3/30/2012
1325	Polygon	CUP03340	OPERATE USE CAR SALES	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/2/2001	<Null>	10/3/2002	<Null>
1326	Polygon	PP25472	CONVERT EXISTING 1,734 SQ FT RESIDENCE TO OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	11/19/2013	<Null>	5/30/2014	5/19/2016
1327	Polygon	PP23272	PLOT PLAN NO. 23272 PROPOSES THE CONSTRUCTION OF A COMMUNITY RETAIL SHOPPING CENTER ON A 0.36 GROSS ACRE LOT. THE PROPOSAL INCLUDES A 4,359 SQ. FT. ST RUCTURE CONSISTING OF FOUR (4) SUITES, 4,637 SQ. F T. OF LAND SCAPING (31%), AND TWENTY (20) PARKING SPACES INCLUDING ONE (1) ACCESSIBLE PARKING SPACE FOR PERSONS WITH DISABILITIES.	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	1/29/2008	<Null>	8/12/2009	3/31/2012
1328	Polygon	PP19197	SHELL COMMERCIAL BLDG	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/10/2004	<Null>	10/27/2005	6/27/2007
1329	Polygon	CUP03751	CUP FOR ABC LICENSING AND CONVENIENCE STORE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	7/6/2016	<Null>	12/13/2017	<Null>
1330	Polygon	PM34020	SCHED F DIVISION INTO TWO LOTS 2X7630 SFR	TENTATIVE PARCEL MAP (TPM)	TPM04 - RESIDENTIAL (W/OUT WAIVER OF FINAL MAP)	PLN	APPROVED	10/13/2005	<Null>	11/3/2006	9/12/2010
1331	Polygon	PP20669	3,518 SQ. FT. PROFESSIONAL OFFICE BUILDING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	7/19/2005	<Null>	5/2/2006	4/17/2008
1332	Polygon	PP17390	PLOT PLAN FOR WOOD PALLET MANUF, REPAIR, SHIPPING	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	10/9/2001	<Null>	2/21/2007	8/21/2008
1333	Polygon	CUP03683	TO PERMIT AN EXISTING 3,270 SQ.FT. COMMERCIAL BUIL DING WITH A LIQUOR STORE BUSINESS WITH THE SALE OF BEER, WINE, AND DISTILLED SPIRITS FOR OFF PREMISE CONSUMPTION	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	5/15/2012	<Null>	11/25/2014	11/25/2016
1334	Polygon	PP24538	PROPOSE A 50 CHILD CHILDCARE CENTER/&LANDSCAPE PLN	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	5/3/2010	<Null>	4/12/2011	4/5/2013
1335	Polygon	CUP03761	76 RETAIL GAS STATION AND CONVENIENCE STORE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	10/25/2016	<Null>	10/30/2018 15:28	<Null>
1336	Polygon	CUP03354	ADD BEER AND WINE SALE TO MARKET	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	9/11/2001	<Null>	5/5/2003	<Null>
1337	Polygon	PP04077R1	REVISED PP TO REACTIVATE EXIST FAST FOOD FACILITY	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/28/2001	<Null>	7/9/2001	<Null>
1338	Polygon	PP13186	CHURCH A CHURCH EA 36218 CPM 435, PP 13438, CFG 310	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	3/31/1992	<Null>	8/24/1992	8/24/1994
1339	Polygon	CUP03722	AUTOMOTIVE SALES IN C-1/C-P ZONE	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	3/11/2015	<Null>	1/4/2018 9:32	<Null>
1340	Polygon	CUP03424	ADD BEER/WINE/LIQUOR SALES TO EXISTING MARKET	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/17/2004	<Null>	7/7/2004	6/22/2006
1341	Polygon	PP16952	MEAT MARKET IN EXIST STRUCTURE W/ADDITION	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	2/16/2001	<Null>	1/16/2002	7/16/2003
1342	Polygon	PUP00326		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	12/26/2000	<Null>	12/26/2000	<Null>
1343	Polygon	PUP0326		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1344	Polygon	PUP0302		PUBLIC USE PERMIT (PUP)	PUP01 - PUBLIC USE PERMIT	PLN	APPROVED	8/7/2000	<Null>	8/7/2000	<Null>
1345	Polygon	PP15401	CONSTRUCT 123,759 SQ FT OF IND BLDG & OFFICE	PLOT PLAN TRANSMITTED (PPT)	PPT01 - TRANSMITTED - NOT CEQA EXEMPT	PLN	APPROVED	4/7/1998	<Null>	10/1/1998	<Null>
1346	Polygon	CUP03522	PROPOSES A TIRE SHOP CONSISTING OF A 1,419 SQ. FT. BUILDING WITH TWO SERVICE BAYS, 7 PARKING SPACES, AND PERIMETER LANDSCAPING	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	8/10/2006	<Null>	11/18/2008	6/17/2011
1347	Polygon	CUP03582	CONDITIONAL USE PERMIT NO. 3582 IS TO PERMIT THE S ALE OF BEER AND WINE FOR CONSUMPTION OFF THE PREMI SES WHERE SOLD (ABC TYPE-20). THE PROJECT SITE CON SISTS OF AN EXISTING 1,208 SQ. FT. CONVENIENCE STO RE AND FIVE PARKING SPACES INCLUDING ONE ACCESSIBL E PARKING SPACE FOR PERSONS WITH DISABILITIES.	CONDITIONAL USE PERMIT (CUP)	CUP01 - GENERAL	PLN	APPROVED	2/7/2008	<Null>	7/29/2009	5/13/2012

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6.3 CITY OF MORENO VALLEY CUMULATIVE PROJECTS

Other than air quality, greenhouse gas emissions, noise, and transportation/traffic, cumulative impacts for all other environmental issue areas are based on a list of projects within the proposed project's study area that either have applications submitted or approved, are under construction, or have recently been completed. Based on information provided by the City of Moreno Valley, 80 cumulative projects were considered in this analysis. The cumulative projects identified in the study area are listed in Table 6-1, and the numbers correspond to the numbers shown on Figure 6-1.

Table 6-1
Cumulative Projects List

ID	Project Name	Project Type	DUs/TSF	
1	PA15 - Global Investment & DEV LLC	Single-Family Housing	272	DU
2	Tract 31305 - RSI	Single-Family Housing	168	DU
3	Tract 36933 - Beazer Homes	Single-Family Housing	275	DU
4	Tract 32548 - Gabel, Cook, and Associates	Single-Family Housing	107	DU
5	PA 15-0046 - LA Jolla Development/Rocas Grandes	Multi-Family Housing	426	DU
6	PA 13-0006 - Rancho Belago Developers, Inc.	Multi-Family Housing	141	DU
7	PEN 16 - MV Bella Vista GP, LLC	Multi-Family Housing	220	DU
8	Moreno Valley Medical Plaza	Medical Office Building	217.00	TSF
9	Tract 33436 - Winchester Associates	Single-Family Housing	105	DU
10	Riverside University Health System Expansion	Medical Office Building	200.00	TSF
11	Eucalyptus Industrial Park	Warehousing, High-Cube Warehousing	2,244.60	TSF
12	World Logistics Center	Warehousing	40,600.00	TSF
13	TownGate Square	Office	463.48	TSF
14	Westcoast Textiles (DPR-0001)	Single-Family Housing	135	DU
15	Tract 22180 - RSI	Single-Family Housing	140	DU
16	Tract 30268	Multi-Family Housing	82	DU
17	PA15-0042 - Latco SC Inc.	Multi-Family Housing	112	DU
18	Winchester Associates - "Scottish Village"	Multi-Family Housing	194	DU
19	Tract 36401 - Continental East	Multi-Family Housing	125	DU
20	Tract 36708 - Nova Homes	Multi-Family Housing	122	DU
21	Latco SC Inc.	Multi-Family Housing	272	DU
22	Mainstreet Post-acute Care	Office/Medical	57.00	TSF
23	Gateway Business Park	Warehousing, High-Cube Warehousing	184.00	TSF
24	Elsworth Plaza	Warehousing, High-Cube Warehousing	30.00	TSF
25	Cactus Commerce Center	Warehousing, High-Cube Warehousing	44.30	TSF
26	MV Professional Office	Office	84.00	TSF

27	March Commerce Center	Commercial	42.15	TSF
28	Plaza Del Sol	Commercial	56.00	TSF
29	Iris Plaza	Commercial	87.12	TSF
30	Prologis Centerpointe	Warehousing, High-Cube Warehousing	601.81	TSF
31	Brodiaea Business Park	Warehousing, High-Cube Warehousing	99.98	TSF
32	Alessandro Plaza	Commercial	122.16	TSF
33	Moreno Valley Commerce Center	Commercial	110.86	TSF
34	Moreno Valley Industrial Park	Warehousing, High-Cube Warehousing	207.68	TSF
35	Moreno Valley Industrial Park	Warehousing, High-Cube Warehousing	400.94	TSF
36	March Business Center	Warehousing, High-Cube Warehousing	1,703.00	TSF
37	17825 Indian St	Warehousing, High-Cube Warehousing	1,109.38	TSF
38	First Nandina Logistics	Warehousing, High-Cube Warehousing	1,388.21	TSF
39	Indian Street Commerce Center	Warehousing, High-Cube Warehousing	433.92	TSF
40	17825 Indian St	Warehousing, High-Cube Warehousing	360.45	TSF
41	Wal-Mart	Commercial	193.00	TSF
42	Tract 32515 - Lennnar Homes-Meadow Creek	Single-Family Housing	148	DU
43	Tract 32005 - Red Hill Village	Single-Family Housing	214	DU
44	Tract 31592 - KB Homes	Single-Family Housing	139	DU
45	Tract 33256 - Pacific Communities	Single-Family Housing	100	DU
46	Tract 35823 - Lansing Companies	Single-Family Housing	562	DU
47	Tact 33222 - 26th Corp	Single-Family Housing	235	DU
48	Tract 36436 - KB Homes	Single-Family Housing	159	DU
49	Tract 34748 - Rados	Single-Family Housing	135	DU
50	Tract 35414 - Oak Park Partners	Multi-Family Housing	266	DU
51	PEN16-0039 - LactoSC Inc.	Multi-Family Housing	272	DU
52	PEN17-004 - City of Moreno Valley "Boulder Bridge"	Multi-Family Housing	141	DU
53	Tract 36760	Single-Family Housing	221	DU
54	Centerpointe Office Area	Office	258.00	TSF
55	First Industrial	Warehousing, High-Cube Warehousing	350.00	TSF
56	Towngate Highlands	Commercial	251.90	TSF
57	Stoneridge Towne Center	Commercial	124.17	TSF
58	Alessandro and Lasselle	Commercial	140.00	TSF
59	Stravisky Development Group	Warehousing, High-Cube Warehousing	330.00	TSF
60	Phelan Development	Warehousing, High-Cube Warehousing	98.00	TSF

61	Meridian March Business Park SP	Warehousing, High-Cube Warehousing	41,917.00	TSF
62	March Lifecare Medical Office	Medical Office Building	275.00	TSF
63	March Airport General Plan	Airport	559.00	TSF
64	Freeway Business Center	High Cube	710.00	TSF
65	Meridian Business Park North	Industrial park	5,985.00	TSF
66	PLN 16-00013	Warehousing, High-Cube Warehousing	241.00	TSF
67	Bookend DPR 15-00010	Warehousing, High-Cube Warehousing	172.00	TSF
68	DPR 17-00001	Warehousing, High-Cube Warehousing	811.00	TSF
69	IPT Perris DC II	Warehousing, High-Cube Warehousing	273.00	TSF
70	Circle Industrial DPR 13-02-0005	Warehousing, High-Cube Warehousing	600.00	TSF
71	TTM 36648 Stratford Ranch	Single-Family Housing	275	DU
72	Harvest Landing Specific Plan (	Single-Family Housing	345	DU
		Multi-Family Housing	1,856	DU
		Sports Park	727.45	TSF
		Business Park	1,233.40	TSF
		Commercial	73.18	TSF
73	Mission Pacific Commercial	Single-Family Housing	192.00	TSF
		Retail	15.00	TSF
		Supermarket	50.00	TSF
		Pharmacy	20.00	TSF
		High Turnover Restaurant	15.00	TSF
74	Tract Map 32917	Multi-Family Housing	227	DU
75	Alere	High Cube	644.00	TSF
76	Jordan Distribution Center	High Cube	378.00	TSF
77	Investment Development Services (IDS) II	High Cube	350.00	TSF
78	TR 30592	Single-Family	131	DU
79	Alessandro Commerce Center	Warehouse or High Cube	808.00	TSF
80	Villages at Lakeview	SFDH (MDR, MHDR)	2,200	DU
		High Density Residential	3,750	DU
		Mixed Use - Dwelling Units	2,775	DU
		Mixed Use - Commercial	555.00	TSF
		Commercial Office	825.00	TSF
		Schools	114.20	AC

Source: Appendix J

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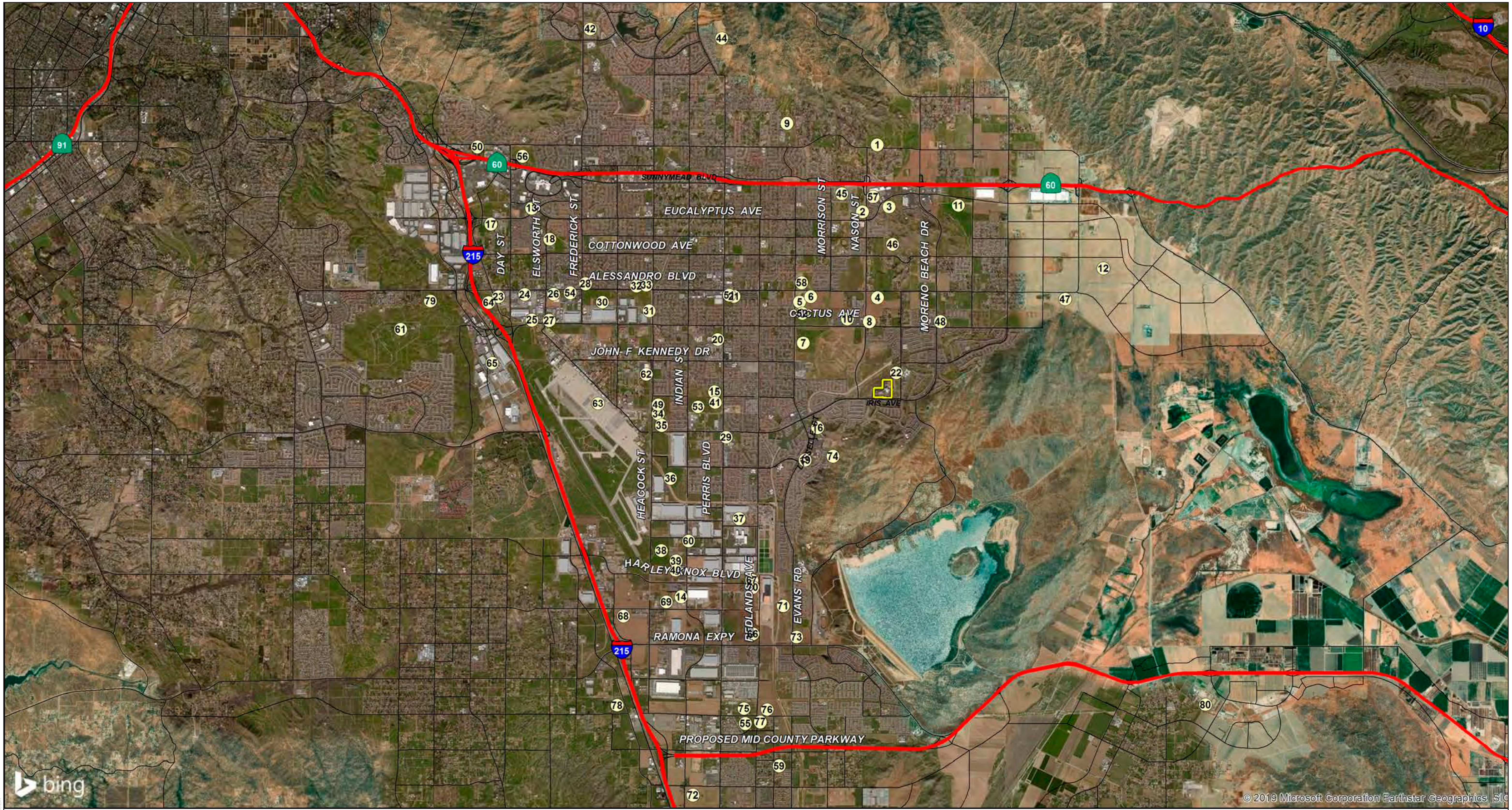

LEGEND

▭ Project Location

○ Cumulative Project Location

SOURCE: LSA 2019

FIGURE 6-1

Cumulative Projects

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APPENDIX B: TRAFFIC COUNTS

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Prepared by National Data & Surveying Services

I-215 SB Ramps & Blaine St

Peak Hour Turning Movement Count

ID: 18-06142-016
City: Riverside

Day: Thursday
Date: 11/15/2018

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

I-215 SB Ramps

SOUTHBOUND

	↲	↓	↳	↶	⇧
AM	453	5	486	0	0
NOON	0	0	0	0	0
PM	142	25	249	0	0
	1	0.5	0.5	0	

Blaine St

EASTBOUND

	AM	NOON	PM	
⇦	926	0	531	
↶	0	0	0	0
↱	0	0	0	0
→	582	0	489	2
↴	116	0	499	0

Blaine St

WESTBOUND

		PM	NOON	AM
0	↰	0	0	0
2	←	389	0	473
2	↲	285	0	205
0	↶	0	0	0
	⇨	738	0	1068

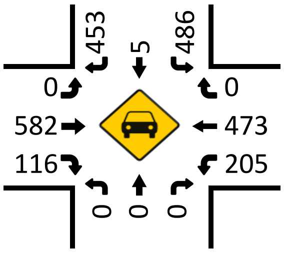
CONTROL			
Signalized			
TEV	2320	0	2078
	AM	NOON	PM
PHF	0.80		0.94

NORTHBOUND

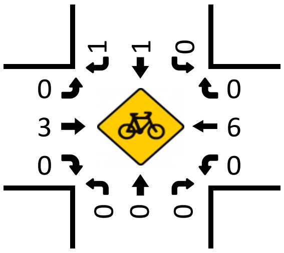
I-215 SB Ramps

	⇩	↶	↰	↑	↱
		0	0	0	0
PM	809	0	0	0	0
NOON	0	0	0	0	0
AM	326	0	0	0	0

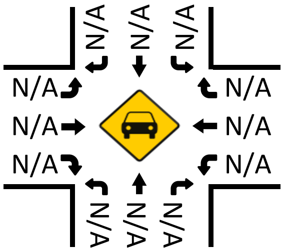
Total Vehicles (AM)



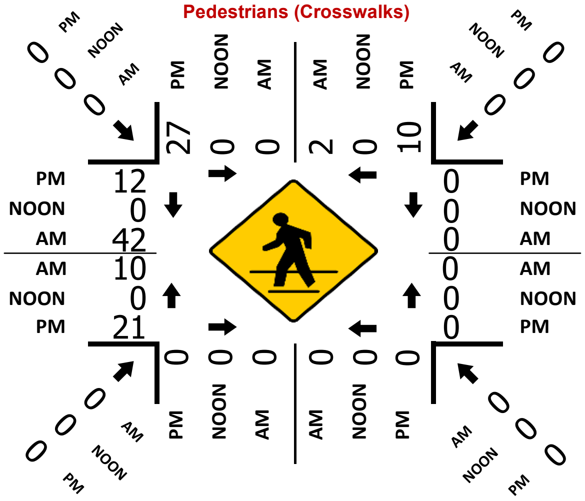
Bikes (AM)



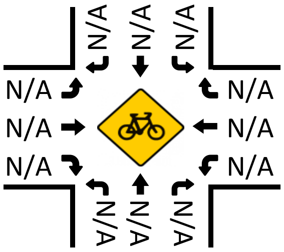
Total Vehicles (Noon)



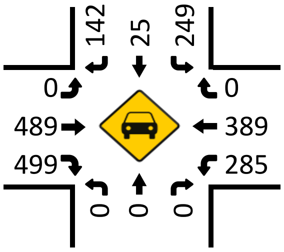
Pedestrians (Crosswalks)



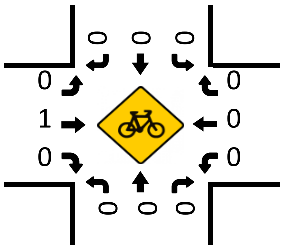
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

I-215 NB Ramps & Blaine St

Peak Hour Turning Movement Count

ID: 18-06142-015
City: Riverside

Day: Thursday
Date: 11/15/2018

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

I-215 NB Ramps
SOUTHBOUND

	↲	↓	↳	U	⇧
AM	0	0	0	0	902
NOON	0	0	0	0	0
PM	0	0	0	0	857
Lanes	0	0	0	0	

Blaine St
EASTBOUND

	AM	NOON	PM	Lanes
⇦	695	0	654	
U	0	0	0	0
↱	203	0	194	2
→	855	0	563	2
↴	0	0	0	0

Blaine St
WESTBOUND

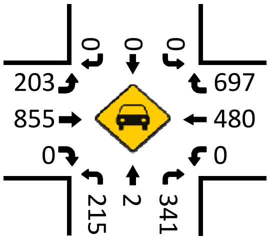
	Lanes	PM	NOON	AM
↰	0	659	0	697
←	2	526	0	480
↲	0	0	0	0
U	0	0	0	0
⇨		813	0	1196

CONTROL			
Signalized			
	AM	NOON	PM
TEV	2793	0	2324
PHF	0.86		0.93

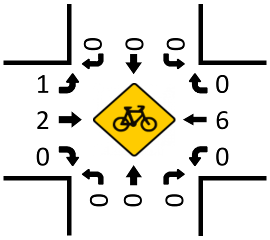
NORTHBOUND
I-215 NB Ramps

	⇩	U	↰	↑	↱
Lanes		0	0.5	0.5	1
PM	0	0	128	4	250
NOON	0	0	0	0	0
AM	0	0	215	2	341

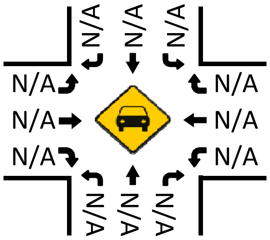
Total Vehicles (AM)



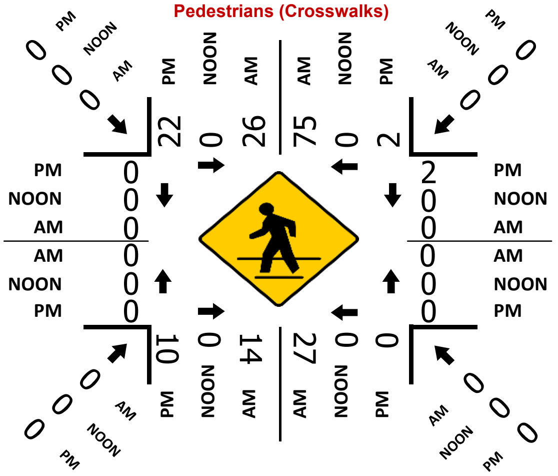
Bikes (AM)



Total Vehicles (Noon)

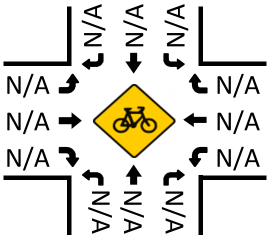


Pedestrians (Crosswalks)

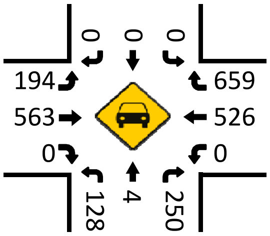


Crosswalk	Direction	AM	NOON	PM
North	→	26	0	22
North	←	75	0	2
West	↓	0	0	0
West	↑	0	0	0
East	↓	0	0	2
East	↑	0	0	0
South	→	14	0	10
South	←	27	0	0

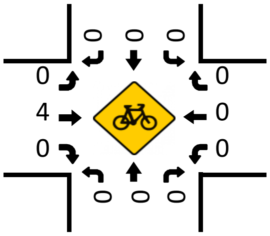
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Canyon Crest Dr & Blaine St

Peak Hour Turning Movement Count

ID: 18-06141-008
City: Riverside

Day: Thursday
Date: 11/15/2018

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 10:00 AM
NOON	12:15 PM - 01:15 PM	10:00 AM - 02:00 PM
PM	04:45 PM - 05:45 PM	02:00 PM - 10:00 PM

Canyon Crest Dr
SOUTHBOUND

	↲	↓	↳	U	⇧
AM	53	85	10	0	91
NOON	37	64	13	0	115
PM	66	128	18	0	144
Lanes	0	1	1	0	

Blaine St
EASTBOUND

	AM	NOON	PM	Lanes
⇦	574	432	598	
U	0	0	0	0
↱	22	40	48	1
→	411	262	379	2
↴	130	111	142	0

CONTROL

Signalized

	AM	NOON	PM
TEV	1546	1145	1668
PHF	0.85	0.95	0.93

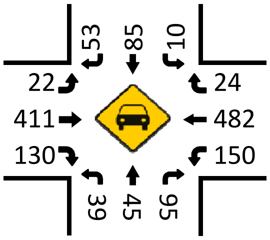
Blaine St
WESTBOUND

Lanes		PM	NOON	AM
0	↰	21	18	24
2	←	421	312	482
1	↲	127	67	150
0	U	0	0	0
	⇨	529	356	516

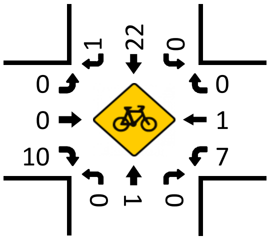
NORTHBOUND
Canyon Crest Dr

	⇩	U	↰	↑	↱
Lanes		0	1	1	1
PM	397	0	111	75	132
NOON	242	0	83	57	81
AM	365	0	39	45	95

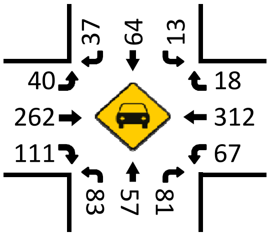
Total Vehicles (AM)



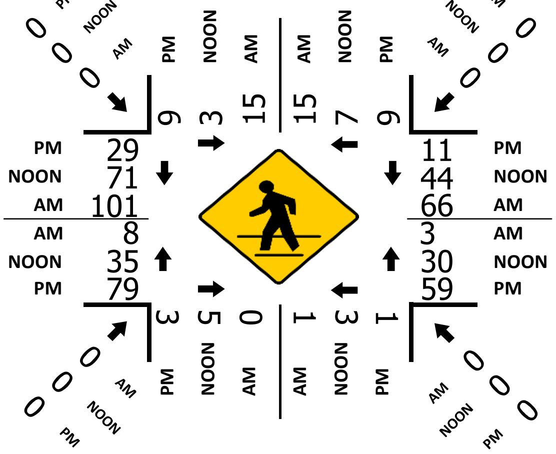
Bikes (AM)



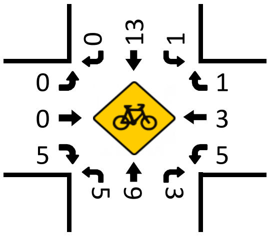
Total Vehicles (Noon)



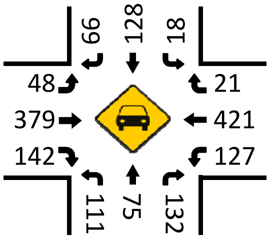
Pedestrians (Crosswalks)



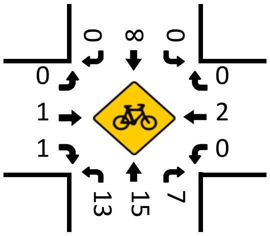
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Canyon Crest Dr & W Linden St

Peak Hour Turning Movement Count

ID: 18-06141-007
City: Riverside

Day: Thursday
Date: 11/15/2018

PEAK HOURS		COUNT PERIODS
07:30 AM - 08:30 AM	AM	07:00 AM - 10:00 AM
12:00 PM - 01:00 PM	NOON	10:00 AM - 02:00 PM
04:45 PM - 05:45 PM	PM	02:00 PM - 10:00 PM

Canyon Crest Dr

SOUTHBOUND

	↲	↓	↳	↶	⇧
AM	67	206	62	0	231
NOON	24	163	72	0	214
PM	26	298	111	1	325
	1	1	1	0	

W Linden St

EASTBOUND

	AM	NOON	PM	
⇦	202	155	197	
↶	0	1	0	0
↱	51	34	49	1
→	68	78	113	2
↴	86	53	129	0

CONTROL

Signalized

	AM	NOON	PM
TEV	1131	1008	1531
PHF	0.83	0.92	0.97

W Linden St

WESTBOUND

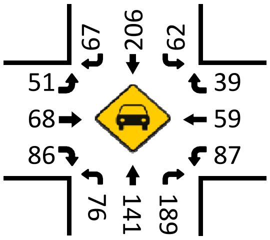
		PM	NOON	AM
0	↰	113	43	39
1	←	117	81	59
1	↙	213	142	87
0	↷	0	0	0
	⇨	368	281	319

NORTHBOUND

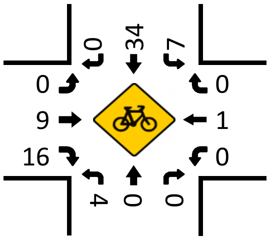
Canyon Crest Dr

	⇩	↶	↰	↑	↱	
		0	1	1	1	
PM	641	1	54	162	144	PM
NOON	358	0	49	137	131	NOON
AM	379	0	76	141	189	AM

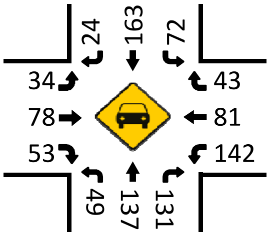
Total Vehicles (AM)



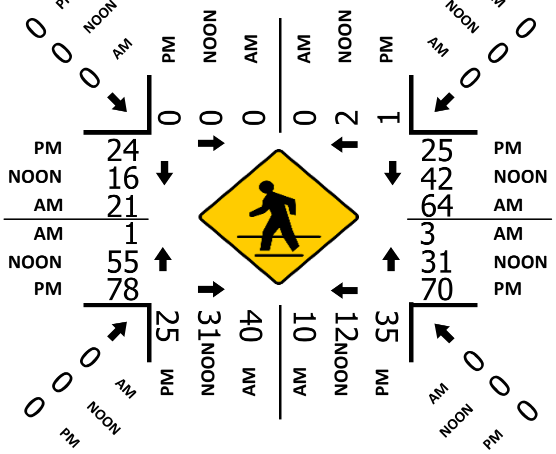
Bikes (AM)



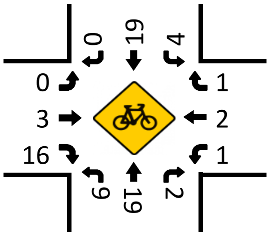
Total Vehicles (Noon)



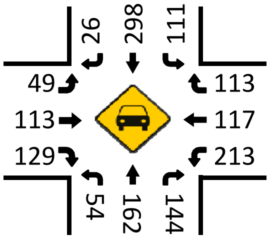
Pedestrians (Crosswalks)



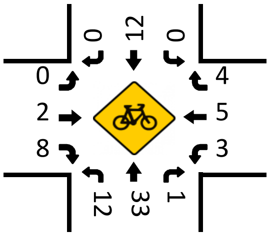
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

I-215 SB Ramps & University Ave

Peak Hour Turning Movement Count

ID: 18-06142-018
City: Riverside

Day: Thursday
Date: 11/15/2018

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

I-215 SB Ramps
SOUTHBOUND

	↲	↓	↳	⮌	⇧
AM	258	0	364	0	0
NOON	0	0	0	0	0
PM	84	0	45	0	0
	1	0	1	0	

University Ave
EASTBOUND

		AM	NOON	PM
⇦		535	0	564
⮌	0	0	0	3
↰	0	0	0	0
→	1	264	0	508
↴	1	242	0	751

WESTBOUND
University Ave

		PM	NOON	AM
↱	0	0	0	0
←	1	477	0	277
↙	1	118	0	49
⮌	0	0	0	0
⇨		553	0	628

CONTROL

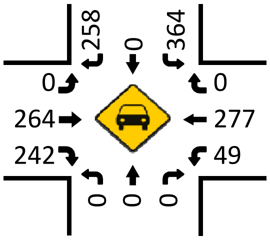
Signalized

	AM	NOON	PM
TEV	1454	0	1986
PHF	0.82		0.93

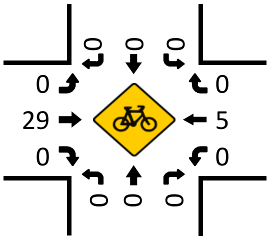
	⇩	⮌	↰	↑	↱
		0	0	0	0
PM	869	0	0	0	0
NOON	0	0	0	0	0
AM	291	0	0	0	0

NORTHBOUND
I-215 SB Ramps

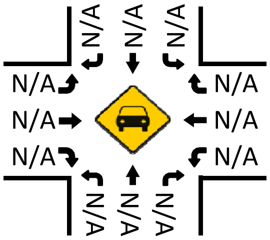
Total Vehicles (AM)



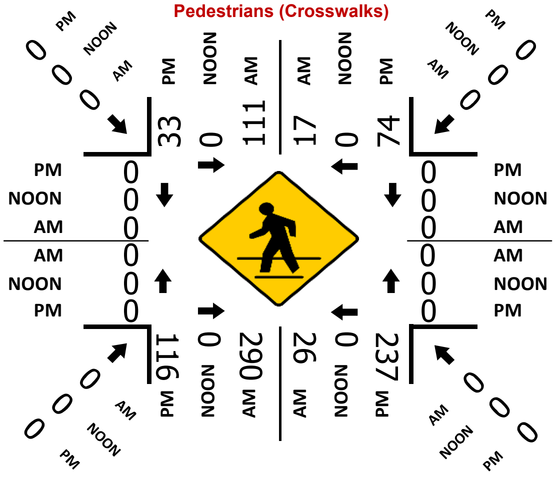
Bikes (AM)



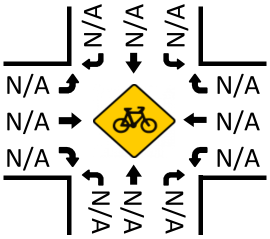
Total Vehicles (Noon)



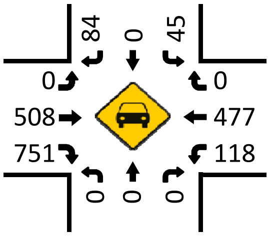
Pedestrians (Crosswalks)



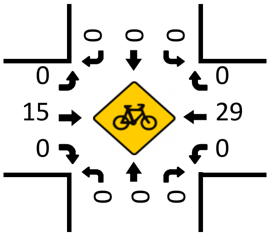
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

I-215 NB Ramps & University Ave

Peak Hour Turning Movement Count

ID: 18-06142-017
City: Riverside

Day: Thursday
Date: 11/15/2018

PEAK HOURS		COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

I-215 NB Ramps

SOUTHBOUND

	↲	↓	↳	⤻	⇧
AM	126	0	58	0	249
NOON	0	0	0	0	0
PM	183	0	57	0	517
	1	0	2	0	

University Ave

EASTBOUND

		AM	NOON	PM
⇦		331	0	598
⤺	0	0	0	0
↰	1	100	0	219
→	1	525	0	334
↳	0	3	0	0

WESTBOUND

University Ave

		PM	NOON	AM
↰	1	298	0	149
←	1	415	0	203
↲	0	0	0	0
⤹	0	0	0	0
⇨		394	0	587

CONTROL

Signalized

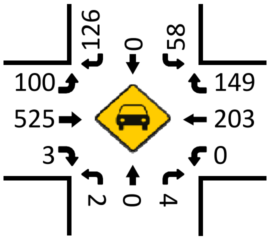
	AM	NOON	PM
TEV	1170	0	1509
PHF	0.85		0.89

	⇩	⤺	↰	↑	↱
		0	0	0	0
PM	0	0	0	0	3
NOON	0	0	0	0	0
AM	3	0	2	0	4

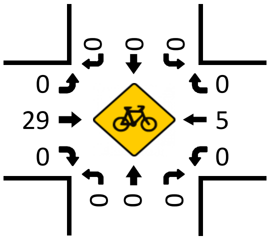
NORTHBOUND

I-215 NB Ramps

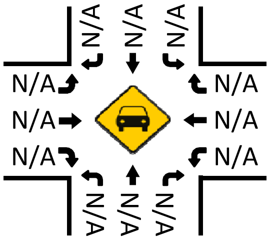
Total Vehicles (AM)



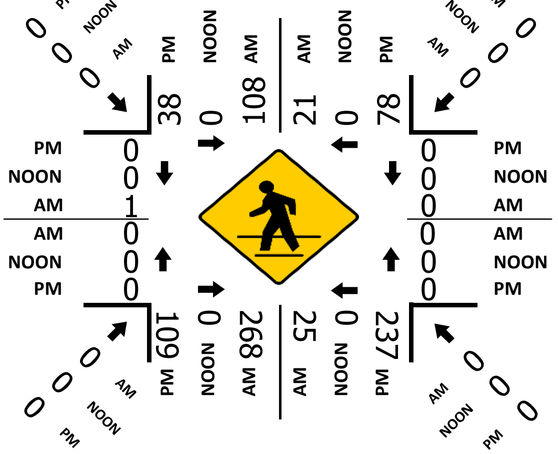
Bikes (AM)



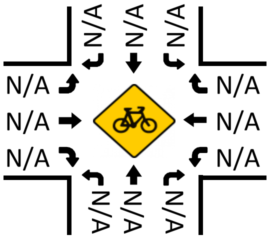
Total Vehicles (Noon)



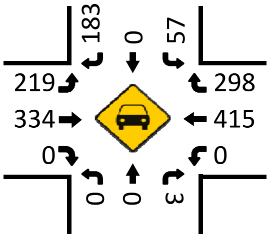
Pedestrians (Crosswalks)



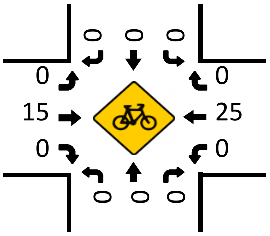
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

W Campus Dr & University Ave

Peak Hour Turning Movement Count

ID: 18-06142-009
City: Riverside

Day: Thursday
Date: 11/15/2018

	PEAK HOURS	COUNT PERIODS
AM	07:30 AM - 08:30 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

W Campus Dr — SOUTHBOUND

	↲	↓	↳	U	⇧
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0
Lanes	0	0	0	0	

University Ave — EASTBOUND

	Lanes	AM	NOON	PM
⇦		346	0	722
U	0	0	0	0
↰	0	0	0	0
→	1	342	0	197
↴	1	244	0	196

University Ave — WESTBOUND

	Lanes	PM	NOON	AM
↱	0	0	0	0
←	1	409	0	194
↲	1	277	0	150
U	0	0	0	0
⇨		337	0	518

W Campus Dr — NORTHBOUND

	⇩	U	↰	↑	↱
Lanes		0	1.5	0	0.5
PM	475	2	313	0	140
NOON	0	0	0	0	0
AM	394	0	152	0	176

CONTROL

Signalized

	AM	NOON	PM
TEV	1258	0	1534
PHF	0.79		0.84

Total Vehicles (AM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	342	244
Westbound	150	194	0
Northbound	152	0	176

Total Vehicles (Noon)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	197	196
Westbound	277	409	0
Northbound	313	0	140

Bikes (AM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	28	2
Westbound	0	5	0
Northbound	0	0	1

Bikes (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	7	0
Westbound	3	19	0
Northbound	6	0	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	→	0	0	0
North	←	0	0	0
West	↓	0	0	0
West	↑	0	0	0
East	↓	106	0	26
East	↑	9	0	68
South	→	297	0	82
South	←	19	0	218
NW corner	↘	0	0	0
NE corner	↙	0	0	0
SW corner	↗	0	0	0
SE corner	↖	0	0	0

Prepared by National Data & Surveying Services

Watkins Dr & Big Springs Rd

Peak Hour Turning Movement Count

ID: 18-06142-012
City: Riverside

Day: Thursday
Date: 11/15/2018

PEAK HOURS		COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Watkins Dr

SOUTHBOUND

	↲	↓	↳	U	⇧
AM	87	182	13	0	727
NOON	0	0	0	0	0
PM	50	394	91	0	548
Lanes	0	1	1	0	

Big Springs Rd

EASTBOUND

	AM	NOON	PM	Lanes
⇦	260	0	173	
U	0	0	0	0
↱	36	0	159	0
→	14	0	30	1
↴	28	0	181	0

Big Springs Rd

WESTBOUND

	Lanes	PM	NOON	AM
↰	0	40	0	130
←	1	36	0	38
↙	0	60	0	8
U	0	0	0	0
⇨		150	0	48

CONTROL

4-Way Stop

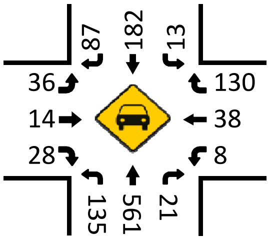
	AM	NOON	PM
TEV	1253	0	1506
PHF	0.94		0.95

NORTHBOUND

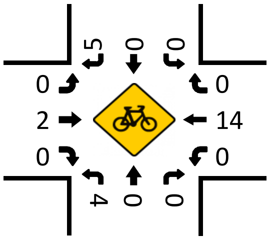
Watkins Dr

	⇩	U	↰	↑	↱
Lanes		0	1	1	0
PM	635	0	87	349	29
NOON	0	0	0	0	0
AM	218	0	135	561	21

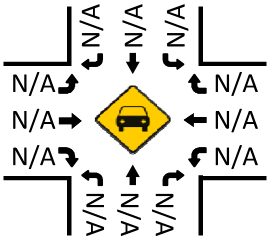
Total Vehicles (AM)



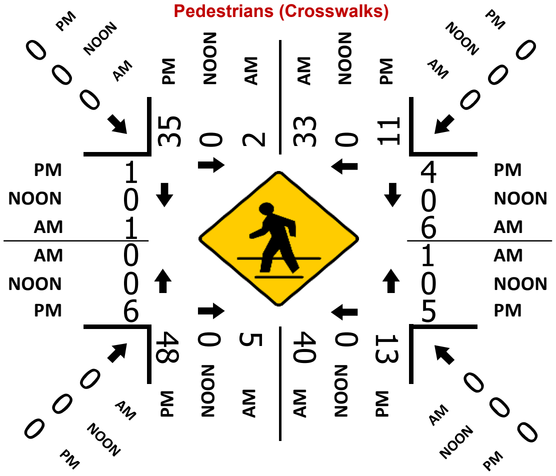
Bikes (AM)



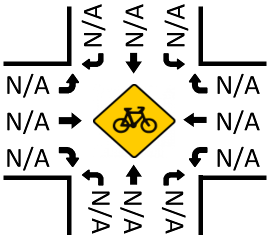
Total Vehicles (Noon)



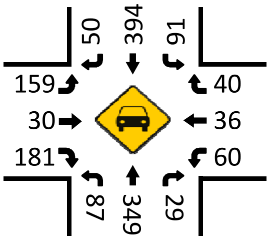
Pedestrians (Crosswalks)



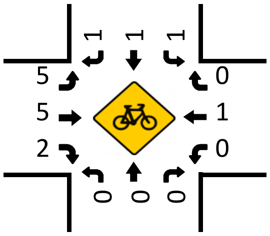
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

Canyon Crest Dr & Martin Luther King Blvd

Peak Hour Turning Movement Count

ID: 18-06142-010
City: Riverside

Day: Thursday
Date: 11/15/2018

PEAK HOURS		COUNT PERIODS
07:15 AM - 08:15 AM	AM	07:00 AM - 09:00 AM
NONE	NOON	NONE
04:45 PM - 05:45 PM	PM	04:00 PM - 06:00 PM

Canyon Crest Dr
SOUTHBOUND

	↲	↓	↳	↶	⇧
AM	27	52	15	6	814
NOON	0	0	0	0	0
PM	137	425	208	6	374
	1	2	2	0	

Martin Luther King Blvd
EASTBOUND

	AM	NOON	PM	
⇦	1571	0	769	
↶	0	0	0	0
↰	131	0	120	2
→	247	0	942	3
↴	184	0	841	1

Martin Luther King Blvd
WESTBOUND

		PM	NOON	AM
1	↰	43	0	239
2	←	262	0	579
2	↲	203	0	192
0	↶	0	0	0
	⇨	1533	0	1177

Canyon Crest Dr
NORTHBOUND

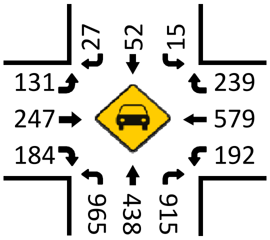
	⇩	↶	↰	↑	↱
		0	2	2	1
PM	1469	0	370	205	383
NOON	0	0	0	0	0
AM	428	0	965	438	915

CONTROL

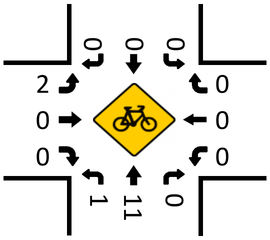
Signalized

	AM	NOON	PM
TEV	3990	0	4145
PHF	0.88		0.95

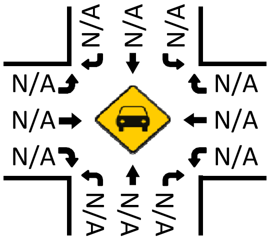
Total Vehicles (AM)



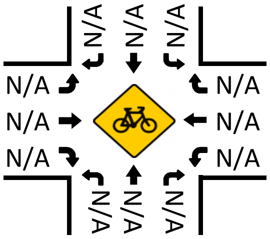
Bikes (AM)



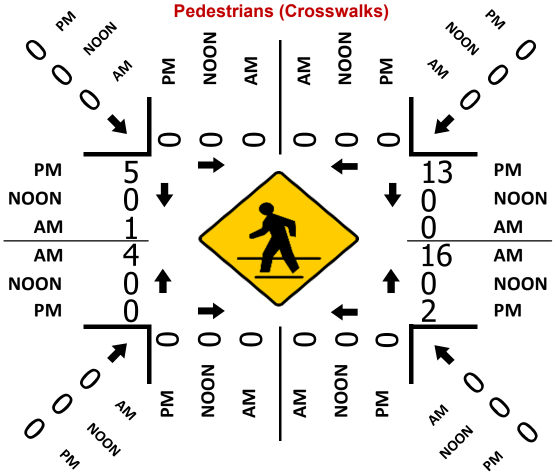
Total Vehicles (Noon)



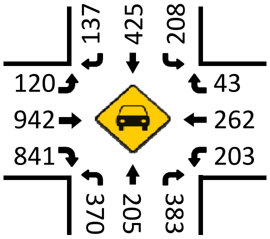
Bikes (NOON)



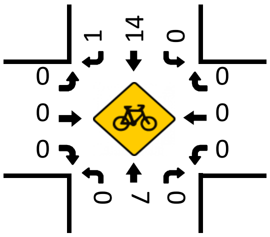
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

I-215 SB Ramps & Martin Luther King Blvd

Peak Hour Turning Movement Count

ID: 18-06142-021
City: Riverside

Day: Thursday
Date: 11/15/2018

	PEAK HOURS	COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

I-215 SB Ramps — SOUTHBOUND

	↲	↓	↳	↶	⇧
AM	606	2	3	0	0
NOON	0	0	0	0	0
PM	220	5	1	0	0
	0.5	0.5	1	0	

Martin Luther King Blvd — EASTBOUND

		AM	NOON	PM
⇦		1014	0	535
↶	0	0	0	0
↱	0	0	0	0
→	1.5	941	0	583
↴	1.5	244	0	1003

Martin Luther King Blvd — WESTBOUND

		PM	NOON	AM
↰	0	0	0	0
←	2	315	0	408
↙	1	2	0	4
↶	0	0	0	0
⇨		584	0	944

CONTROL

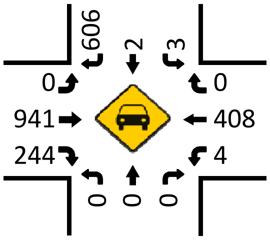
Signalized

	AM	NOON	PM
TEV	2208	0	2129
PHF	0.89		0.92

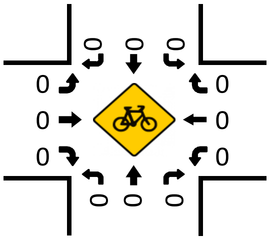
I-215 SB Ramps — NORTHBOUND

	⇩	↶	↰	↑	↱
		0	0	0	0
PM	1010	0	0	0	0
NOON	0	0	0	0	0
AM	250	0	0	0	0

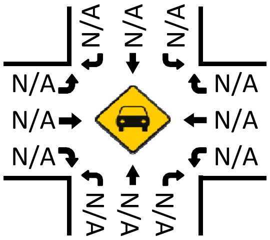
Total Vehicles (AM)



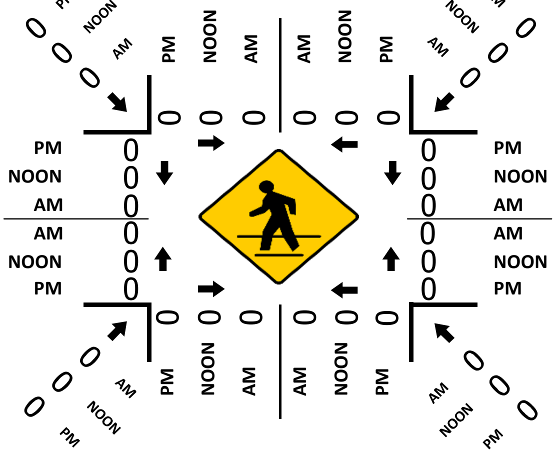
Bikes (AM)



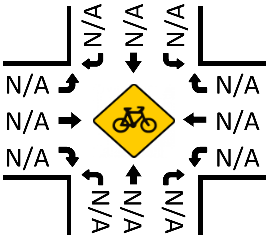
Total Vehicles (Noon)



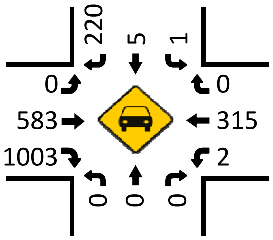
Pedestrians (Crosswalks)



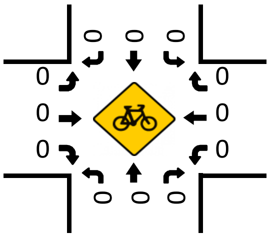
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

I-215 NB Ramps & Martin Luther King Blvd

Peak Hour Turning Movement Count

ID: 18-06142-020
City: Riverside

Day: Thursday
Date: 11/15/2018

PEAK HOURS		COUNT PERIODS
AM	07:15 AM - 08:15 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

I-215 NB Ramps

SOUTHBOUND

	↲	↓	↳	⮌	⇧
AM	0	0	0	0	1040
NOON	0	0	0	0	0
PM	0	0	0	0	741
	0	0	0	0	

Martin Luther King Blvd

EASTBOUND

	AM	NOON	PM	
⇦	412	0	289	
⮌	1	0	0	0
↰	938	0	618	2
→	0	0	0	0
↘	0	0	0	0

Martin Luther King Blvd

WESTBOUND

		PM	NOON	AM
0	↰	0	0	0
0	←	0	0	0
0	↙	0	0	0
0	⮌	0	0	0
	⇨	0	0	0

CONTROL

2-Way Stop(NB/EB)

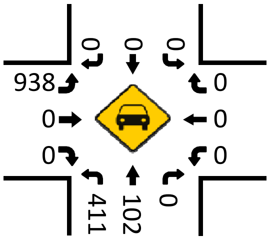
	AM	NOON	PM
TEV	1452	0	1030
PHF	0.96		0.85

NORTHBOUND

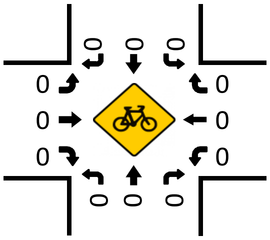
I-215 NB Ramps

	⇩	⮌	↰	↑	↱
		0	1.5	0.5	0
PM	0	0	289	123	0
NOON	0	0	0	0	0
AM	0	0	411	102	0

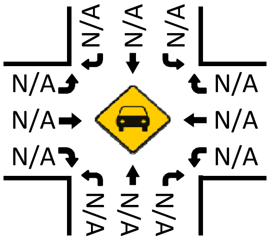
Total Vehicles (AM)



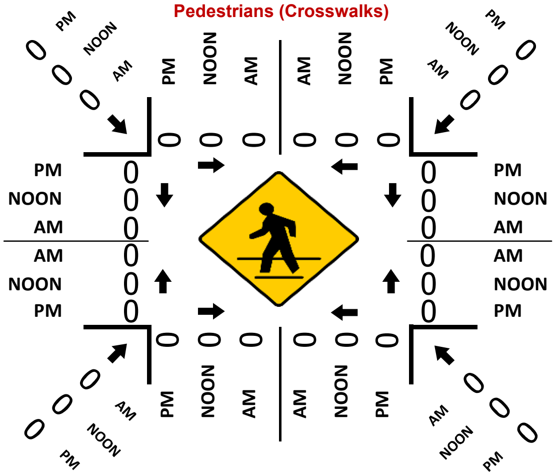
Bikes (AM)



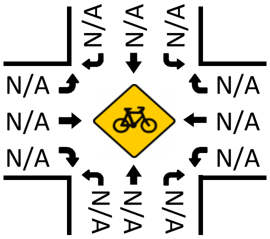
Total Vehicles (Noon)



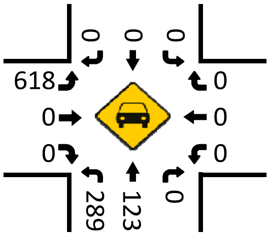
Pedestrians (Crosswalks)



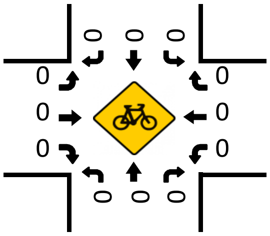
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

I-215 SB Ramps & Watkins Dr

Peak Hour Turning Movement Count

ID: 18-06142-022
City: Riverside

Day: Thursday
Date: 11/15/2018

PEAK HOURS		COUNT PERIODS
AM	07:00 AM - 08:00 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	05:00 PM - 06:00 PM	04:00 PM - 06:00 PM

I-215 SB Ramps

SOUTHBOUND

AM	51	3	90	0	0
NOON	0	0	0	0	0
PM	44	8	18	0	0
	1.5	0.5	1	0	

Watkins Dr

EASTBOUND

AM	NOON	PM	
349	0	735	⇦
0	0	0	0
0	0	0	0
1282	0	429	2
256	0	627	1

WESTBOUND

Watkins Dr

	PM	NOON	AM
0	0	0	0
2	691	0	298
2	641	0	183
0	0	0	0
⇨	447	0	1372

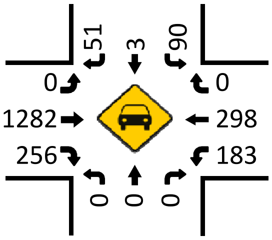
CONTROL			
Signalized			
TEV	2163	0	2458
	AM	NOON	PM
PHF	0.90		0.96

NORTHBOUND

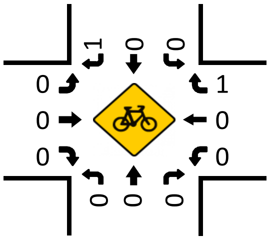
I-215 SB Ramps

		0	0	0	0
PM	1276	0	0	0	0
NOON	0	0	0	0	0
AM	442	0	0	0	0

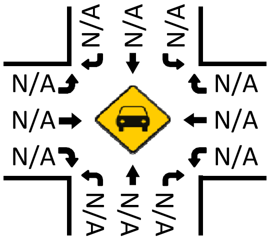
Total Vehicles (AM)



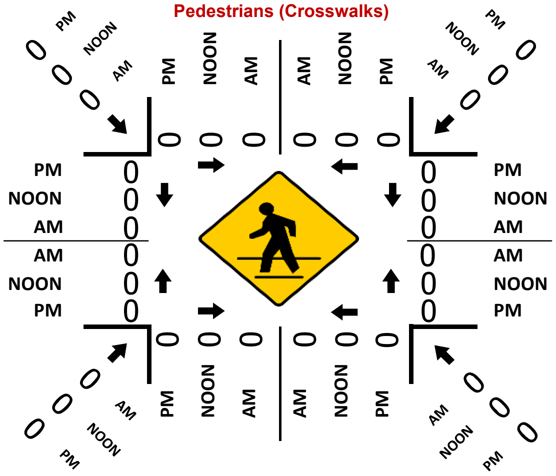
Bikes (AM)



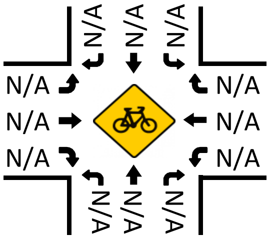
Total Vehicles (Noon)



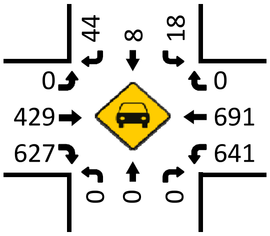
Pedestrians (Crosswalks)



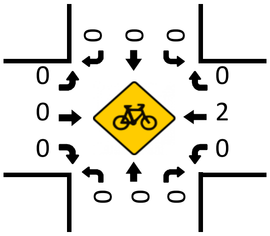
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



Prepared by National Data & Surveying Services

I-215 NB Off Ramp & Watkins Dr

Peak Hour Turning Movement Count

ID: 18-06142-024
City: Riverside

Day: Thursday
Date: 11/15/2018

PEAK HOURS	
AM	07:00 AM - 08:00 AM
NOON	NONE
PM	05:00 PM - 06:00 PM

COUNT PERIODS	
AM	07:00 AM - 09:00 AM
NOON	NONE
PM	04:00 PM - 06:00 PM

I-215 NB Off Ramp — SOUTHBOUND

	↲	↓	↳	U	⇧
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0
	0	0	0	0	

Watkins Dr — EASTBOUND

	AM	NOON	PM	
⇦	472	0	1331	
U	0	0	0	0
↰	0	0	0	0
→	1379	0	450	2
↴	0	0	0	0

Watkins Dr — WESTBOUND

		PM	NOON	AM
0	↱	0	0	0
2	←	989	0	346
0	↲	0	0	0
0	U	0	0	0
	⇨	741	0	1816

I-215 NB Off Ramp — NORTHBOUND

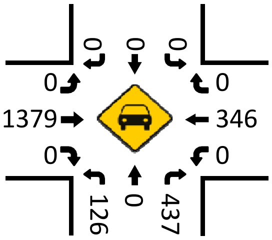
	⇩	U	↰	↑	↱
		0	2	0	1
PM	0	0	342	0	291
NOON	0	0	0	0	0
AM	0	0	126	0	437

CONTROL

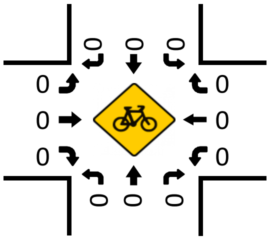
Signalized

	AM	NOON	PM
TEV	2288	0	2072
PHF	0.89		0.95

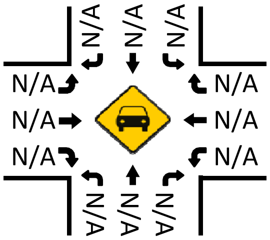
Total Vehicles (AM)



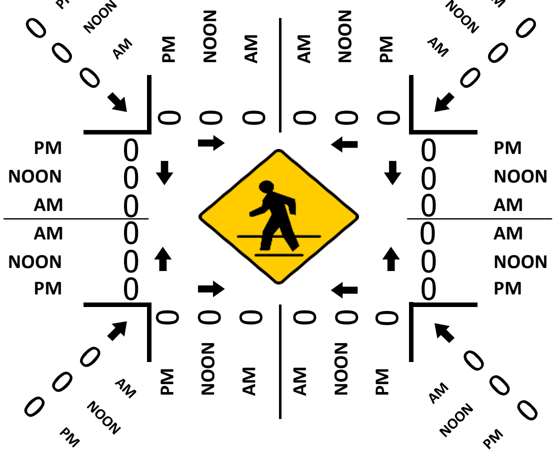
Bikes (AM)



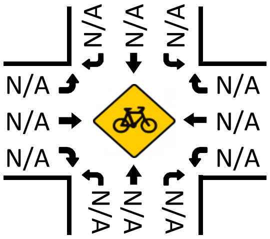
Total Vehicles (Noon)



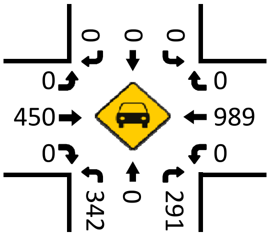
Pedestrians (Crosswalks)



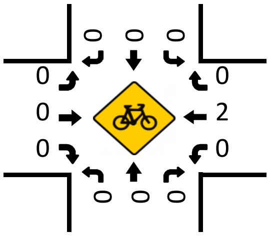
Bikes (NOON)



Total Vehicles (PM)



Bikes (PM)



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APPENDIX C: OFF-RAMP QUEUE CALCULATIONS

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Baseline (2018)

Queues
1: I-215 SB On Ramp/I-215 SB Off Ramp & Blaine St

08/10/2020

	→	↙	←	↓	↙
Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	873	256	591	614	566
v/c Ratio	0.83	0.42	0.32	0.93	0.79
Control Delay	37.5	37.9	13.4	50.9	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	37.9	13.4	50.9	23.8
Queue Length 50th (ft)	244	72	101	349	172
Queue Length 95th (ft)	265	98	117	#456	241
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1141	612	1862	663	716
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.77	0.42	0.32	0.93	0.79

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

	↗	→	←	↑	↱
Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	236	994	1368	252	397
v/c Ratio	0.35	0.42	0.87	0.65	0.90
Control Delay	30.9	7.5	21.8	37.6	47.1
Queue Delay	0.0	0.4	0.0	0.0	0.0
Total Delay	30.9	7.9	21.8	37.6	47.1
Queue Length 50th (ft)	55	121	234	117	142
Queue Length 95th (ft)	84	148	#312	183	#269
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	674	2360	1572	433	476
Starvation Cap Reductn	0	807	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.64	0.87	0.58	0.83

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: I-215 SB On Ramp/I-215 SB Off Ramp & University Avenue

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	322	295	60	338	444	315
v/c Ratio	0.49	0.52	0.31	0.38	0.59	0.40
Control Delay	28.4	6.8	43.5	17.2	25.2	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.4	6.8	43.5	17.2	25.2	7.6
Queue Length 50th (ft)	156	0	34	124	201	35
Queue Length 95th (ft)	220	41	65	168	263	74
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	661	567	288	896	748	795
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.52	0.21	0.38	0.59	0.40

Intersection Summary

Queues
6: University Avenue & I-215 NB Ramps

08/10/2020

	↗	→	←	↖	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	118	618	239	175	68	148
v/c Ratio	0.48	0.53	0.28	0.24	0.07	0.28
Control Delay	43.9	11.7	17.7	3.6	26.1	6.3
Queue Delay	0.0	0.7	0.0	0.0	0.0	0.0
Total Delay	43.9	12.4	17.7	3.6	26.1	6.3
Queue Length 50th (ft)	67	185	84	0	15	0
Queue Length 95th (ft)	110	246	138	32	29	38
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	480	1173	844	717	920	523
Starvation Cap Reductn	0	258	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.68	0.28	0.24	0.07	0.28

Intersection Summary

Queues
10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1084	247	4	458	3	683
v/c Ratio	0.69	0.31	0.03	0.28	0.00	0.88
Control Delay	17.4	2.9	0.5	10.6	16.3	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.4	2.9	0.5	10.6	16.3	26.6
Queue Length 50th (ft)	214	0	0	4	1	154
Queue Length 95th (ft)	281	37	0	0	6	#391
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	2134	1001	184	2235	840	922
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.25	0.02	0.20	0.00	0.74

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

08/10/2020

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1424	284	203	331	100	30	30
v/c Ratio	0.77	0.29	0.40	0.12	0.41	0.13	0.10
Control Delay	18.0	2.6	19.6	0.8	28.2	11.6	0.7
Queue Delay	3.8	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.9	2.6	19.6	0.8	28.2	11.6	0.7
Queue Length 50th (ft)	217	0	23	4	33	1	0
Queue Length 95th (ft)	#396	37	37	6	71	21	0
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	1854	964	743	2664	295	277	334
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	340	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.94	0.29	0.27	0.12	0.34	0.11	0.09

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: I-215 NB Off Ramp & Central Ave/Watkins Dr

	→	←	↰	↱
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1549	389	142	491
v/c Ratio	0.89	0.22	0.12	0.92
Control Delay	29.8	9.3	14.0	44.9
Queue Delay	46.9	0.0	0.0	0.0
Total Delay	76.7	9.3	14.0	44.9
Queue Length 50th (ft)	258	40	18	160
Queue Length 95th (ft)	333	62	34	#321
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	1745	1745	1172	550
Starvation Cap Reductn	460	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.21	0.22	0.12	0.89

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Blaine St

08/10/2020

	→	↙	←	↓	↙
Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1051	303	414	292	151
v/c Ratio	0.88	0.51	0.22	0.44	0.23
Control Delay	32.0	39.9	12.5	24.9	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.0	39.9	12.5	24.9	4.4
Queue Length 50th (ft)	230	88	66	130	0
Queue Length 95th (ft)	317	131	94	204	39
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1253	591	1862	666	663
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.84	0.51	0.22	0.44	0.23

Intersection Summary

2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

	↗	→	←	↑	↱
Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	209	605	1275	142	269
v/c Ratio	0.31	0.23	0.70	0.57	0.60
Control Delay	30.4	3.8	13.3	42.4	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.4	3.8	13.3	42.4	10.2
Queue Length 50th (ft)	48	40	166	71	0
Queue Length 95th (ft)	80	75	281	119	61
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	674	2646	1811	433	584
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.23	0.70	0.33	0.46

Intersection Summary

Queues

5: I-215 SB On Ramp/I-215 SB Off Ramp & University Avenue

08/10/2020

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	546	808	127	513	48	90
v/c Ratio	0.52	0.87	0.47	0.37	0.20	0.31
Control Delay	13.8	15.9	34.2	4.3	31.2	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.8	15.9	34.2	4.3	31.2	10.5
Queue Length 50th (ft)	153	21	55	66	20	0
Queue Length 95th (ft)	273	#377	99	102	50	38
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	1055	924	601	1383	240	293
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.87	0.21	0.37	0.20	0.31

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
6: University Avenue & I-215 NB Ramps

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	246	375	466	335	64	206
v/c Ratio	0.71	0.31	0.62	0.44	0.08	0.38
Control Delay	42.5	7.5	25.0	4.3	25.1	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	7.5	25.0	4.3	25.1	6.4
Queue Length 50th (ft)	121	78	190	0	13	0
Queue Length 95th (ft)	186	119	309	51	28	50
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	431	1202	757	764	825	537
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.31	0.62	0.44	0.08	0.38

Intersection Summary

10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

	→	↘	↙	←	↘	↓
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1179	545	2	342	1	244
v/c Ratio	0.55	0.49	0.01	0.15	0.00	0.57
Control Delay	4.5	2.1	0.0	3.6	22.0	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	2.1	0.0	3.6	22.0	10.2
Queue Length 50th (ft)	46	0	0	0	0	1
Queue Length 95th (ft)	113	31	0	0	4	55
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	2625	1270	293	2864	1077	1060
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.43	0.01	0.12	0.00	0.23

Intersection Summary

Queues
12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

08/10/2020

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	447	653	668	720	19	28	26
v/c Ratio	0.26	0.66	0.78	0.24	0.10	0.15	0.11
Control Delay	11.2	9.6	31.2	1.4	25.1	16.1	0.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	11.2	9.6	31.2	1.5	25.1	16.1	0.8
Queue Length 50th (ft)	55	57	122	22	6	3	0
Queue Length 95th (ft)	90	#207	187	31	23	23	0
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	1731	988	915	2962	295	280	334
Starvation Cap Reductn	0	0	0	795	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.66	0.73	0.33	0.06	0.10	0.08

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: I-215 NB Off Ramp & Central Ave/Watkins Dr

08/10/2020

	→	←	↖	↗
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	474	1041	360	306
v/c Ratio	0.21	0.47	0.52	0.57
Control Delay	1.5	7.5	23.6	8.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	1.5	7.5	23.6	8.4
Queue Length 50th (ft)	5	86	60	9
Queue Length 95th (ft)	7	159	86	59
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	2206	2206	1287	766
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.21	0.47	0.28	0.40

Intersection Summary

Baseline Plus Project

	→	↙	←	↓	↙
Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	975	280	636	831	566
v/c Ratio	0.88	0.50	0.34	1.25	0.81
Control Delay	40.5	40.2	13.6	154.9	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.5	40.2	13.6	154.9	26.6
Queue Length 50th (ft)	281	81	110	~632	190
Queue Length 95th (ft)	305	107	127	#716	260
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1141	557	1862	663	699
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.85	0.50	0.34	1.25	0.81

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	236	1291	1522	252	445
v/c Ratio	0.35	0.57	1.01	0.58	0.99
Control Delay	30.9	9.7	43.7	34.3	68.5
Queue Delay	0.0	1.3	0.0	0.0	0.0
Total Delay	30.9	10.9	43.7	34.3	68.5
Queue Length 50th (ft)	55	178	~316	117	196
Queue Length 95th (ft)	84	213	#442	183	#359
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	674	2275	1509	433	449
Starvation Cap Reductn	0	705	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	0.82	1.01	0.58	0.99

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

5: I-215 SB On Ramp/I-215 SB Off Ramp & University Avenue

08/10/2020

	→	↘	↙	←	↘	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	388	295	102	357	527	315
v/c Ratio	0.61	0.55	0.47	0.40	0.70	0.40
Control Delay	33.0	9.8	45.8	17.5	28.8	8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	9.8	45.8	17.5	28.8	8.2
Queue Length 50th (ft)	200	14	59	133	255	40
Queue Length 95th (ft)	282	68	95	178	325	80
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	636	534	288	896	748	788
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.55	0.35	0.40	0.70	0.40

Intersection Summary

6: University Avenue & I-215 NB Ramps

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
	↗	→	←	↖	↘	↙
Lane Group Flow (vph)	118	761	299	211	161	148
v/c Ratio	0.48	0.65	0.35	0.29	0.17	0.28
Control Delay	43.9	14.2	18.6	3.5	27.1	6.3
Queue Delay	0.0	1.4	0.0	0.0	0.0	0.0
Total Delay	43.9	15.6	18.6	3.5	27.1	6.3
Queue Length 50th (ft)	67	258	110	0	38	0
Queue Length 95th (ft)	110	338	174	34	59	38
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	480	1173	844	737	920	523
Starvation Cap Reductn	0	226	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.80	0.35	0.29	0.17	0.28

Intersection Summary

Queues

10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

08/10/2020

	→	↘	↙	←	↘	↓
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1209	337	4	685	3	938
v/c Ratio	0.77	0.40	0.04	0.41	0.00	1.30
Control Delay	21.0	3.0	0.8	11.9	16.3	168.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	3.0	0.8	11.9	16.3	168.0
Queue Length 50th (ft)	256	0	0	6	1	~584
Queue Length 95th (ft)	330	42	0	0	6	#799
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	1740	906	104	1824	686	720
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.37	0.04	0.38	0.00	1.30

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

08/10/2020

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1424	284	248	331	100	30	30
v/c Ratio	0.79	0.30	0.45	0.12	0.41	0.13	0.10
Control Delay	19.6	2.7	19.5	0.8	28.2	11.6	0.7
Queue Delay	18.6	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.2	2.7	19.5	0.8	28.2	11.6	0.7
Queue Length 50th (ft)	225	0	27	3	33	1	0
Queue Length 95th (ft)	#408	38	41	6	71	21	0
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	1809	948	743	2664	295	277	334
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	418	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.02	0.30	0.33	0.12	0.34	0.11	0.09

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

13: I-215 NB Off Ramp & Central Ave/Watkins Dr

	→	←	↰	↱
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	1549	434	142	592
v/c Ratio	0.91	0.25	0.12	1.08
Control Delay	31.7	9.6	14.0	83.8
Queue Delay	46.6	0.0	0.0	0.0
Total Delay	78.3	9.6	14.0	83.8
Queue Length 50th (ft)	269	45	18	~244
Queue Length 95th (ft)	338	68	34	#414
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	1710	1710	1172	550
Starvation Cap Reductn	498	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.28	0.25	0.12	1.08

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
1: I-215 SB On Ramp/I-215 SB Off Ramp & Blaine St

	→	↙	←	↓	↙
Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1128	353	512	454	151
v/c Ratio	0.93	0.64	0.27	0.68	0.23
Control Delay	38.5	43.8	13.0	31.4	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.5	43.8	13.0	31.4	4.4
Queue Length 50th (ft)	275	105	85	227	0
Queue Length 95th (ft)	#410	152	117	339	39
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1235	548	1862	664	663
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.91	0.64	0.27	0.68	0.23

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

	↗	→	←	↑	↗
Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	209	846	1634	142	309
v/c Ratio	0.31	0.33	0.92	0.52	0.77
Control Delay	30.4	5.0	26.3	37.9	26.7
Queue Delay	0.0	0.3	0.0	0.0	0.0
Total Delay	30.4	5.3	26.3	37.9	26.7
Queue Length 50th (ft)	48	64	305	70	61
Queue Length 95th (ft)	80	130	#562	112	136
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	674	2589	1770	433	521
Starvation Cap Reductn	0	1033	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.54	0.92	0.33	0.59

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
5: I-215 SB On Ramp/I-215 SB Off Ramp & University Avenue

08/10/2020

	→	↘	↙	←	↘	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	597	808	223	556	113	90
v/c Ratio	0.66	0.94	0.63	0.40	0.47	0.31
Control Delay	20.7	26.6	35.2	4.6	37.1	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	26.6	35.2	4.6	37.1	10.5
Queue Length 50th (ft)	199	43	96	74	49	0
Queue Length 95th (ft)	#378	#405	150	115	98	38
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	901	858	601	1383	240	293
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.94	0.37	0.40	0.47	0.31

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	246	496	611	421	142	206
v/c Ratio	0.71	0.41	0.81	0.52	0.17	0.38
Control Delay	42.5	8.5	33.6	4.6	26.0	6.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	8.5	33.6	4.6	26.0	6.4
Queue Length 50th (ft)	121	112	279	0	30	0
Queue Length 95th (ft)	186	167	#496	56	53	50
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	431	1202	757	816	825	537
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.41	0.81	0.52	0.17	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

	→	↘	↙	←	↘	↓
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1540	709	2	534	1	459
v/c Ratio	0.77	0.62	0.02	0.25	0.00	0.81
Control Delay	13.7	3.7	0.5	0.3	17.0	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	13.7	3.7	0.5	0.3	17.0	21.6
Queue Length 50th (ft)	182	0	0	0	0	71
Queue Length 95th (ft)	#499	58	0	0	4	171
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	2062	1161	116	2186	822	879
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.61	0.02	0.24	0.00	0.52

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	447	653	774	720	19	28	26
v/c Ratio	0.26	0.67	0.86	0.24	0.10	0.15	0.11
Control Delay	11.4	10.1	35.7	2.0	25.1	16.1	0.8
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	11.4	10.1	35.7	2.1	25.1	16.1	0.8
Queue Length 50th (ft)	55	60	161	23	6	3	0
Queue Length 95th (ft)	90	#219	#236	51	23	23	0
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	1695	970	915	2962	295	280	334
Starvation Cap Reductn	0	0	0	858	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.67	0.85	0.34	0.06	0.10	0.08

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

13: I-215 NB Off Ramp & Central Ave/Watkins Dr

	→	←	↰	↱
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	474	1148	360	389
v/c Ratio	0.22	0.54	0.47	0.69
Control Delay	1.4	9.2	21.4	12.8
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	1.4	9.2	21.4	12.8
Queue Length 50th (ft)	5	105	59	35
Queue Length 95th (ft)	7	217	76	91
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	2134	2134	1287	766
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.22	0.54	0.28	0.51

Intersection Summary

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Cumulative (LRDP Horizon Year 2035)

Queues
1: I-215 SB On Ramp/I-215 SB Off Ramp & Blaine St

Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1151	339	780	812	748
v/c Ratio	1.12	0.82	0.49	1.05	1.04
Control Delay	97.5	57.8	19.5	73.6	70.3
Queue Delay	0.0	0.0	0.7	0.0	0.0
Total Delay	97.5	57.8	20.3	73.6	70.3
Queue Length 50th (ft)	~417	104	168	~537	~453
Queue Length 95th (ft)	#448	#134	187	#624	#546
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1032	415	1601	775	716
Starvation Cap Reductn	0	0	469	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.12	0.82	0.69	1.05	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

	↗	→	←	↑	↱
Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	312	1313	1807	333	523
v/c Ratio	0.94	0.61	1.06	0.67	1.04
Control Delay	76.7	11.8	56.6	34.6	78.3
Queue Delay	0.0	1.7	0.0	0.0	0.0
Total Delay	76.7	13.6	56.6	34.6	78.3
Queue Length 50th (ft)	86	206	~463	155	~267
Queue Length 95th (ft)	#152	247	#547	232	#424
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	331	2148	1707	496	503
Starvation Cap Reductn	0	622	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	0.86	1.06	0.67	1.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

5: I-215 SB On Ramp/I-215 SB Off Ramp & University Avenue

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	424	389	79	446	585	416
v/c Ratio	0.63	0.65	0.42	0.50	0.78	0.55
Control Delay	31.8	10.4	47.5	19.2	32.6	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.8	10.4	47.5	19.2	32.6	15.3
Queue Length 50th (ft)	220	20	45	176	296	109
Queue Length 95th (ft)	289	78	83	229	375	166
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	668	601	186	896	748	762
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.65	0.42	0.50	0.78	0.55

Intersection Summary

Queues

6: University Avenue & I-215 NB Ramps

	↗	→	←	↖	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	155	815	315	232	91	195
v/c Ratio	0.58	0.60	0.32	0.28	0.15	0.46
Control Delay	45.5	8.6	13.8	2.7	33.9	9.0
Queue Delay	0.0	1.2	0.0	0.0	0.0	0.0
Total Delay	45.5	9.8	13.8	2.7	33.9	9.0
Queue Length 50th (ft)	88	200	97	0	24	0
Queue Length 95th (ft)	134	261	158	30	43	48
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	348	1351	998	843	591	428
Starvation Cap Reductn	0	306	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.78	0.32	0.28	0.15	0.46

Intersection Summary

Queues
10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

	→	↘	↙	←	↘	↓
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1432	326	6	606	4	902
v/c Ratio	1.08	0.43	0.07	0.43	0.00	1.11
Control Delay	73.6	4.0	1.4	16.2	11.8	85.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	4.0	1.4	16.2	11.8	85.3
Queue Length 50th (ft)	~457	0	0	7	1	~494
Queue Length 95th (ft)	#584	51	0	0	6	#708
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	1332	765	90	1394	826	816
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.08	0.43	0.07	0.43	0.00	1.11

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

08/10/2020

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1880	376	269	437	132	40	38
v/c Ratio	0.87	0.34	0.94	0.16	0.90	0.25	0.18
Control Delay	16.2	1.6	66.5	3.3	84.7	15.5	1.8
Queue Delay	48.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	1.6	66.5	3.3	84.7	15.5	1.8
Queue Length 50th (ft)	257	0	52	35	49	1	0
Queue Length 95th (ft)	#385	26	#114	36	#137	27	2
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	2152	1110	286	2683	147	160	217
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	1088	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.77	0.34	0.94	0.16	0.90	0.25	0.18

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: I-215 NB Off Ramp & Central Ave/Watkins Dr

08/10/2020

	→	←	↰	↱
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	2045	513	187	648
v/c Ratio	1.16	0.29	0.17	1.25
Control Delay	100.1	9.3	15.0	152.7
Queue Delay	1.8	0.0	0.0	0.0
Total Delay	101.9	9.3	15.0	152.7
Queue Length 50th (ft)	~437	52	24	~306
Queue Length 95th (ft)	#479	78	43	#481
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	1769	1769	1115	517
Starvation Cap Reductn	683	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.88	0.29	0.17	1.25

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

1: I-215 SB On Ramp/I-215 SB Off Ramp & Blaine St

	→	↙	←	↓	↙
Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1409	406	554	391	202
v/c Ratio	1.07	0.87	0.29	0.60	0.29
Control Delay	69.5	59.9	12.9	28.9	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5	59.9	12.9	28.9	4.3
Queue Length 50th (ft)	~431	125	92	188	0
Queue Length 95th (ft)	#568	#204	125	285	44
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1322	469	1881	656	688
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.07	0.87	0.29	0.60	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

08/10/2020

	↗	→	←	↑	↱
Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	280	811	1707	190	360
v/c Ratio	0.71	0.32	0.84	0.66	0.82
Control Delay	46.6	4.9	16.0	44.0	28.9
Queue Delay	0.0	0.3	0.0	0.0	0.0
Total Delay	46.6	5.2	16.0	44.0	28.9
Queue Length 50th (ft)	74	66	258	95	68
Queue Length 95th (ft)	#123	106	#438	155	#176
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	396	2566	2021	361	495
Starvation Cap Reductn	0	1051	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.71	0.54	0.84	0.53	0.73

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

5: I-215 SB On Ramp/I-215 SB Off Ramp & University Avenue

08/10/2020

	→	↘	↙	←	↘	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	732	1082	170	687	65	122
v/c Ratio	0.71	1.21	0.72	0.49	0.28	0.39
Control Delay	17.3	119.2	50.5	5.3	32.7	10.3
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	17.3	119.2	50.5	5.7	32.7	10.3
Queue Length 50th (ft)	231	~482	77	99	28	0
Queue Length 95th (ft)	361	#714	#167	154	63	44
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	1028	891	236	1388	236	316
Starvation Cap Reductn	0	0	0	253	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.71	1.21	0.72	0.61	0.28	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

6: University Avenue & I-215 NB Ramps

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	329	503	625	448	85	275
v/c Ratio	0.81	0.36	0.70	0.50	0.19	0.61
Control Delay	47.2	4.4	22.8	3.6	33.6	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	4.4	22.8	3.6	33.6	11.1
Queue Length 50th (ft)	160	71	256	0	20	0
Queue Length 95th (ft)	#266	106	385	48	41	65
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	453	1401	898	905	457	449
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.36	0.70	0.50	0.19	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

	→	↘	↙	←	↘	↓
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1580	730	3	459	1	329
v/c Ratio	0.67	0.60	0.02	0.19	0.00	0.69
Control Delay	5.6	2.7	0.3	3.4	26.0	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.6	2.7	0.3	3.4	26.0	12.3
Queue Length 50th (ft)	71	0	0	0	0	3
Queue Length 95th (ft)	229	37	0	0	4	69
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	2562	1282	156	2750	558	722
Starvation Cap Reductn	50	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.57	0.02	0.17	0.00	0.46

Intersection Summary

Queues
12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

08/10/2020

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	599	875	895	965	25	37	35
v/c Ratio	0.33	0.95	1.04	0.32	0.17	0.24	0.16
Control Delay	10.4	35.5	67.3	1.4	28.5	18.4	1.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	10.4	35.5	67.3	1.5	28.5	18.4	1.6
Queue Length 50th (ft)	72	~304	~200	15	9	4	0
Queue Length 95th (ft)	107	#507	#305	25	29	29	0
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	1799	921	858	3025	147	155	217
Starvation Cap Reductn	0	0	0	780	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.95	1.04	0.43	0.17	0.24	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: I-215 NB Off Ramp & Central Ave/Watkins Dr

08/10/2020

	→	←	↰	↱
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	635	1395	482	411
v/c Ratio	0.31	0.67	0.58	0.74
Control Delay	3.7	11.3	22.7	17.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.7	11.3	22.7	17.5
Queue Length 50th (ft)	20	159	79	56
Queue Length 95th (ft)	25	258	111	136
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	2067	2067	1001	625
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.31	0.67	0.48	0.66

Intersection Summary

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Cumulative Year Plus Project

1: I-215 SB On Ramp/I-215 SB Off Ramp & Blaine St

08/10/2020

	→	↙	←	↓	↙
Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1254	363	825	1029	748
v/c Ratio	1.22	0.87	0.52	1.33	1.06
Control Delay	136.8	63.9	20.0	182.7	74.6
Queue Delay	0.0	0.0	0.9	0.0	0.0
Total Delay	136.8	63.9	20.9	182.7	74.6
Queue Length 50th (ft)	~488	112	181	~811	~463
Queue Length 95th (ft)	#513	#154	201	#879	#556
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1032	415	1601	775	708
Starvation Cap Reductn	0	0	461	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.22	0.87	0.72	1.33	1.06

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

	↰	→	←	↑	↱
Lane Group	**EBL**	**EBT**	**WBT**	**NBT**	**NBR**
Lane Group Flow (vph)	312	1609	1960	333	572
v/c Ratio	0.94	0.75	1.15	0.67	1.14
Control Delay	76.7	14.7	93.1	34.6	110.4
Queue Delay	0.0	10.6	0.0	0.0	0.0
Total Delay	76.7	25.3	93.1	34.6	110.4
Queue Length 50th (ft)	86	291	~556	155	~323
Queue Length 95th (ft)	#152	344	#637	232	#484
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	331	2148	1705	496	503
Starvation Cap Reductn	0	532	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	1.00	1.15	0.67	1.14

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	490	389	122	466	668	416
v/c Ratio	0.80	0.71	0.66	0.52	0.89	0.55
Control Delay	40.8	15.3	58.7	19.7	42.0	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.8	15.3	58.7	19.7	42.0	15.8
Queue Length 50th (ft)	267	41	72	187	364	113
Queue Length 95th (ft)	343	115	#125	242	#470	171
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	611	548	186	896	748	756
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.71	0.66	0.52	0.89	0.55

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	↰	→	←	↖	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	155	959	375	267	184	195
v/c Ratio	0.58	0.71	0.38	0.31	0.31	0.46
Control Delay	45.5	11.0	14.6	2.7	35.7	9.0
Queue Delay	0.0	2.4	0.0	0.0	0.0	0.0
Total Delay	45.5	13.4	14.6	2.7	35.7	9.0
Queue Length 50th (ft)	88	272	120	0	50	0
Queue Length 95th (ft)	134	356	191	32	76	48
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	348	1351	998	860	591	428
Starvation Cap Reductn	0	259	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.88	0.38	0.31	0.31	0.46

Intersection Summary

Queues

10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

	→	↘	↙	←	↘	↓
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1555	417	6	833	4	1157
v/c Ratio	1.17	0.51	0.07	0.60	0.00	1.49
Control Delay	109.6	4.5	1.4	17.2	11.8	251.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	109.6	4.5	1.4	17.2	11.8	251.7
Queue Length 50th (ft)	~531	2	0	10	1	~825
Queue Length 95th (ft)	#661	59	0	1	6	#1051
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	1332	816	90	1394	826	774
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	1.17	0.51	0.07	0.60	0.00	1.49

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

08/10/2020

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	1880	376	313	437	132	40	38
v/c Ratio	0.87	0.34	1.09	0.16	0.90	0.25	0.18
Control Delay	16.2	1.6	107.1	3.2	84.7	15.5	1.8
Queue Delay	48.3	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	1.6	107.1	3.2	84.7	15.5	1.8
Queue Length 50th (ft)	257	0	~69	30	49	1	0
Queue Length 95th (ft)	#385	26	#138	32	#137	27	2
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	2152	1110	286	2683	147	160	217
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	1088	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.77	0.34	1.09	0.16	0.90	0.25	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: I-215 NB Off Ramp & Central Ave/Watkins Dr

08/10/2020

	→	←	↰	↱
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	2045	558	187	749
v/c Ratio	1.16	0.32	0.17	1.45
Control Delay	100.1	9.5	15.0	235.2
Queue Delay	1.8	0.0	0.0	0.0
Total Delay	101.9	9.5	15.0	235.2
Queue Length 50th (ft)	~437	58	24	~387
Queue Length 95th (ft)	#479	85	43	#571
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	1769	1769	1115	517
Starvation Cap Reductn	683	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	1.88	0.32	0.17	1.45

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

1: I-215 SB On Ramp/I-215 SB Off Ramp & Blaine St

08/10/2020

	→	↙	←	↓	↙
Lane Group	EBT	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1485	456	652	553	202
v/c Ratio	1.14	0.97	0.35	0.84	0.29
Control Delay	96.5	77.4	13.4	41.3	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	96.5	77.4	13.4	41.3	4.3
Queue Length 50th (ft)	~494	143	112	301	0
Queue Length 95th (ft)	#632	#241	150	#486	44
Internal Link Dist (ft)	624		349	723	
Turn Bay Length (ft)		165			350
Base Capacity (vph)	1308	469	1881	655	688
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.14	0.97	0.35	0.84	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

2: I-215 NB Off Ramp/I-215 NB On Ramp & Blaine St

08/10/2020

	↗	→	←	↑	↱
Lane Group	EBL	EBT	WBT	NBT	NBR
Lane Group Flow (vph)	280	1052	2068	190	400
v/c Ratio	0.71	0.43	1.07	0.54	0.95
Control Delay	46.6	6.5	60.4	36.5	57.4
Queue Delay	0.0	0.6	0.0	0.0	0.0
Total Delay	46.6	7.1	60.4	36.5	57.4
Queue Length 50th (ft)	74	112	~568	90	141
Queue Length 95th (ft)	#123	147	#708	155	#318
Internal Link Dist (ft)		349	1011	596	
Turn Bay Length (ft)	125				350
Base Capacity (vph)	396	2436	1926	361	427
Starvation Cap Reductn	0	884	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.71	0.68	1.07	0.53	0.94

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues

5: I-215 SB On Ramp/I-215 SB Off Ramp & University Avenue

08/10/2020

	→	↘	↙	←	↘	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBR
Lane Group Flow (vph)	783	1082	266	730	129	122
v/c Ratio	0.76	1.26	1.13	0.53	0.55	0.39
Control Delay	19.1	137.8	131.0	5.6	39.9	10.3
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	19.1	137.8	131.0	6.0	39.9	10.3
Queue Length 50th (ft)	259	~512	~146	110	57	0
Queue Length 95th (ft)	407	#744	#285	171	110	44
Internal Link Dist (ft)	539			502		
Turn Bay Length (ft)		140	200		350	350
Base Capacity (vph)	1028	862	236	1388	236	316
Starvation Cap Reductn	0	0	0	242	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.76	1.26	1.13	0.64	0.55	0.39

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
6: University Avenue & I-215 NB Ramps

08/10/2020

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Group Flow (vph)	329	624	770	535	163	275
v/c Ratio	0.81	0.45	0.86	0.57	0.36	0.61
Control Delay	47.2	5.1	32.0	4.6	35.6	11.1
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	47.2	5.5	32.0	4.6	35.6	11.1
Queue Length 50th (ft)	160	96	358	8	40	0
Queue Length 95th (ft)	#266	143	#586	64	69	65
Internal Link Dist (ft)		502	544		324	
Turn Bay Length (ft)	200				250	250
Base Capacity (vph)	453	1401	898	936	457	449
Starvation Cap Reductn	0	342	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.59	0.86	0.57	0.36	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	→	↘	↙	←	↘	↓
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT
Lane Group Flow (vph)	1946	889	3	650	1	544
v/c Ratio	0.91	0.72	0.03	0.29	0.00	0.94
Control Delay	19.5	4.5	0.7	0.3	23.0	41.5
Queue Delay	0.6	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	4.5	0.7	0.3	23.0	41.5
Queue Length 50th (ft)	376	0	0	0	0	141
Queue Length 95th (ft)	#633	46	0	0	4	#339
Internal Link Dist (ft)	531			276		1311
Turn Bay Length (ft)			150			
Base Capacity (vph)	2127	1234	92	2213	447	606
Starvation Cap Reductn	36	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.72	0.03	0.29	0.00	0.90

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
12: I-215 SB On Ramp/I-215 SB Off Ramp & Central Ave

	→	↘	↙	←	↘	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBL	SBT	SBR
Lane Group Flow (vph)	599	875	1001	965	25	37	35
v/c Ratio	0.33	0.95	1.17	0.32	0.17	0.24	0.16
Control Delay	10.4	35.9	111.1	1.5	28.5	18.4	1.6
Queue Delay	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Total Delay	10.4	35.9	111.1	1.6	28.5	18.4	1.6
Queue Length 50th (ft)	72	~305	~243	15	9	4	0
Queue Length 95th (ft)	107	#508	#355	42	29	29	0
Internal Link Dist (ft)	811			244		872	
Turn Bay Length (ft)			150				120
Base Capacity (vph)	1799	919	858	3025	147	155	217
Starvation Cap Reductn	0	0	0	842	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.95	1.17	0.44	0.17	0.24	0.16

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Queues
13: I-215 NB Off Ramp & Central Ave/Watkins Dr

	→	←	↰	↱
Lane Group	EBT	WBT	NBL	NBR
Lane Group Flow (vph)	635	1502	482	494
v/c Ratio	0.32	0.75	0.55	0.85
Control Delay	3.9	13.4	21.3	27.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.9	13.4	21.3	27.1
Queue Length 50th (ft)	20	210	73	83
Queue Length 95th (ft)	25	293	111	#235
Internal Link Dist (ft)	244	480	1153	
Turn Bay Length (ft)				240
Base Capacity (vph)	2010	2010	1001	625
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.32	0.75	0.48	0.79

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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Cumulative Year Plus Project with Improvements

Queues
10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

08/12/2020

Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1555	417	6	833	584	577
v/c Ratio	0.92	0.45	0.07	0.47	0.94	0.94
Control Delay	30.3	3.0	1.4	11.5	46.5	45.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.3	3.0	1.4	11.5	46.5	45.0
Queue Length 50th (ft)	391	0	0	8	247	242
Queue Length 95th (ft)	#558	47	0	1	#460	#452
Internal Link Dist (ft)	531			276	1311	
Turn Bay Length (ft)			150			
Base Capacity (vph)	1682	926	91	1760	636	634
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.45	0.07	0.47	0.92	0.91

Intersection Summary

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

10: I-215 SB On Ramp/I-215 SB Off Ramp & MLK Blvd

	→	↘	↙	←	↓	↲
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	1946	889	3	650	272	273
v/c Ratio	0.78	0.68	0.03	0.25	0.68	0.67
Control Delay	7.7	3.4	0.7	0.2	14.5	13.2
Queue Delay	0.3	0.1	0.0	0.0	0.0	0.0
Total Delay	8.1	3.5	0.7	0.2	14.5	13.2
Queue Length 50th (ft)	151	0	0	0	4	0
Queue Length 95th (ft)	354	34	0	0	74	68
Internal Link Dist (ft)	531			276	1311	
Turn Bay Length (ft)			150			
Base Capacity (vph)	2488	1299	96	2634	479	485
Starvation Cap Reductn	138	29	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.70	0.03	0.25	0.57	0.56

Intersection Summary

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Appendix K

Tribal Cultural Resources – AB 52 Correspondence

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Appendix K1

Agua Caliente Band of Cahuilla Indians

From:	Stephanie Tang
To:	THPO Consulting
Subject:	RE: AB 52 Consultation - UCR 2021 Long Range Development Plan
Date:	Friday, April 2, 2021 6:30:00 PM
Attachments:	UCR 2021 LRDP Draft Proposed Cultural TCR MMs.docx UCR LRDP Cultural Resource Constraints Report.pdf AB52 NoticeLtr ACBCI 05-19-2020.pdf

---

Hi Patricia,

The University has been working on the Draft Program Environmental Impact Report for the proposed 2021 Long Range Development Plan and appreciate the Agua Caliente Band of Cahuilla Indians comments on the Initial Study that was prepared. I have attached the draft cultural resources/tribal cultural resources mitigation measures for your review and feedback.

In regards to the tribe's comment about a less than significant impact determination to human remains: California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097. If human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and UCR shall notify the Riverside County coroner and the NAHC immediately, according to PRC Section 5097.98 and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, UCR and the NAHC-designated most likely descendant shall recommend the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.94. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. Therefore, based on the above discussion and required regulations in the event human remains are encountered, the University concludes a less than significant impact.

I have also attached AB 52 notice and LRDP Cultural Resource Constraint Study again, for your reference.

Please let me know if you have any suggested edits in tracked change edits/comments and whether you would like to set up a zoom call to discuss. Requesting your any edits/comments you may have by April 16, 2021, if possible.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

-----Original Message-----
From: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Sent: Friday, October 23, 2020 3:35 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Cc: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Subject: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan Comments on Initial Study

Good afternoon,

If you have any questions about the attached letter please feel free to contact me.

Thank you,

Patricia Garcia, Director
Agua Caliente Band of Cahuilla Indians
Tribal Historic Preservation Office
5401 Dinah Shore Drive
Palm Springs, CA 92264
Direct (760) 699-6907
Cell (760) 567-3761
Fax (760) 699-6924

*Due to COVID-19 the THPO is operating remotely with a reduced staff. Please send all correspondence to our department email address ACBCI-THPO@aguacaliente.net

From: Stephanie Tang
To: THPO Consulting
Subject: RE: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan
Date: Monday, July 27, 2020 11:46:00 AM
Attachments: UCR_Cultural_Report-031319.pdf

Hi Patricia,

Thank you for your email. I wanted to touch base with you to see when the Tribe would like to consult on the University of California, Riverside's (UCR's) Long Range Development Plan (LRDP) which is a long-term master plan so to speak for future campus development in the next 15 years. Please note that because this is a long-term plan, no specific projects, site plans, grading plans, development plans, etc. have been prepared.

The AB 52 notice the Tribe received gives a brief summary of the proposed land uses, campus population projection, and projected development square footage through the horizon year 2035. The CEQA document for the proposed LRDP will be a programmatic level EIR. Future campus projects will undergo its own specific CEQA analysis at which point the Tribe will be provided relevant site plans, grading plans, geotechnical studies, etc. as part of the AB 52 process for those specific projects.

As a matter of information, the LRDP EIR Scoping Meeting will be held this Wednesday, July 29th from 6-8pm. Information on how to join the Scoping Meeting virtually as well as the Draft Initial Study is provided in the following link - https://pdc.ucr.edu/environmental-planning-ceqa.

I have attached the Cultural Resources Constraint Study that was prepared for the LRDP for your reference. Please let me know if you have any questions or need clarification. Looking forward to scheduling our AB 52 consultation. Thank you.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

-----Original Message-----
From: THPO Consulting <ACBCI-THPO@aguacaliente.net>
Sent: Friday, June 26, 2020 12:28 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan

If you have any questions about the attached letter please feel free to contact me.

Thank you,

Patricia Garcia Plotkin
Agua Caliente Band of Cahuilla Indians
Director of Historic Preservation

*Due to COVID-19 the THPO is operating remotely with a reduced staff. Please send all correspondence to our department email address ACBCI-THPO@aguacaliente.net

AGUA CALIENTE BAND OF CAHUILLA INDIANS
TRIBAL HISTORIC PRESERVATION

02-032-2020-002

October 23, 2020

[VIA EMAIL TO:stephanie.tang@ucr.edu]
University of California, Riverside
Ms. Stephanie Tang
1223 University Avenue, Suite 240
Riverside, CA 92507

Re: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan Comments on Initial Study

Dear Ms. Stephanie Tang,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the UC Riverside 2021 Long Range Development Plan project. We have reviewed the documents and have the following comments:

*Continued consultation on this project.

* The THPO concurs on determination of Potentially Significant Impact to Historic Resources and Archaeological resources, however, the following Project Level Mitigation should be incorporated- Presence of a Tribal monitor for earth disturbing activities.

* The THPO disagrees on determination of Less Than Significant Impact to Human Remains, and the following Project Level Mitigation should be incorporated- Presence of a Tribal monitor for earth disturbing activities.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760)699-6907. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

Patricia Garcia-Plotkin

Pattie Garcia-Plotkin
Director
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

5401 DINAH SHORE DRIVE, PALM SPRINGS, CA 92264
T 760/699/6800 F 760/699/6924 WWW.AGUACALIENTE-NSN.GOV

AGUA CALIENTE BAND OF CAHUILLA INDIANS

TRIBAL HISTORIC PRESERVATION

02-032-2020-002

June 26, 2020

[VIA EMAIL TO:stephanie.tang@ucr.edu]
University of California, Riverside
Ms. Stephanie Tang
1223 University Avenue, Suite 240
Riverside, CA 92507

Re: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan

Dear Ms. Stephanie Tang,

The Agua Caliente Band of Cahuilla Indians (ACBCI) appreciates your efforts to include the Tribal Historic Preservation Office (THPO) in the UC Riverside 2021 Long Range Development Plan project. The project area is not located within the boundaries of the ACBCI Reservation. However, it is within the Tribe’s Traditional Use Area. For this reason, the ACBCI THPO requests the following:

*Continued consultation on this project.

*Formal government to government consultion under California Assembly Bill No. 52 (AB-52).

*A copy of the records search with associated survey reports and site records from the information center.

*A cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area.

*Copies of any cultural resource documentation (report and site records) generated in connection with this project.

*The presence of an approved Agua Caliente Native American Cultural Resource Monitor(s) during any ground disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified Archaeologist (Secretary of the Interior’s Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the Agua Caliente Tribal Historic Preservation Office.

Again, the Agua Caliente appreciates your interest in our cultural heritage. If you have questions or require additional information, please call me at (760)699-6907. You may also email me at ACBCI-THPO@aguacaliente.net.

Cordially,

Patricia Garcia-Plotkin

Pattie Garcia-Plotkin
Director
Tribal Historic Preservation Office
AGUA CALIENTE BAND
OF CAHUILLA INDIANS

UC RIVERSIDE
UNIVERSITY OF CALIFORNIA

Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

May 19, 2020

Patricia Garcia, Director of Tribal Historic Preservation Office
Agua Caliente Band of Cahuilla Indians
5401 Dinah Shore Drive
Palm Springs, California 92264

ACBCI-THPO@aguacaliente.net

Subject: Assembly Bill (AB) 52 Consultation (Public Resources Code §21080.3.1) – UC Riverside 2021 Long Range Development Plan, Riverside County, California

Dear Ms. Garcia:

The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed 2021 Long Range Development Plan (LRDP) located in the City of Riverside, Riverside County, California. The proposed UCR 2021 LRDP is located within Sections 19, 20, 29, and 30 (Township 2 South; Range 4 West) of the USGS **Riverside East, CA** 7.5 Minute Quadrangle.

The approximate 1,108-acre campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway. The two resulting areas of campus is described below. Refer to Exhibit 1 and Exhibit 2 for the regional location and aerial map, respectively.

East Campus

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are located within the Academic Center circumscribed by Campus Drive, including most of the campus' original buildings. The northern half of East Campus is devoted to student housing and recreation. The Belltower marks the heart of the campus, at the center of the Carillon Mall. The terrain steepens to the south and east of East Campus and as a result, these areas are largely unbuilt.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations (Ag Ops) unit of College of Natural and Agricultural Services (CNAS). Several facilities are also located on West Campus: these include Parking Lot 30, University Extension (UNEX), and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR is at the northern edge of Parking Lot 30. There is a California Department of Transportation (Caltrans) service yard on an approximately 4.1-acre triangular parcel directly west of the I-215/SR-60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses the area north to south.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet (asf) (approximately 6 million gross square feet [gsf][1]) of additional academic buildings and support facilities, including student housing. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf[2]) of total academic, research and support space development by the academic year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (three-quarter average headcount) by the academic year 2035/2036. It is anticipated that approximately 2,800 additional faculty and staff would be needed to support academic year 2035/2036 student enrollment.

A comparison of the projected population and campus development between the 2018/2019 academic year and 2021 LRDP projections are provided in Table 1.

Table 1 – Baseline (2018/2019) and 2021 LRDP (2035/2036) Project Population and Physical Development

Category	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Campus Population			
Undergraduate Student Population (three-quarter average headcount)	20,581	28,000	7,419
Graduate Student Population (three-quarter average)	3,341	7,000	3,659
Total Student Population (three-quarter average)	**23,922**	**35,000**	**11,078**
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	**4,739**	**7,545**	**2,806**
Campus Development (asf/gsf)			
Academics and Research	1,220,283 / 1,830,425	1,700,852 / 2,551,278	480,569 / 720,854
Academic Support	1,458,975 / 2,188,463	2,355,204 / 3,532,806	896,229 / 1,344,344
Student Life (including residential, residential dining, student health, student union, indoor recreation, and athletics)	1,875,963 / 2,813,945	4,198,504 / 6,297,756	2,322,541 / 3,483,812

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[1] Rounded to the nearest million

[2] Rounded to the nearest million

Corporation Yard	248,279 / 372,419	248,279 / 372,419	0 / 0
Total Campus Development (asf/gsf)	**4,803,500 / 7,205,250**	**8,502,839 / 12,754,259**	**3,699,339 / 5,549,009**
On-Campus Housing Beds			
Residential (beds) (includes Freshmen, Triples, Upperclass, and Family Housing)	6,511	14,000	7,489
Source: UCR 2021 LRDP Program Model Notes: LRDP = Long Range Development Plan asf = assignable square feet gsf = gross square feet			

Land Use Descriptions

The proposed 2021 LRDP provides long-term planning for the land uses, activities and facilities on the main UCR campus. Predominant uses can be described by the primary facilities, programs, and/or activities within a geographic area on campus to achieve specific planning objectives. In many instances, other secondary permissible uses are also allowed within the predominant land use category. The proposed 2021 LRDP land uses are described below and are shown on Exhibit 3.

A comparison of the land uses from the 2005 LRDP and proposed 2021 LRDP are shown in Table 2.

Table 2 – 2005 LRDP versus 2021 LRDP Land Uses

Land Use Designations	**2005 LRDP (Acres)**		**2021 LRDP (Acres)**	
	West Campus	**East Campus**	**West Campus**	**East Campus**
Academics & Research	54.3	132.2	0.0	184.3
Campus Support	9.1	11.0	51.0	3.0
Land-based Research	294.9	0.0	419.3	0.0
Open Space Reserve	0.0	130.5	0.0	154.8
Recreation & Athletics	14.1	53.4	0.0	28.7
Student Neighborhood	68.5	100.1	5.4	136.4
2021 LRDP-Specific Land Use Designations[1]				
Agricultural/Campus Research	Not Applicable	Not Applicable	19.4	0.0
UCR Botanic Gardens	Not Applicable	Not Applicable	0.0	43.7
Canyon Crest Gateway	Not Applicable	Not Applicable	0.0	31.9
University Avenue Gateway	Not Applicable	Not Applicable	8.3	21.3

Non-UCR Land of Interest	Not Applicable	Not Applicable	12.8[3]	0.0
2005 LRDP-Specific Land Use Designations[2]				
Open Space	25.2	144.2	Not Applicable	Not Applicable
Campus Reserve	37.3	0.0	Not Applicable	Not Applicable
Non-Institutional Agencies	0.0	12.3	Not Applicable	Not Applicable
Parking	7.9	17.1	Not Applicable	Not Applicable
Totals				
Total Acres by Campus	511.3	600.8	503.4	604.1
Total Acres (Rounded)[4]	1,112		1,108	

Source: GIS.

Notes:

[1] These land use designations are new to the 2021 LRDP and were not used as land use categories under the 2005 LRDP.

[2] The acreage from 2005 LRDP Land Use Designations no longer in use have been incorporated into the proposed 2021 LRDP Land Use Designations as appropriate, e.g. 25 acres of parking lots has been allocated among the new land use areas throughout campus based on location.

[3] Non-UCR Land of Interest is not included in the total acreage under the 2021 LRDP.

[4] The difference in the acreage between the 2005 LRDP and 2021 LRDP is related to the acquisition of Oban and Falkirk Apartments and the acquisition of several properties in Frost Court and one on Watkins Ave next to the Chancellor's residence. There was also the sale of approximately 18 acres of land on the West Campus to CARB.

Academics & Research (~184.3 acres)

The Academics & Research land use areas are located within or adjacent to the core of East Campus, primarily bounded by the campus loop road. This land use designation consists of facilities dedicated to undergraduate and graduate learning and research environments, and daytime student life activities, such as the student union and food services.

Academics & Research facilities may include classrooms; instructional and research laboratories and greenhouses; undergraduate, graduate, and professional schools and associated programs; libraries; advanced scientific research facilities; federal research partnerships; performance and cultural facilities; clinical facilities; and ancillary support facilities, such as general administrative offices, conference rooms, and meeting spaces. Additional uses are those supporting core campus student life activities, and food services, such as the Highlander Union Building and The Barn. Secondary permissible uses include parking, utility infrastructure, and other campus support services.

Agricultural/Campus Research (~19.4 acres)

The Agricultural/Campus Research land use is established to enhance and expand external engagement of UCR's research, education, and public service mission by providing a principal place for facilities and activities that support the University and the City of Riverside's aspirations to make and showcase UCR as a recognized center for innovation in agricultural sciences and technology.

Agricultural/Campus Research facilities may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses include parking, open space, utility infrastructure, and other support uses.

Land-based Research (~419.3 acres)

The Land-based Research land use areas are located on West Campus and retain the existing agricultural land-based teaching and research fields.

Land-based Research land uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses also include parking, storage, utility infrastructure, and related support services/facilities.

Student Neighborhood (~141.8 acres)

The Student Neighborhood land use areas are predominantly located within the northern portions of East Campus and encompass primarily non-academic uses to facilitate vibrant undergraduate and graduate student learning experiences outside of the classroom environment.

Student Neighborhood land uses are meant to accommodate a diverse array of uses to ensure that student needs are met within an interactive, mixed-use environment. Land uses may include student residences for undergraduate and graduate students, and students with families; student services, meeting, and instructional space; food service and retail; appropriately scaled recreation and athletic facilities; childcare and pre-schools proximate to family housing; parking primarily for students; and other residential support services, such as facilities services and public safety.

Recreation & Athletics (~28.7 acres)

The Recreation & Athletics land uses are concentrated in two areas in the northern portion of East Campus and include the Student Recreation Center, the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood-scale facilities would be interspersed within student neighborhoods, as indicated above, to improve student access, and create a more dynamic student experience into the evenings and on weekends.

Recreation & Athletics land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses also include parking, food service, administrative areas, office and meeting space, and other supporting uses.

Campus Support (~54.0 acres)

The Campus Support land use areas would be primarily located on the eastern portion of West Campus, with a small land use area located in the northeast portion of East Campus. Land uses include general campus support services, such as administrative and institutional support functions, including facilities services, public safety, parking and transportation, service yards, maintenance facilities, trade shops, materials handling and storage, inclusive of hazardous materials, shipping and receiving, utility plants and systems, fleet storage, parking, and other support functions.

Open Space Reserve (~154.8 acres)

The Open Space Reserve land use designation would recognize, protect, and enhance areas that have ecological or aesthetic value to campus, including those subject to special development constraints due to native or endangered species habitats, steep or unique terrain such as arroyos, and riparian corridors or other natural features. This land use designation is intended to recognize that these areas are major contributors to UCR's character and ecology.

The Open Space Reserve land uses would include designated hillsides, storm water management infrastructure, habitat restoration and management activities, trails and minor amenities such as seating and viewing areas, and other features compatible with natural open spaces. Secondary permissible uses include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities.

UCR Botanic Gardens (~43.7 acres)

The UCR Botanic Gardens is in the easternmost portion of East Campus, at the foothills of the Box Springs Mountains, and serves a unique role as a venue for a wide array of teaching, research, and demonstration activities. Approximately one-third of the UCR Botanic Gardens land remains natural, featuring the native habitat of the region.

UCR Botanic Gardens land uses include demonstration gardens, habitat restoration and management, and incidental facilities, such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses include support facilities for the UCR Botanic Gardens and parking.

Canyon Crest Gateway (~31.9 acres)

The Canyon Crest Gateway land use designation is in the northern portion of East Campus, generally bordering Canyon Crest Drive, between Blaine Street to the north and half a block south of Linden Street. The Canyon Crest Gateway is envisioned as a high-density, horizontal and vertical mixed-use gateway environment that will serve as a campus "Main Street" for the campus population to experience on a regular basis. It would accommodate a variety of student housing needs, above an array of student and commercial services that meet the needs of the campus and the local community. This corridor will continue to serve as a multi-modal arterial, but with increased focus on pedestrian-oriented uses at the lower levels of mid-rise structures. Parking would be carefully integrated into this area to allow for safe and convenient access from adjacent side streets, supportive of the desired pedestrian experience along the main street.

Canyon Crest Gateway uses may include student housing, recreation and athletics facilities, university-oriented services, administrative and support service offices, neighborhood-serving commercial and retail space such as banks, pharmacies, grocery outlets, etc., restaurants, professional services space inclusive of outpatient clinical facilities, hotel/conference center(s), alumni center, public safety, and other complementary uses, including affiliated and non-affiliated educational facilities. Secondary permissible uses include parking, academic uses, open space, and other support uses, as well as multi-modal transportation support facilities.

University Avenue Gateway (~21.3 acres)

The University Avenue Gateway land use designation begins on the northern portion of West Campus and continues east under I-215 along University Avenue into the core of East Campus. The University Avenue Gateway is envisioned as the campus' primary entryway, connecting campus to Downtown Riverside and the broader Riverside community. The area is intended to encourage activities that express a welcoming and identifiable approach to campus, create identity, and that are active during the daytime and evening hours as well as on weekends, with an emphasis on street-oriented interaction and engagement. The University Avenue Gateway is envisioned to include a dense and diverse mix of uses that provide opportunities for greater campus-community interaction, and that collectively reinforce the importance of the area as the terminus of the University Avenue corridor, which connects campus with Downtown Riverside, approximately 3 miles to the west.

University Avenue Gateway uses may include academic instruction and research facilities above, or in conjunction with, large lecture halls or assembly and exhibition spaces, a visitor's center, food services and cafes, student services, multi-modal transportation support facilities, and other compatible non-UCR uses. Secondary permissible uses include parking, open space, and other support uses.

Non-UCR Land of Interest (~12.8 acres)

While not a designated land use, the 2021 LRDP identifies two properties not currently owned by UCR as potential opportunity areas for University-related uses, should they become available for University use in the future. They include the existing Caltrans Yard at the east end of Everton Drive and a City of Riverside-owned, eight-acre parcel of land that is landlocked within West Campus.

Assembly Bill (AB) 52 requires lead agencies to consult with California Native American Tribes that request such consultation in writing prior to the agency's release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. UCR received your September 16, 2015 letter requesting formal notification of proposed projects within the Agua Caliente Band of Cahuilla Indians Traditional Use Area. This letter is intended as formal notification of the proposed 2021 LRDP pursuant to AB 52.

Your participation in this local planning process is important. A Cultural Resources Constraint Study for the 2021 LRDP has been prepared. The Sacred Lands File Search (SLF) conducted by the Native American Heritage Commission (NAHC) for the proposed 2021 LRDP had positive results. If you possess any information or knowledge regarding Native American Sacred Lands or other tribal cultural resources in and around the campus area, and wish to consult with the UCR regarding these resources or mitigation measures to reduce impacts of the proposed 2021 LRDP, please direct your email to stephanie.tang@ucr.edu or any correspondence on this matter to:

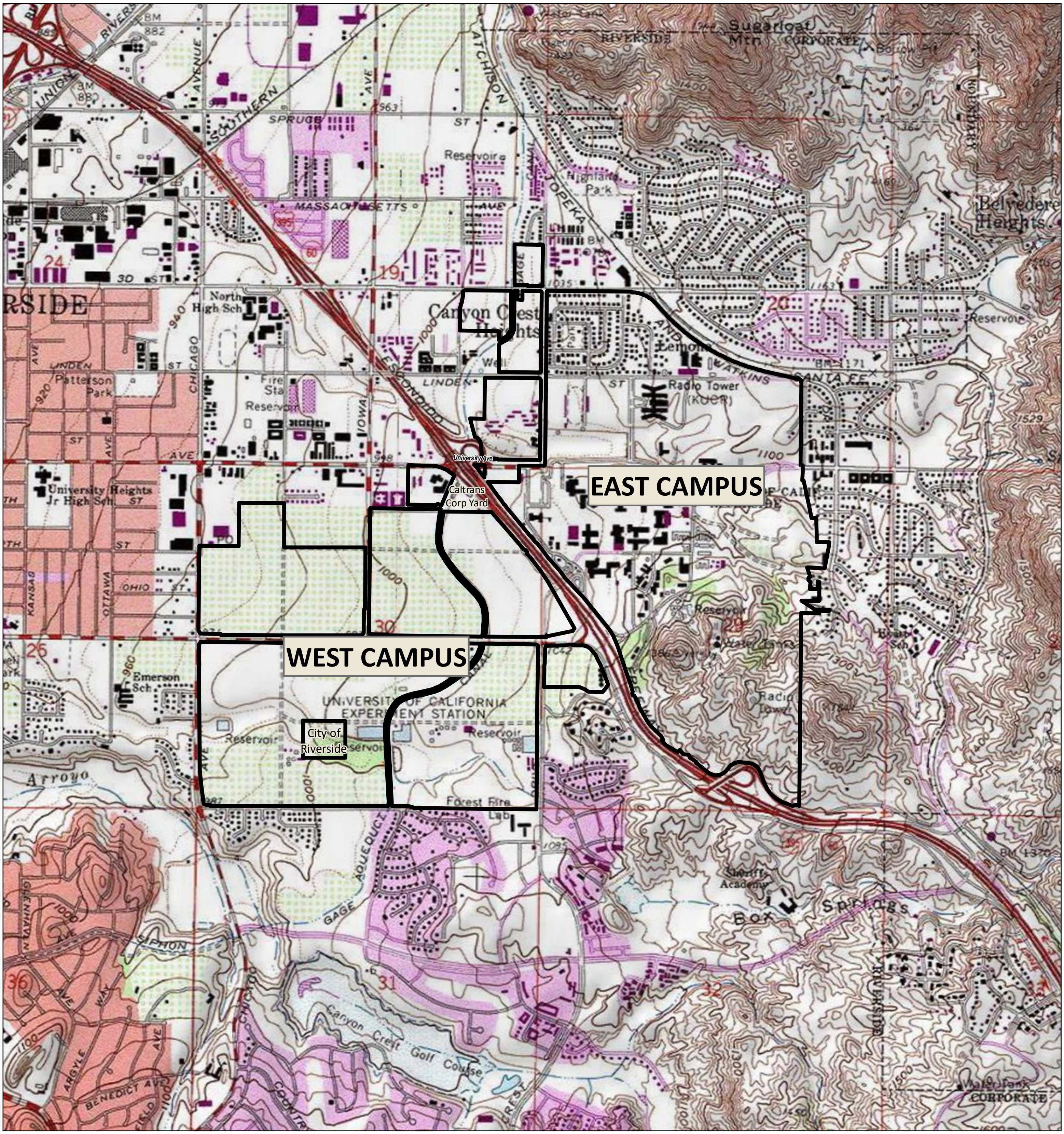
Stephanie Tang
Campus Environmental Planner
University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507-7209

Please let me know if you have any questions or would like to discuss the proposed 2021 LRDP. I can be reached by phone at (951) 827-1484 or via email at stephanie.tang@ucr.edu. Thank you for your interest on projects at UCR.

Respectfully,

Stephanie Tang

Stephanie Tang
Campus Environmental Planner



UCR

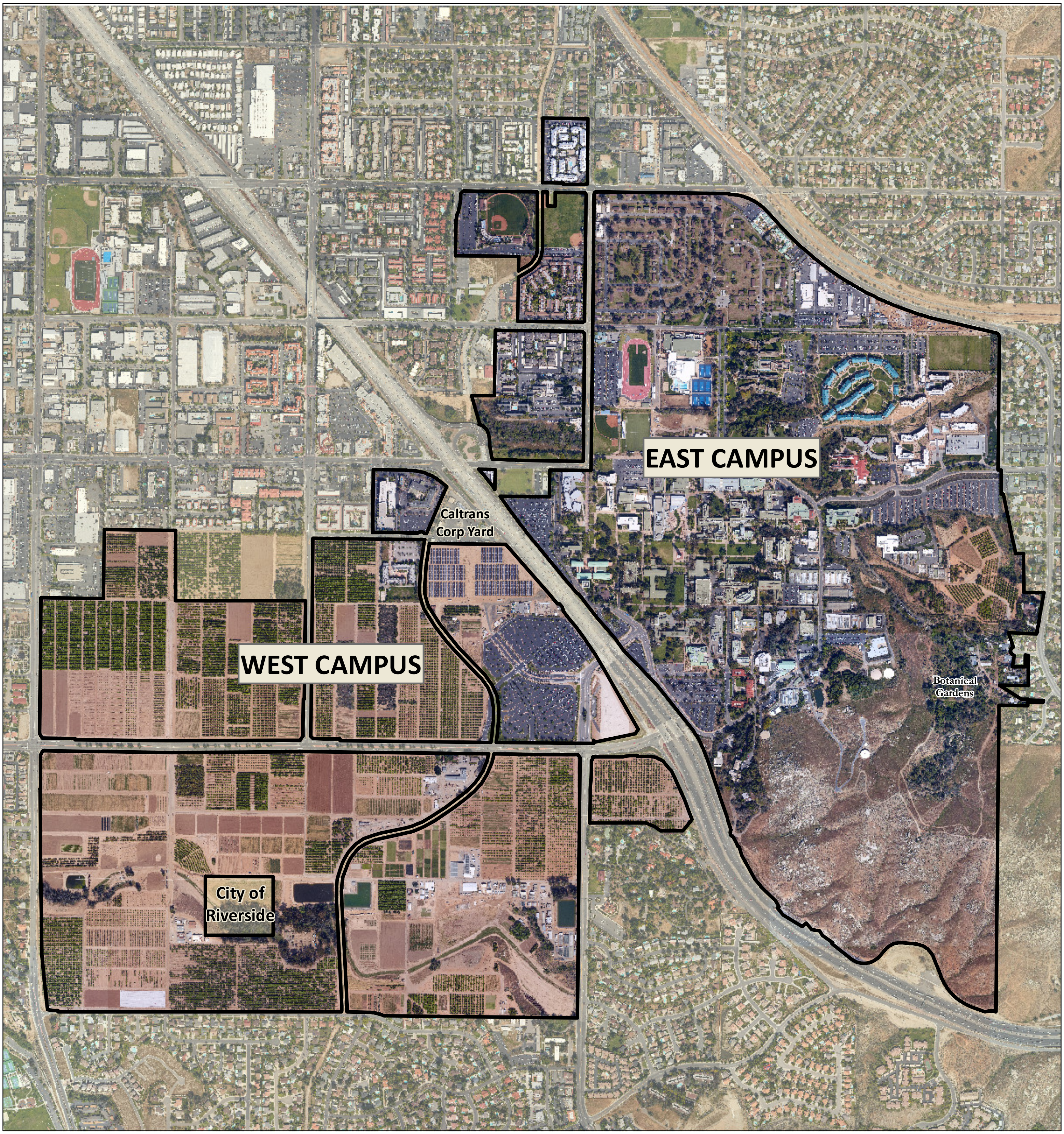
EXHIBIT 1
Regional Location

▭ UCR Campus Boundary

2,000 1,000 0 2,000
Feet

Source: USGS 7.5 min Riverside East

V:\map_docs\mxd\LRDP\LRDP_regloc_2000.mxd 5/12/2020



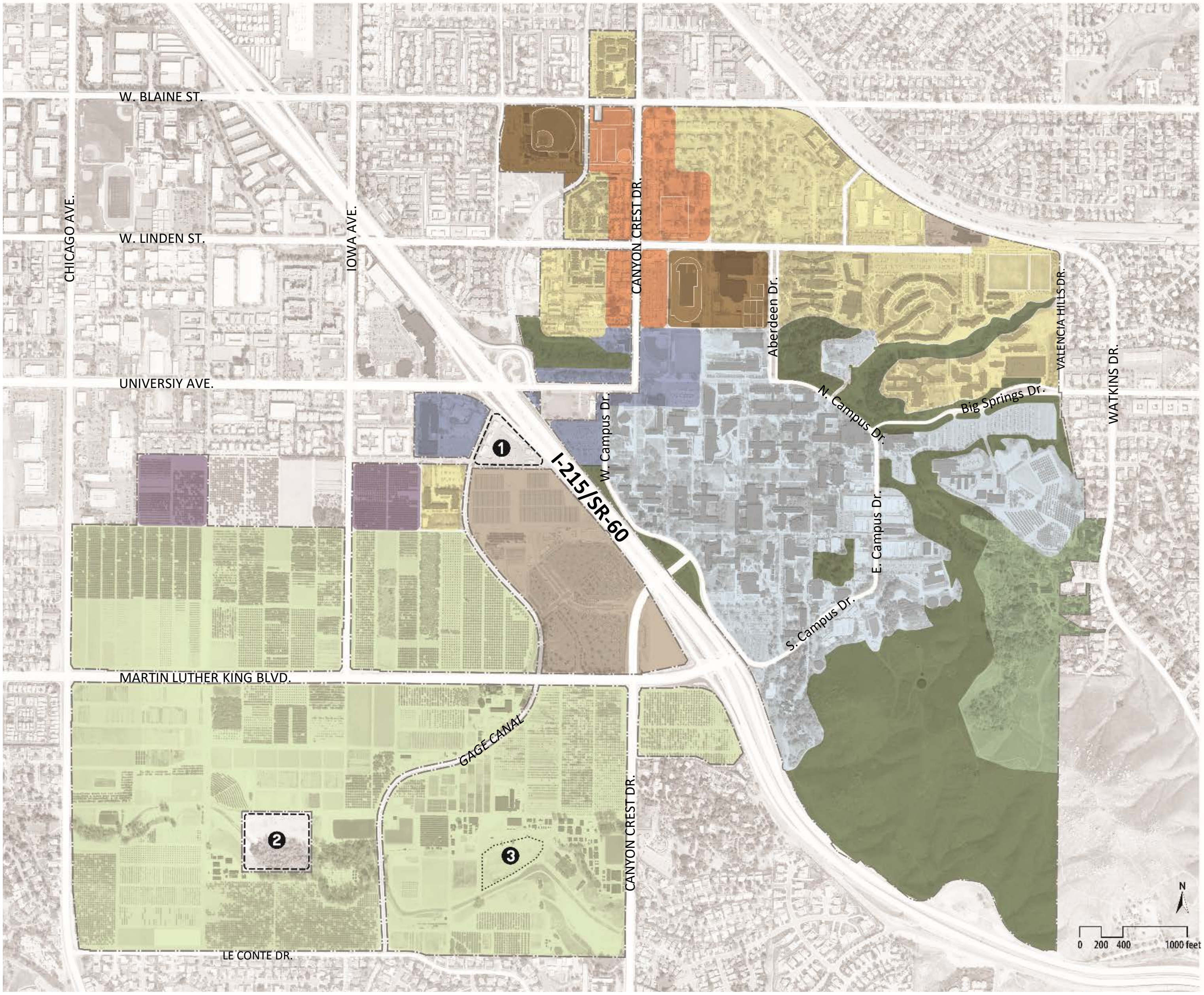
UCR

N

▭ UCR Campus Boundary

EXHIBIT 2
Aerial Map

V:\map_docs\mxd\LRDP\LRDP_Aerial_PrjSite.mxd 5/12/2020



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

🟦 ACADEMICS & RESEARCH

🟪 AGRICULTURAL/CAMPUS RESEARCH

🟩 LAND-BASED RESEARCH

🟫 CAMPUS SUPPORT

🟩 OPEN SPACE RESERVE

🟩 UCR BOTANIC GARDENS

🟫 RECREATION & ATHLETICS

🟨 STUDENT NEIGHBORHOOD

🟧 CANYON CREST GATEWAY

🟦 UNIVERSITY AVENUE GATEWAY

⬚ NON-UCR LAND OF INTEREST

EXHIBIT 3
Land Use Diagram

Appendix K2

Cahuilla Band of Indians

From: Stephanie Tang
To: "BobbyRay Esparza"; "anthony madrigal"; "CHAIRMAN@CAHUILLA.NET"
Subject: RE: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan
Date: Friday, April 2, 2021 6:58:00 PM
Attachments: AB52_NoticeLtr_Cahuilla.pdf
image001.png

Hi,

The 2021 Long Range Development Plan AB 52 notice was emailed to the Cahuilla Band of Indians on May 19, 2020 and the University has not heard from the tribe whether the tribe would like to consult on this project. I have attached the AB 52 notice again for your reference. Please kindly let me know by April 9, 2021 if the tribe would like to consult on this project otherwise I will assume the tribe does not wish to consult. Thank you so much.

Respectfully,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
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951.827.1484 | cpp.ucr.edu

From: BobbyRay Esparza <Besparza@cahuilla.net>
Sent: Tuesday, May 26, 2020 2:34 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: Re: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan

Hello,

Yes an emailed AB 52 notice for the above project will be fine and no hard copy will be needed. Thank you

Respectfully,

BobbyRay Esparza

Cultural Coordinator

Cahuilla Band of Indians

Cell: (760)423-2773

Office: (951)763-5549

Fax:(951)763-2808

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Tuesday, May 26, 2020 2:25 PM
To: BobbyRay Esparza <Besparza@cahuilla.net>
Subject: RE: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan

Hi BobbyRay,

Could you also confirm that the emailed AB 52 notice for UCR's proposed 2021 LRDP is also sufficient and no hardcopy is needed?

Thank you.

Kind regards,

Stephanie Tang
Campus Environmental Planner
UCR | Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
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From: Stephanie Tang
Sent: Tuesday, May 19, 2020 5:39 PM
To: BobbyRay Esparza <Besparza@cahuilla.net>; anthony madrigal <anthonymad2002@gmail.com>; Daniel Salgado <CHAIRMAN@CAHUILLA.NET>
Subject: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan

Hi,

The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed 2021 Long Range Development Plan (LRDP). The approximate 1,108-acre campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway. Please see attached PDF for a description of the proposed UCR 2021 LRDP.

Assembly Bill 52 (AB 52) requires lead agencies to consult with California Native American tribes that request such consultation in writing prior to the agency's release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. UCR received your May 19, 2020 letter requesting formal notification of proposed projects within the Cahuilla Band of Indians Traditional Use Area. The attached letter is intended as formal notification of the proposed 2021 LRDP pursuant to AB 52.

Please let me know if you have any questions or would like to discuss the proposed 2021

LRDP. Could you also let me know if you need a hard copy of the AB 52 notice or whether this email along with the attached AB 52 notice is sufficient.

Thank you for your interest on projects at UCR.

Kind regards,

Stephanie Tang
Campus Environmental Planner
UCR | Planning, Design & Construction
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UC RIVERSIDE
UNIVERSITY OF CALIFORNIA

Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

May 19, 2020

Daniel Salgado, Chairperson
Cahuilla Band of Indians
52701 U.S. Highway 371
Anza, CA 92539

Chairman@cahuilla.net, Besparza@cahuilla.net, anthonymad2002@gmail.com

Subject: Assembly Bill (AB) 52 Consultation (Public Resources Code §21080.3.1) – UC Riverside 2021 Long Range Development Plan, Riverside County, California

Dear Mr. Salgado:

The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed 2021 Long Range Development Plan (LRDP) located in the City of Riverside, Riverside County, California. The proposed UCR 2021 LRDP is located within Sections 19, 20, 29, and 30 (Township 2 South; Range 4 West) of the USGS **Riverside East, CA** 7.5 Minute Quadrangle.

The approximate 1,108-acre campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway. The two resulting areas of campus is described below. Refer to Exhibit 1 and Exhibit 2 for the regional location and aerial map, respectively.

East Campus

East Campus comprises approximately 604 acres and contains most of the University’s built space. Nearly all the academic, research, and support facilities are located within the Academic Center circumscribed by Campus Drive, including most of the campus’ original buildings. The northern half of East Campus is devoted to student housing and recreation. The Belltower marks the heart of the campus, at the center of the Carillon Mall. The terrain steepens to the south and east of East Campus and as a result, these areas are largely unbuilt.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations (Ag Ops) unit of College of Natural and Agricultural Services (CNAS). Several facilities are also located on West Campus: these include Parking Lot 30, University Extension (UNEX), and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR is at the northern edge of Parking Lot 30. There is a California Department of Transportation (Caltrans) service yard on an approximately 4.1-acre triangular parcel directly west of the I-215/SR-60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses the area north to south.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet (asf) (approximately 6 million gross square feet [gsf][1]) of additional academic buildings and support facilities, including student housing. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf[2]) of total academic, research and support space development by the academic year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (three-quarter average headcount) by the academic year 2035/2036. It is anticipated that approximately 2,800 additional faculty and staff would be needed to support academic year 2035/2036 student enrollment.

A comparison of the projected population and campus development between the 2018/2019 academic year and 2021 LRDP projections are provided in Table 1.

Table 1 – Baseline (2018/2019) and 2021 LRDP (2035/2036) Project Population and Physical Development

Category	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Campus Population			
Undergraduate Student Population (three-quarter average headcount)	20,581	28,000	7,419
Graduate Student Population (three-quarter average)	3,341	7,000	3,659
Total Student Population (three-quarter average)	**23,922**	**35,000**	**11,078**
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	**4,739**	**7,545**	**2,806**
Campus Development (asf/gsf)			

---

[1] Rounded to the nearest million

[2] Rounded to the nearest million

Academics and Research	1,220,283 / 1,830,425	1,700,852 / 2,551,278	480,569 / 720,854
Academic Support	1,458,975 / 2,188,463	2,355,204 / 3,532,806	896,229 / 1,344,344
Student Life (including residential, residential dining, student health, student union, indoor recreation, and athletics)	1,875,963 / 2,813,945	4,198,504 / 6,297,756	2,322,541 / 3,483,812
Corporation Yard	248,279 / 372,419	248,279 / 372,419	0 / 0
Total Campus Development (asf/gsf)	**4,803,500 / 7,205,250**	**8,502,839 / 12,754,259**	**3,699,339 / 5,549,009**
On-Campus Housing Beds			
Residential (beds) (includes Freshmen, Triples, Upperclass, and Family Housing)	6,511	14,000	7,489
Source: UCR 2021 LRDP Program Model Notes: LRDP = Long Range Development Plan asf = assignable square feet gsf = gross square feet			

Land Use Descriptions

The proposed 2021 LRDP provides long-term planning for the land uses, activities and facilities on the main UCR campus. Predominant uses can be described by the primary facilities, programs, and/or activities within a geographic area on campus to achieve specific planning objectives. In many instances, other secondary permissible uses are also allowed within the predominant land use category. The proposed 2021 LRDP land uses are described below and are shown on Exhibit 3.

A comparison of the land uses from the 2005 LRDP and proposed 2021 LRDP are shown in Table 2.

Table 2 – 2005 LRDP versus 2021 LRDP Land Uses

Land Use Designations	2005 LRDP (Acres)		2021 LRDP (Acres)	
	West Campus	East Campus	West Campus	East Campus
Academics & Research	54.3	132.2	0.0	184.3
Campus Support	9.1	11.0	51.0	3.0
Land-based Research	294.9	0.0	419.3	0.0
Open Space Reserve	0.0	130.5	0.0	154.8

Recreation & Athletics	14.1	53.4	0.0	28.7
Student Neighborhood	68.5	100.1	5.4	136.4
2021 LRDP-Specific Land Use Designations[1]				
Agricultural/Campus Research	Not Applicable	Not Applicable	19.4	0.0
UCR Botanic Gardens	Not Applicable	Not Applicable	0.0	43.7
Canyon Crest Gateway	Not Applicable	Not Applicable	0.0	31.9
University Avenue Gateway	Not Applicable	Not Applicable	8.3	21.3
Non-UCR Land of Interest	Not Applicable	Not Applicable	12.8[3]	0.0
2005 LRDP-Specific Land Use Designations[2]				
Open Space	25.2	144.2	Not Applicable	Not Applicable
Campus Reserve	37.3	0.0	Not Applicable	Not Applicable
Non-Institutional Agencies	0.0	12.3	Not Applicable	Not Applicable
Parking	7.9	17.1	Not Applicable	Not Applicable
Totals				
Total Acres by Campus	511.3	600.8	503.4	604.1
Total Acres (Rounded)[4]	1,112		1,108	

Source: GIS.

Notes:

[1] These land use designations are new to the 2021 LRDP and were not used as land use categories under the 2005 LRDP.

[2] The acreage from 2005 LRDP Land Use Designations no longer in use have been incorporated into the proposed 2021 LRDP Land Use Designations as appropriate, e.g. 25 acres of parking lots has been allocated among the new land use areas throughout campus based on location.

[3] Non-UCR Land of Interest is not included in the total acreage under the 2021 LRDP.

[4] The difference in the acreage between the 2005 LRDP and 2021 LRDP is related to the acquisition of Oban and Falkirk Apartments and the acquisition of several properties in Frost Court and one on Watkins Ave next to the Chancellor’s residence. There was also the sale of approximately 18 acres of land on the West Campus to CARB.

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Academics & Research (~184.3 acres)

The Academics & Research land use areas are located within or adjacent to the core of East Campus, primarily bounded by the campus loop road. This land use designation consists of facilities dedicated to undergraduate and graduate learning and research environments, and daytime student life activities, such as the student union and food services.

Academics & Research facilities may include classrooms; instructional and research laboratories and greenhouses; undergraduate, graduate, and professional schools and associated programs; libraries; advanced scientific research facilities; federal research partnerships; performance and cultural facilities; clinical facilities; and ancillary support facilities, such as general administrative offices, conference rooms, and meeting spaces. Additional uses are those supporting core campus student life activities, and food services, such as the Highlander Union Building and The Barn. Secondary permissible uses include parking, utility infrastructure, and other campus support services.

Agricultural/Campus Research (~19.4 acres)

The Agricultural/Campus Research land use is established to enhance and expand external engagement of UCR’s research, education, and public service mission by providing a principal place for facilities and activities that support the University and the City of Riverside’s aspirations to make and showcase UCR as a recognized center for innovation in agricultural sciences and technology.

Agricultural/Campus Research facilities may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses include parking, open space, utility infrastructure, and other support uses.

Land-based Research (~419.3 acres)

The Land-based Research land use areas are located on West Campus and retain the existing agricultural land-based teaching and research fields.

Land-based Research land uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses also include parking, storage, utility infrastructure, and related support services/facilities.

Student Neighborhood (~141.8 acres)

The Student Neighborhood land use areas are predominantly located within the northern portions of East Campus and encompass primarily non-academic uses to facilitate vibrant undergraduate and graduate student learning experiences outside of the classroom environment.

Student Neighborhood land uses are meant to accommodate a diverse array of uses to ensure that student needs are met within an interactive, mixed-use environment. Land uses may include student residences for undergraduate and graduate students, and students with families; student services, meeting, and instructional space; food service and retail; appropriately scaled recreation and athletic facilities; childcare and pre-schools proximate to family housing; parking primarily for students; and other residential support services, such as facilities services and public safety.

Recreation & Athletics (~28.7 acres)

The Recreation & Athletics land uses are concentrated in two areas in the northern portion of East Campus and include the Student Recreation Center, the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood-scale facilities would be interspersed within student neighborhoods, as indicated above, to improve student access, and create a more dynamic student experience into the evenings and on weekends.

Recreation & Athletics land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses also include parking, food service, administrative areas, office and meeting space, and other supporting uses.

Campus Support (~54.0 acres)

The Campus Support land use areas would be primarily located on the eastern portion of West Campus, with a small land use area located in the northeast portion of East Campus. Land uses include general campus support services, such as administrative and institutional support functions, including facilities services, public safety, parking and transportation, service yards, maintenance facilities, trade shops, materials handling and storage, inclusive of hazardous materials, shipping and receiving, utility plants and systems, fleet storage, parking, and other support functions.

Open Space Reserve (~154.8 acres)

The Open Space Reserve land use designation would recognize, protect, and enhance areas that have ecological or aesthetic value to campus, including those subject to special development constraints due to native or endangered species habitats, steep or unique terrain such as arroyos, and riparian corridors or other natural features. This land use designation is intended to recognize that these areas are major contributors to UCR’s character and ecology.

The Open Space Reserve land uses would include designated hillsides, storm water management infrastructure, habitat restoration and management activities, trails and minor amenities such as seating and viewing areas, and other features compatible with natural open spaces. Secondary permissible uses include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities.

UCR Botanic Gardens (~43.7 acres)

The UCR Botanic Gardens is in the easternmost portion of East Campus, at the foothills of the Box Springs Mountains, and serves a unique role as a venue for a wide array of teaching, research, and demonstration activities. Approximately one-third of the UCR Botanic Gardens land remains natural, featuring the native habitat of the region.

UCR Botanic Gardens land uses include demonstration gardens, habitat restoration and management, and incidental facilities, such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses include support facilities for the UCR Botanic Gardens and parking.

Canyon Crest Gateway (~31.9 acres)

The Canyon Crest Gateway land use designation is in the northern portion of East Campus, generally bordering Canyon Crest Drive, between Blaine Street to the north and half a block south of Linden Street. The Canyon Crest Gateway is envisioned as a high-density, horizontal and vertical mixed-use gateway environment that will serve as a campus “Main Street” for the campus population to experience on a regular basis. It would accommodate a variety of student housing needs, above an array of student and commercial services that meet the needs of the campus and the local community. This corridor will continue to serve as a multi-modal arterial, but with increased focus on pedestrian-oriented uses at the lower levels of mid-rise structures. Parking would be carefully integrated into this area to allow for safe and convenient access from adjacent side streets, supportive of the desired pedestrian experience along the main street.

Canyon Crest Gateway uses may include student housing, recreation and athletics facilities, university-oriented services, administrative and support service offices, neighborhood-serving commercial and retail space such as banks, pharmacies, grocery outlets, etc., restaurants, professional services space inclusive of outpatient clinical facilities, hotel/conference center(s), alumni center, public safety, and other complementary uses, including affiliated and non-affiliated educational facilities. Secondary permissible uses include parking, academic uses, open space, and other support uses, as well as multi-modal transportation support facilities.

University Avenue Gateway (~21.3 acres)

The University Avenue Gateway land use designation begins on the northern portion of West Campus and continues east under I-215 along University Avenue into the core of East Campus. The University Avenue Gateway is envisioned as the campus’ primary entryway, connecting campus to Downtown Riverside and the broader Riverside community. The area is intended to encourage activities that express a welcoming and identifiable approach to campus, create identity, and that are active during the daytime and evening hours as well as on weekends, with an emphasis on street-oriented interaction and engagement. The University Avenue Gateway is envisioned to include a dense and diverse mix of uses that provide opportunities for greater campus-community interaction, and that collectively reinforce the importance of the area as the terminus of the University Avenue corridor, which connects campus with Downtown Riverside, approximately 3 miles to the west.

University Avenue Gateway uses may include academic instruction and research facilities above, or in conjunction with, large lecture halls or assembly and exhibition spaces, a visitor’s center, food services and cafes, student services, multi-modal transportation support facilities, and other compatible non-UCR uses. Secondary permissible uses include parking, open space, and other support uses.

Non-UCR Land of Interest (~12.8 acres)

While not a designated land use, the 2021 LRDP identifies two properties not currently owned by UCR as potential opportunity areas for University-related uses, should they become available for University use in the future. They include the existing Caltrans Yard at the east end of Everton Drive and a City of Riverside-owned, eight-acre parcel of land that is landlocked within West Campus.

Assembly Bill (AB) 52 requires lead agencies to consult with California Native American Tribes that request such consultation in writing prior to the agency’s release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. UCR received your May 19, 2020 letter requesting formal notification of proposed projects within the Cahuilla Band of Indians Traditional Use Area. This letter is intended as formal notification of the proposed 2021 LRDP pursuant to AB 52.

Your participation in this local planning process is important. A Cultural Resources Constraint Study for the 2021 LRDP has been prepared. The Sacred Lands File Search (SLF) conducted by the Native American Heritage Commission (NAHC) for the proposed 2021 LRDP had positive results. If you possess any information or knowledge regarding Native American Sacred Lands or other tribal cultural resources in and around the campus area, and wish to consult with the UCR regarding these resources or mitigation measures to reduce impacts of the proposed 2021 LRDP, please direct your email to stephanie.tang@ucr.edu or any correspondence on this matter to:

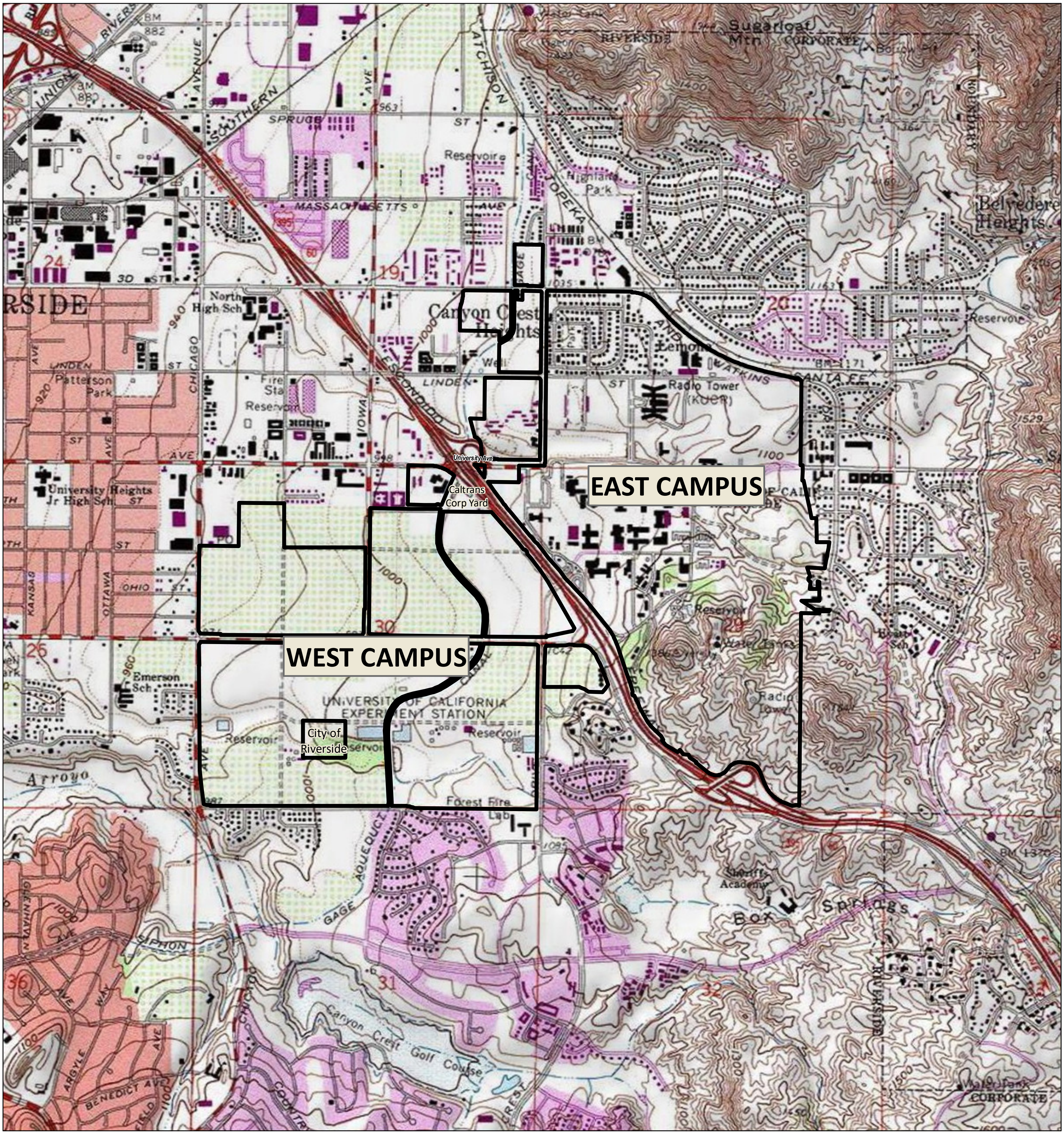
Stephanie Tang
Campus Environmental Planner
University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507-7209

Please let me know if you have any questions or would like to discuss the proposed 2021 LRDP. I can be reached by phone at (951) 827-1484 or via email at stephanie.tang@ucr.edu. Thank you for your interest on projects at UCR.

Respectfully,

Stephanie Tang

Stephanie Tang
Campus Environmental Planner



UCR

UCR Campus Boundary

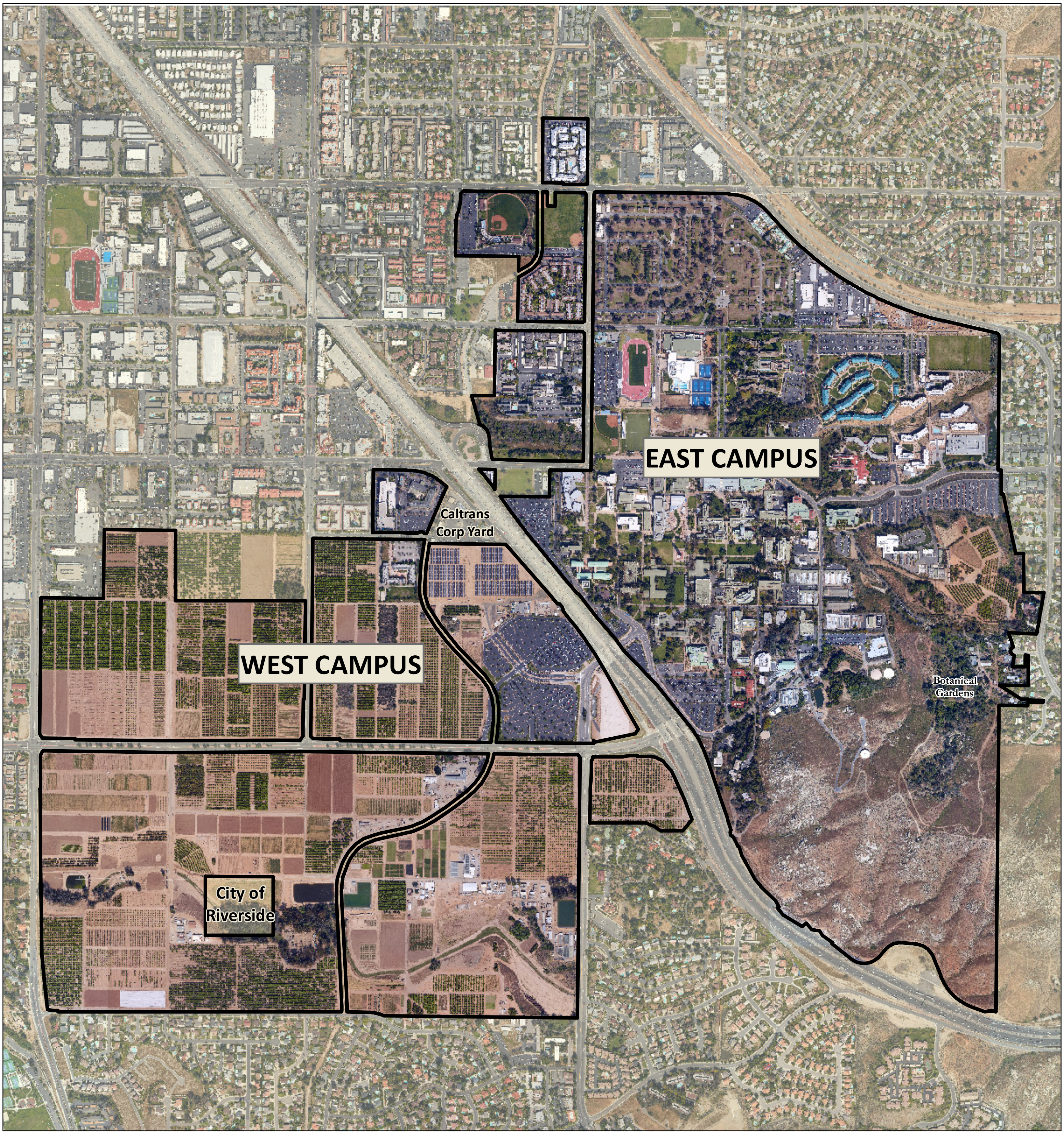
2,000 1,000 0 2,000

Feet

EXHIBIT 1
Regional Location

Source: USGS 7.5 min Riverside East

V:\map_docs\mxd\LRDP\LRDP_regloc_2000.mxd 5/12/2020



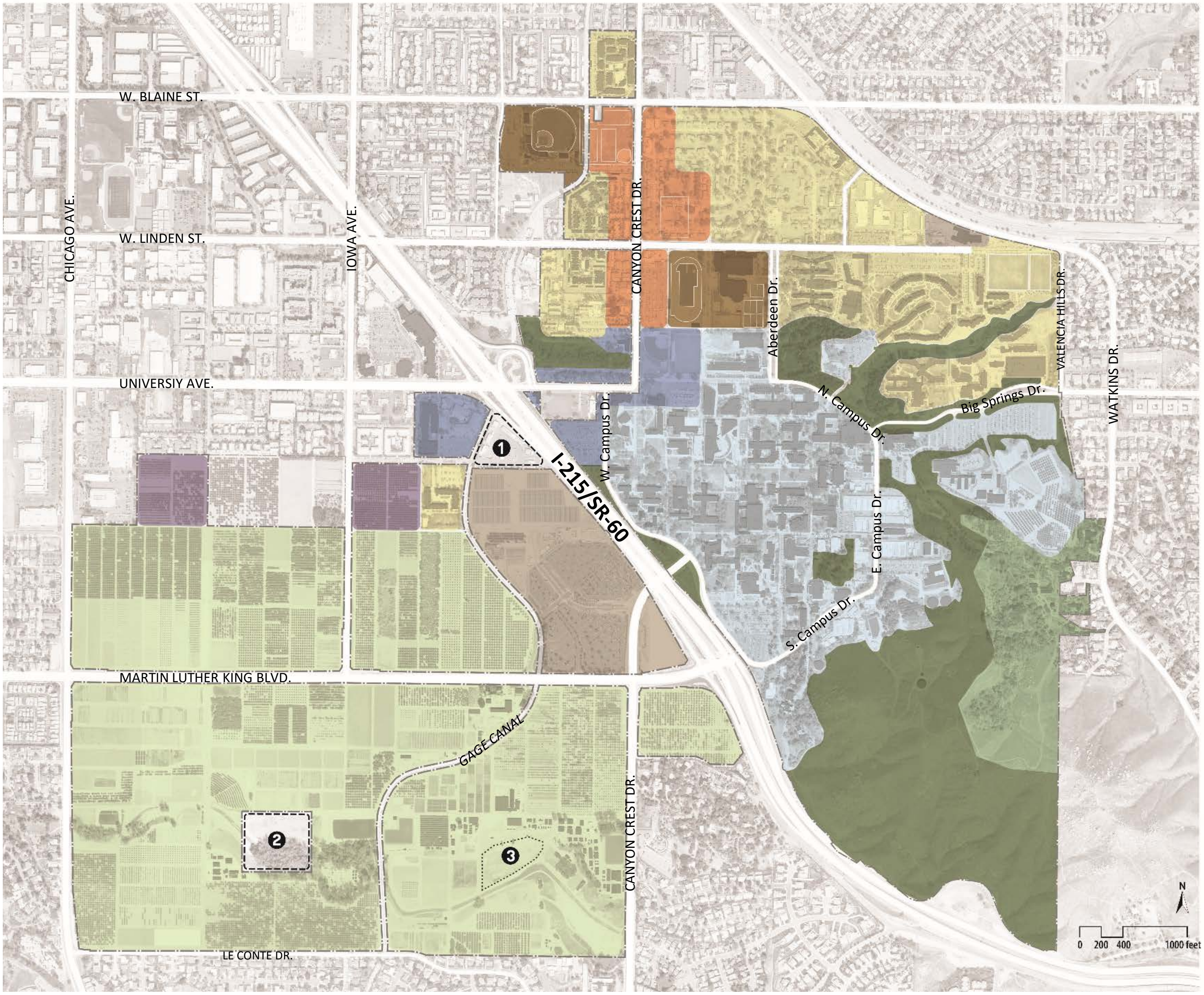
UCR

N

▭ UCR Campus Boundary

EXHIBIT 2
Aerial Map

V:\map_docs\mxd\LRDP\LRDP_Aerial_PrjSite.mxd 5/12/2020



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

- 🟦 ACADEMICS & RESEARCH
- 🟪 AGRICULTURAL/CAMPUS RESEARCH
- 🟩 LAND-BASED RESEARCH
- 🟫 CAMPUS SUPPORT
- 🟩 OPEN SPACE RESERVE
- 🟩 UCR BOTANIC GARDENS
- 🟫 RECREATION & ATHLETICS
- 🟨 STUDENT NEIGHBORHOOD
- 🟧 CANYON CREST GATEWAY
- 🟦 UNIVERSITY AVENUE GATEWAY
- ⬚ NON-UCR LAND OF INTEREST

EXHIBIT 3
Land Use Diagram

Appendix K3

Pechanga Band of Luiseño Indians

From: Stephanie Tang
To: Ebru Ozdil
Cc: Juan Ochoa; Tina Thompson Mendoza
Subject: AB 52 Consultation - UCR 2021 Long Range Development Plan
Date: Friday, April 2, 2021 7:13:00 PM
Attachments: UCR 2021 LRDP_Draft Proposed Cultural TCR MMs.docx
AB52_NoticeLtr_Pechanga.pdf
UCR LRDP Cultural Resource Constraints Report.pdf

Hi Ebru,

The University has been working on the Draft Program Environmental Impact Report for the proposed 2021 Long Range Development Plan and appreciates the Pechanga Band of Luiseño Indians taking the time back in July 2020 to meet with University staff to go over the proposed LRDP.

I wanted to share with the Pechanga Band of Luiseño Indians the draft cultural resources/tribal cultural resources mitigation measures for any suggested edits/feedback the tribe may have. I have included the AB 52 notice and LRDP Cultural Resource Constraints Report for your reference as well.

Please let me know if you have any suggested edits in tracked change edits/comments and whether you would like to set up a zoom call to discuss. Requesting your any edits/comments you may have by April 16, 2021, if possible, otherwise the University will assume tribal consultation has concluded. Thank you so much.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From:	Juan Ochoa
To:	Stephanie Tang; Ebru Ozdil
Cc:	Tina Thompson Mendoza
Subject:	RE: Pechanga Tribe AB 52 Comments on UC Riverside 2021 Long Range Development Plan
Date:	Wednesday, May 27, 2020 4:03:23 PM
Attachments:	image001.png

Thank you for the documents. I will touch base with you once I receive the team's availability for a teleconference.

Juan Ochoa, MLIS
Assistant Tribal Historic Preservation Officer
Pechanga Cultural Resources Department
P.O. Box 2183
Temecula, CA 92593

Office:(951)-770-6308
jochoa@pechanga-nsn.gov

From: Stephanie Tang [mailto:stephanie.tang@ucr.edu]
Sent: Wednesday, May 27, 2020 3:59 PM
To: Juan Ochoa <jochoa@pechanga-nsn.gov>; Ebru Ozdil <eozdil@pechanga-nsn.gov>
Cc: Tina Thompson Mendoza <tmendoza@pechanga-nsn.gov>
Subject: RE: Pechanga Tribe AB 52 Comments on UC Riverside 2021 Long Range Development Plan

Hi Juan,

There is no specific project at this time as the University is proposing a Long Range Development Plan (LRDP) which is a long-term master plan so to speak for future campus development in the next 15 years. As such, no specific site plans, grading plans, development plans, etc. have been prepared.

The attached AB 52 notice gives a brief summary of the proposed land uses, campus population projection, and projected development square footage through the horizon year 2035. The CEQA document for the proposed LRDP will be a programmatic level EIR. Future campus projects will undergo its own specific CEQA analysis at which point the Tribe will be provided relevant site plans, grading plans, geotechnical studies, etc. as part of the AB 52 process for those specific projects.

I have attached the Cultural Resources Constraint Study that was prepared for the LRDP for your reference. Please let me know if you have any questions or need clarification. Thank you.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UCR | Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Juan Ochoa <jochoa@pechanga-nsn.gov>
Sent: Wednesday, May 27, 2020 3:44 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>; Ebru Ozdil <eozdil@pechanga-nsn.gov>
Cc: Andrea Fernandez <afernandez@pechanga-nsn.gov>; Tina Thompson Mendoza <tmendoza@pechanga-nsn.gov>
Subject: RE: Pechanga Tribe AB 52 Comments on UC Riverside 2021 Long Range Development Plan

Stephanie,

We request to have the following documents, if available: site plans, grading plans, cultural report and geotech report sent to the Tribe prior to setting up a meeting. This assures that all sides are informed of the proposed project before we begin the consultation process. When submitting the reports and plans for the project, please include Ebru Ozdil, Tina Thompson Mendoza, and myself. If you have any further questions, please don't hesitate to ask us.

Juan Ochoa, MLIS
Assistant Tribal Historic Preservation Officer
Pechanga Cultural Resources Department
P.O. Box 2183
Temecula, CA 92593

Office:(951)-770-6308
jochoa@pechanga-nsn.gov

From: Stephanie Tang [mailto:stephanie.tang@ucr.edu]
Sent: Wednesday, May 27, 2020 3:39 PM
To: Juan Ochoa <jochoa@pechanga-nsn.gov>; Ebru Ozdil <eozdil@pechanga-nsn.gov>
Cc: Andrea Fernandez <afernandez@pechanga-nsn.gov>; Tina Thompson Mendoza <tmendoza@pechanga-nsn.gov>
Subject: RE: Pechanga Tribe AB 52 Comments on UC Riverside 2021 Long Range Development Plan

Hi,

Thank you for your email and interest in participating in the AB 52 tribal consultation process for the proposed UCR 2021 Long Range Development Plan. At your convenience, please provide dates and timeframes of your availability for a Zoom call. We look forward to hearing from you. Thank you.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UCR | Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Juan Ochoa <jochoa@pechanga-nsn.gov>
Sent: Wednesday, May 27, 2020 3:27 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Cc: Andrea Fernandez <afernandez@pechanga-nsn.gov>; Ebru Ozdil <eozdil@pechanga-nsn.gov>; Tina Thompson Mendoza <tmendoza@pechanga-nsn.gov>
Subject: Pechanga Tribe AB 52 Comments on UC Riverside 2021 Long Range Development Plan

Dear Stephanie Tang,

This letter is written on behalf of the Pechanga Band of Luiseño Indians (hereinafter, "the Tribe") a federally recognized Indian tribe and sovereign government in response to the AB 52 notice provided by the University of California Riverside (UCR).

This email serves as the Tribe's formal request to begin consultation under AB 52 for this Project. Per AB 52, we intend to assist the UCR in determining the type of environmental document that should be prepared for this Project (i.e. EIR, MND, ND); with identifying potential tribal cultural resources (TCRs); determining whether potential substantial adverse effects will occur to them; and to develop appropriate preservation, avoidance and/or mitigation measures, as appropriate. CEQA, as amended by AB 52, requires the County to avoid damaging effects to the significance of a tribal cultural resource. As such, the preferred TCR mitigation is complete avoidance and knowing that this Project is within a Traditional Cultural Property and contains additional TCRs, the Tribe requests that all efforts to preserve sensitive TCRs be made as early in the development process as possible.

Please add the Tribe to your distribution list(s) for public notices and circulation of all documents, including environmental review documents, archaeological reports, development plans, conceptual grading plans (if available), and all other applicable documents pertaining to this Project. The Tribe further requests to be directly notified of all public hearings and scheduled approvals concerning this Project, and that these comments be incorporated into the record of approval for this Project.

The Pechanga Tribe asserts that the Project area is part of *'Ataaxum* (Luiseño), and therefore the Tribe's, aboriginal territory as evidenced by the existence of cultural resources, named places, *tóota yixélval* (rock art, pictographs, petroglyphs), and an extensive *'Ataaxum* artifact record in the vicinity of the Project. This culturally sensitive area is affiliated with the Pechanga Band of Luiseño Indians because of the Tribe's cultural ties to this area as well as our extensive history with UCR and other projects within the area.

The Tribe hereby informs the County that the Project site is located within a Traditional Cultural Property (TCP). We will provide additional information regarding tribal affiliation and the TCP in our consultation as well as provide more specific, confidential information on potential TCRs that may be impacted by the proposed Project. Additionally, the Tribe requests that no Phase II testing or other ground-disturbing archaeological activities be conducted on the site until after the Tribe and the County consult about the TCRs in our government-to-government consultation.

As you know, the AB 52 consultation process is ongoing and continues until appropriate mitigation has been agreed upon for the TCRs that may be impacted by the Project. As such, under both AB 52 and CEQA, we look forward to working closely with the UCR on ensuring that a full, comprehensive environmental review of the Project's impacts is completed.

In addition to those rights granted to the Tribe under AB 52, the Tribe reserves the right to fully participate in the environmental review process, as well as to provide further comment on the Project's impacts to cultural resources and potential mitigation for such impacts.

The Pechanga Tribe looks forward to working together with the University of California Riverside in protecting the invaluable Pechanga cultural resources found in the Project area. The formal contact person for this Project will be Ebru Ozdil. Please contact her at 951-770-6313 or at eozdil@pechanga-nsn.gov within 30 days of receiving this consultation request so that we can begin the consultation process. Thank you.

Juan Ochoa, MLIS
Assistant Tribal Historic Preservation Officer
Pechanga Cultural Resources Department
P.O. Box 2183
Temecula, CA 92593

Office:(951)-770-6308
jochoa@pechanga-nsn.gov

UNIVERSITY OF CALIFORNIA
UC RIVERSIDE

Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

May 21, 2020

Ebru Ozdil
Pechanga Band of Luiseño Indians
P.O. Box 1477
Temecula, CA 92593

eozdil@pechanga-nsn.gov

Subject: Assembly Bill (AB) 52 Consultation (Public Resources Code §21080.3.1) – UC Riverside 2021 Long Range Development Plan, Riverside County, California

Dear Ms. Ozdil:

The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed 2021 Long Range Development Plan (LRDP) located in the City of Riverside, Riverside County, California. The proposed UCR 2021 LRDP is located within Sections 19, 20, 29, and 30 (Township 2 South; Range 4 West) of the USGS **Riverside East, CA** 7.5 Minute Quadrangle.

The approximate 1,108-acre campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway. The two resulting areas of campus is described below. Refer to Exhibit 1 and Exhibit 2 for the regional location and aerial map, respectively.

East Campus

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are located within the Academic Center circumscribed by Campus Drive, including most of the campus' original buildings. The northern half of East Campus is devoted to student housing and recreation. The Belltower marks the heart of the campus, at the center of the Carillon Mall. The terrain steepens to the south and east of East Campus and as a result, these areas are largely unbuilt.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations (Ag Ops) unit of College of Natural and Agricultural Services (CNAS). Several facilities are also located on West Campus: these include

Parking Lot 30, University Extension (UNEX), and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR is at the northern edge of Parking Lot 30. There is a California Department of Transportation (Caltrans) service yard on an approximately 4.1-acre triangular parcel directly west of the I-215/SR-60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses the area north to south.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet (asf) (approximately 6 million gross square feet [gsf][1] of additional academic buildings and support facilities, including student housing. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf[2]) of total academic, research and support space development by the academic year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (three-quarter average headcount) by the academic year 2035/2036. It is anticipated that approximately 2,800 additional faculty and staff would be needed to support academic year 2035/2036 student enrollment.

A comparison of the projected population and campus development between the 2018/2019 academic year and 2021 LRDP projections are provided in Table 1.

Table 1 – Baseline (2018/2019) and 2021 LRDP (2035/2036) Project Population and Physical Development

Category	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Campus Population			
Undergraduate Student Population (three-quarter average headcount)	20,581	28,000	7,419
Graduate Student Population (three-quarter average)	3,341	7,000	3,659
Total Student Population (three-quarter average)	**23,922**	**35,000**	**11,078**
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	**4,739**	**7,545**	**2,806**

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1 Rounded to the nearest million

2 Rounded to the nearest million

Campus Development (asf/gsf)			
Academics and Research	1,220,283 / 1,830,425	1,700,852 / 2,551,278	480,569 / 720,854
Academic Support	1,458,975 / 2,188,463	2,355,204 / 3,532,806	896,229 / 1,344,344
Student Life (including residential, residential dining, student health, student union, indoor recreation, and athletics)	1,875,963 / 2,813,945	4,198,504 / 6,297,756	2,322,541 / 3,483,812
Corporation Yard	248,279 / 372,419	248,279 / 372,419	0 / 0
Total Campus Development (asf/gsf)	**4,803,500 / 7,205,250**	**8,502,839 / 12,754,259**	**3,699,339 / 5,549,009**
On-Campus Housing Beds			
Residential (beds) (includes Freshmen, Triples, Upperclass, and Family Housing)	6,511	14,000	7,489

Source: UCR 2021 LRDP Program Model

Notes:

LRDP = Long Range Development Plan

asf = assignable square feet

gsf = gross square feet

Land Use Descriptions

The proposed 2021 LRDP provides long-term planning for the land uses, activities and facilities on the main UCR campus. Predominant uses can be described by the primary facilities, programs, and/or activities within a geographic area on campus to achieve specific planning objectives. In many instances, other secondary permissible uses are also allowed within the predominant land use category. The proposed 2021 LRDP land uses are described below and are shown on Exhibit 3.

A comparison of the land uses from the 2005 LRDP and proposed 2021 LRDP are shown in Table 2.

Table 2 – 2005 LRDP versus 2021 LRDP Land Uses

Land Use Designations	2005 LRDP (Acres)		2021 LRDP (Acres)	
	West Campus	East Campus	West Campus	East Campus
Academics & Research	54.3	132.2	0.0	184.3
Campus Support	9.1	11.0	51.0	3.0
Land-based Research	294.9	0.0	419.3	0.0

Open Space Reserve	0.0	130.5	0.0	154.8
Recreation & Athletics	14.1	53.4	0.0	28.7
Student Neighborhood	68.5	100.1	5.4	136.4
2021 LRDP-Specific Land Use Designations[1]				
Agricultural/Campus Research	Not Applicable	Not Applicable	19.4	0.0
UCR Botanic Gardens	Not Applicable	Not Applicable	0.0	43.7
Canyon Crest Gateway	Not Applicable	Not Applicable	0.0	31.9
University Avenue Gateway	Not Applicable	Not Applicable	8.3	21.3
Non-UCR Land of Interest	Not Applicable	Not Applicable	12.8[3]	0.0
2005 LRDP-Specific Land Use Designations[2]				
Open Space	25.2	144.2	Not Applicable	Not Applicable
Campus Reserve	37.3	0.0	Not Applicable	Not Applicable
Non-Institutional Agencies	0.0	12.3	Not Applicable	Not Applicable
Parking	7.9	17.1	Not Applicable	Not Applicable
Totals				
Total Acres by Campus	511.3	600.8	503.4	604.1
Total Acres (Rounded)[4]	1,112		1,108	

Source: GIS.

Notes:

[1] These land use designations are new to the 2021 LRDP and were not used as land use categories under the 2005 LRDP.

[2] The acreage from 2005 LRDP Land Use Designations no longer in use have been incorporated into the proposed 2021 LRDP Land Use Designations as appropriate, e.g. 25 acres of parking lots has been allocated among the new land use areas throughout campus based on location.

[3] Non-UCR Land of Interest is not included in the total acreage under the 2021 LRDP.

[4] The difference in the acreage between the 2005 LRDP and 2021 LRDP is related to the acquisition of Oban and Falkirk Apartments and the acquisition of several properties in Frost Court and one on Watkins Ave next to the Chancellor's residence. There was also the sale of approximately 18 acres of land on the West Campus to CARB.

Academics & Research (~184.3 acres)

The Academics & Research land use areas are located within or adjacent to the core of East Campus, primarily bounded by the campus loop road. This land use designation consists of facilities dedicated to undergraduate and graduate learning and research environments, and daytime student life activities, such as the student union and food services.

Academics & Research facilities may include classrooms; instructional and research laboratories and greenhouses; undergraduate, graduate, and professional schools and associated programs; libraries; advanced scientific research facilities; federal research partnerships; performance and cultural facilities; clinical facilities; and ancillary support facilities, such as general administrative offices, conference rooms, and meeting spaces. Additional uses are those supporting core campus student life activities, and food services, such as the Highlander Union Building and The Barn. Secondary permissible uses include parking, utility infrastructure, and other campus support services.

Agricultural/Campus Research (~19.4 acres)

The Agricultural/Campus Research land use is established to enhance and expand external engagement of UCR’s research, education, and public service mission by providing a principal place for facilities and activities that support the University and the City of Riverside’s aspirations to make and showcase UCR as a recognized center for innovation in agricultural sciences and technology.

Agricultural/Campus Research facilities may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses include parking, open space, utility infrastructure, and other support uses.

Land-based Research (~419.3 acres)

The Land-based Research land use areas are located on West Campus and retain the existing agricultural land-based teaching and research fields.

Land-based Research land uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses also include parking, storage, utility infrastructure, and related support services/facilities.

Student Neighborhood (~141.8 acres)

The Student Neighborhood land use areas are predominantly located within the northern portions of East Campus and encompass primarily non-academic uses to facilitate vibrant undergraduate and graduate student learning experiences outside of the classroom environment.

Student Neighborhood land uses are meant to accommodate a diverse array of uses to ensure that student needs are met within an interactive, mixed-use environment. Land uses may include student residences for undergraduate and graduate students, and students with families; student services, meeting, and instructional space; food service and retail; appropriately scaled recreation and athletic facilities; childcare and pre-schools proximate to family housing; parking primarily for students; and other residential support services, such as facilities services and public safety.

Recreation & Athletics (~28.7 acres)

The Recreation & Athletics land uses are concentrated in two areas in the northern portion of East Campus and include the Student Recreation Center, the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood-scale facilities would be interspersed within student neighborhoods, as indicated above, to improve student access, and create a more dynamic student experience into the evenings and on weekends.

Recreation & Athletics land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses also include parking, food service, administrative areas, office and meeting space, and other supporting uses.

Campus Support (~54.0 acres)

The Campus Support land use areas would be primarily located on the eastern portion of West Campus, with a small land use area located in the northeast portion of East Campus. Land uses include general campus support services, such as administrative and institutional support functions, including facilities services, public safety, parking and transportation, service yards, maintenance facilities, trade shops, materials handling and storage, inclusive of hazardous materials, shipping and receiving, utility plants and systems, fleet storage, parking, and other support functions.

Open Space Reserve (~154.8 acres)

The Open Space Reserve land use designation would recognize, protect, and enhance areas that have ecological or aesthetic value to campus, including those subject to special development constraints due to native or endangered species habitats, steep or unique terrain such as arroyos, and riparian corridors or other natural features. This land use designation is intended to recognize that these areas are major contributors to UCR’s character and ecology.

The Open Space Reserve land uses would include designated hillsides, storm water management infrastructure, habitat restoration and management activities, trails and minor amenities such as seating and viewing areas, and other features compatible with natural open spaces. Secondary permissible uses include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities.

UCR Botanic Gardens (~43.7 acres)

The UCR Botanic Gardens is in the easternmost portion of East Campus, at the foothills of the Box Springs Mountains, and serves a unique role as a venue for a wide array of teaching, research, and demonstration activities. Approximately one-third of the UCR Botanic Gardens land remains natural, featuring the native habitat of the region.

UCR Botanic Gardens land uses include demonstration gardens, habitat restoration and management, and incidental facilities, such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses include support facilities for the UCR Botanic Gardens and parking.

Canyon Crest Gateway (~31.9 acres)

The Canyon Crest Gateway land use designation is in the northern portion of East Campus, generally bordering Canyon Crest Drive, between Blaine Street to the north and half a block south of Linden Street. The Canyon Crest Gateway is envisioned as a high-density, horizontal and vertical mixed-use gateway environment that will serve as a campus "Main Street" for the campus population to experience on a regular basis. It would accommodate a variety of student housing needs, above an array of student and commercial services that meet the needs of the campus and the local community. This corridor will continue to serve as a multi-modal arterial, but with increased focus on pedestrian-oriented uses at the lower levels of mid-rise structures. Parking would be carefully integrated into this area to allow for safe and convenient access from adjacent side streets, supportive of the desired pedestrian experience along the main street.

Canyon Crest Gateway uses may include student housing, recreation and athletics facilities, university-oriented services, administrative and support service offices, neighborhood-serving commercial and retail space such as banks, pharmacies, grocery outlets, etc., restaurants, professional services space inclusive of outpatient clinical facilities, hotel/conference center(s), alumni center, public safety, and other complementary uses, including affiliated and non-affiliated educational facilities. Secondary permissible uses include parking, academic uses, open space, and other support uses, as well as multi-modal transportation support facilities.

University Avenue Gateway (~21.3 acres)

The University Avenue Gateway land use designation begins on the northern portion of West Campus and continues east under I-215 along University Avenue into the core of East Campus. The University Avenue Gateway is envisioned as the campus' primary entryway, connecting campus to Downtown Riverside and the broader Riverside community. The area is intended to encourage activities that express a welcoming and identifiable approach to campus, create identity, and that are active during the daytime and evening hours as well as on weekends, with an emphasis on street-oriented interaction and engagement. The University Avenue Gateway is envisioned to include a dense and diverse mix of uses that provide opportunities for greater campus-community interaction, and that collectively reinforce the importance of the area as the terminus of the University Avenue corridor, which connects campus with Downtown Riverside, approximately 3 miles to the west.

University Avenue Gateway uses may include academic instruction and research facilities above, or in conjunction with, large lecture halls or assembly and exhibition spaces, a visitor’s center, food services and cafes, student services, multi-modal transportation support facilities, and other compatible non-UCR uses. Secondary permissible uses include parking, open space, and other support uses.

Non-UCR Land of Interest (~12.8 acres)

While not a designated land use, the 2021 LRDP identifies two properties not currently owned by UCR as potential opportunity areas for University-related uses, should they become available for University use in the future. They include the existing Caltrans Yard at the east end of Everton Drive and a City of Riverside-owned, eight-acre parcel of land that is landlocked within West Campus.

Assembly Bill (AB) 52 requires lead agencies to consult with California Native American Tribes that request such consultation in writing prior to the agency’s release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. UCR received your May 21, 2020 letter requesting formal notification of proposed campus projects. This letter is intended as formal notification of the proposed 2021 LRDP pursuant to AB 52.

Your participation in this local planning process is important. A Cultural Resources Constraint Study for the 2021 LRDP has been prepared. The Sacred Lands File Search (SLF) conducted by the Native American Heritage Commission (NAHC) for the proposed 2021 LRDP had positive results. If you possess any information or knowledge regarding Native American Sacred Lands or other tribal cultural resources in and around the campus area, and wish to consult with the UCR regarding these resources or mitigation measures to reduce impacts of the proposed 2021 LRDP, please direct your email to stephanie.tang@ucr.edu or any correspondence on this matter to:

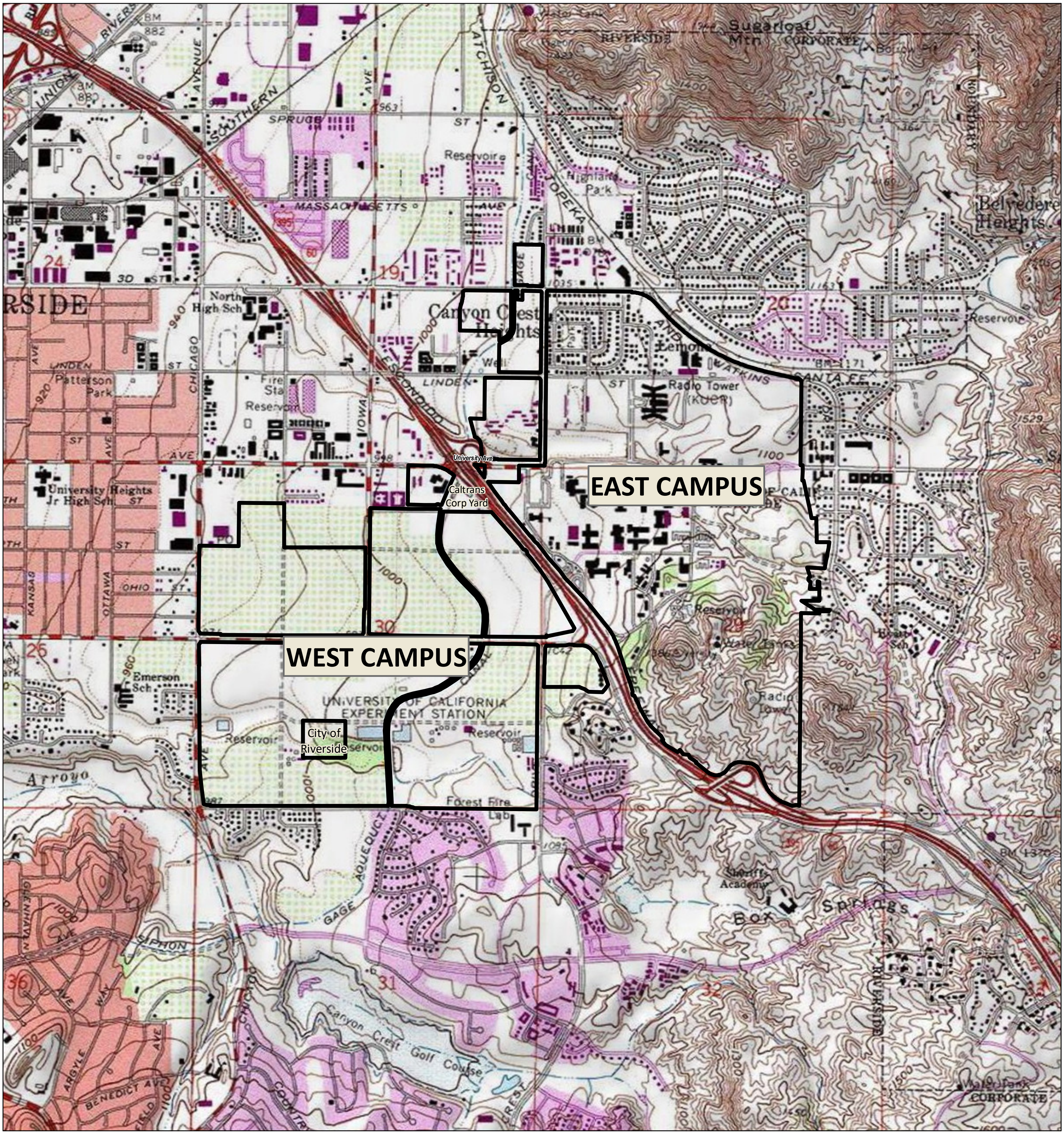
Stephanie Tang
Campus Environmental Planner
University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507-7209

Please let me know if you have any questions or would like to discuss the proposed 2021 LRDP. I can be reached by phone at (951) 827-1484 or via email at stephanie.tang@ucr.edu. Thank you for your interest on projects at UCR.

Respectfully,

Stephanie Tang

Stephanie Tang
Campus Environmental Planner



UCR

N

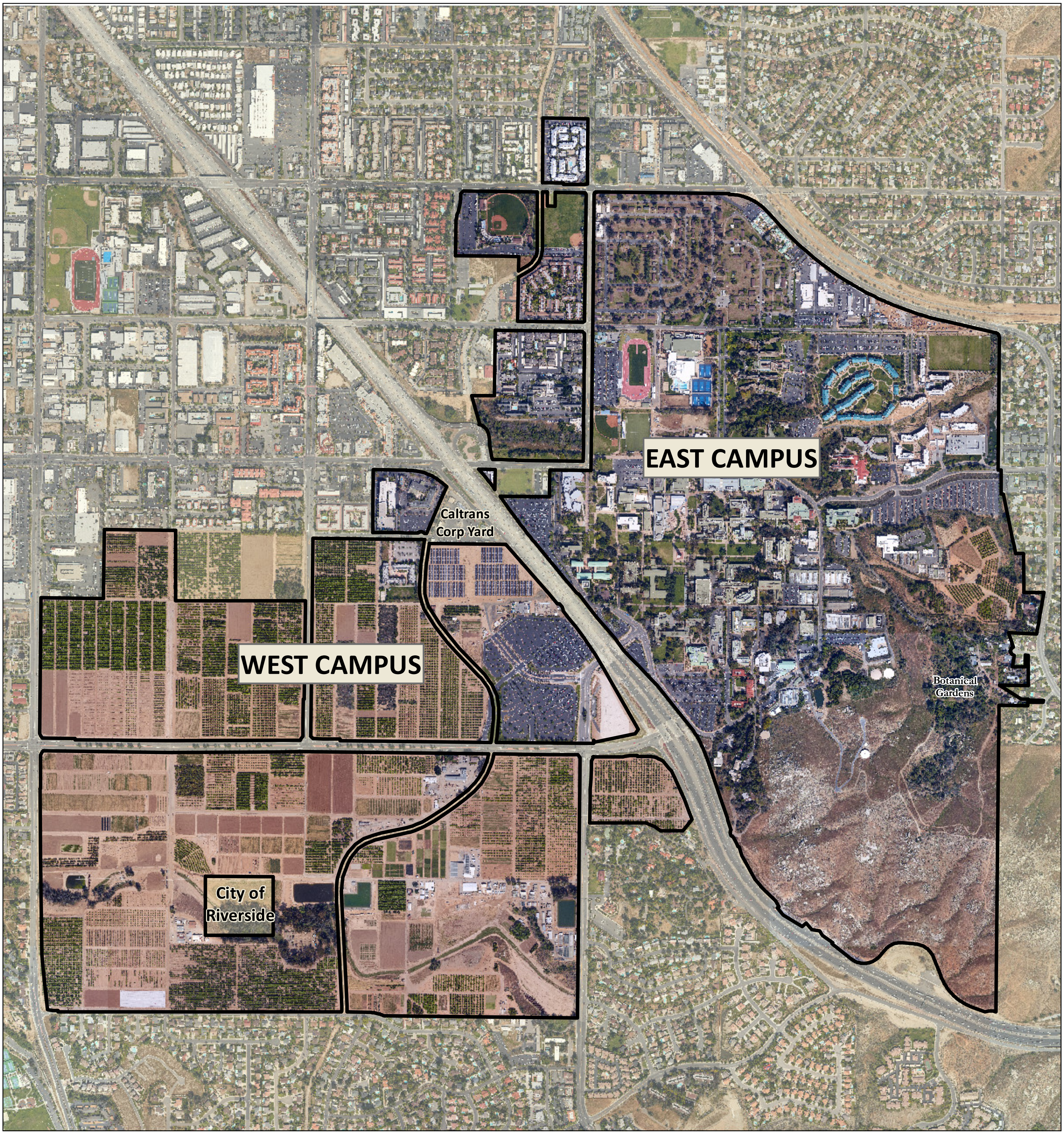
EXHIBIT 1
Regional Location

UCR Campus Boundary

2,000 1,000 0 2,000
Feet

Source: USGS 7.5 min Riverside East

V:\map_docs\mxd\LRDP\LRDP_regloc_2000.mxd 5/12/2020



UCR

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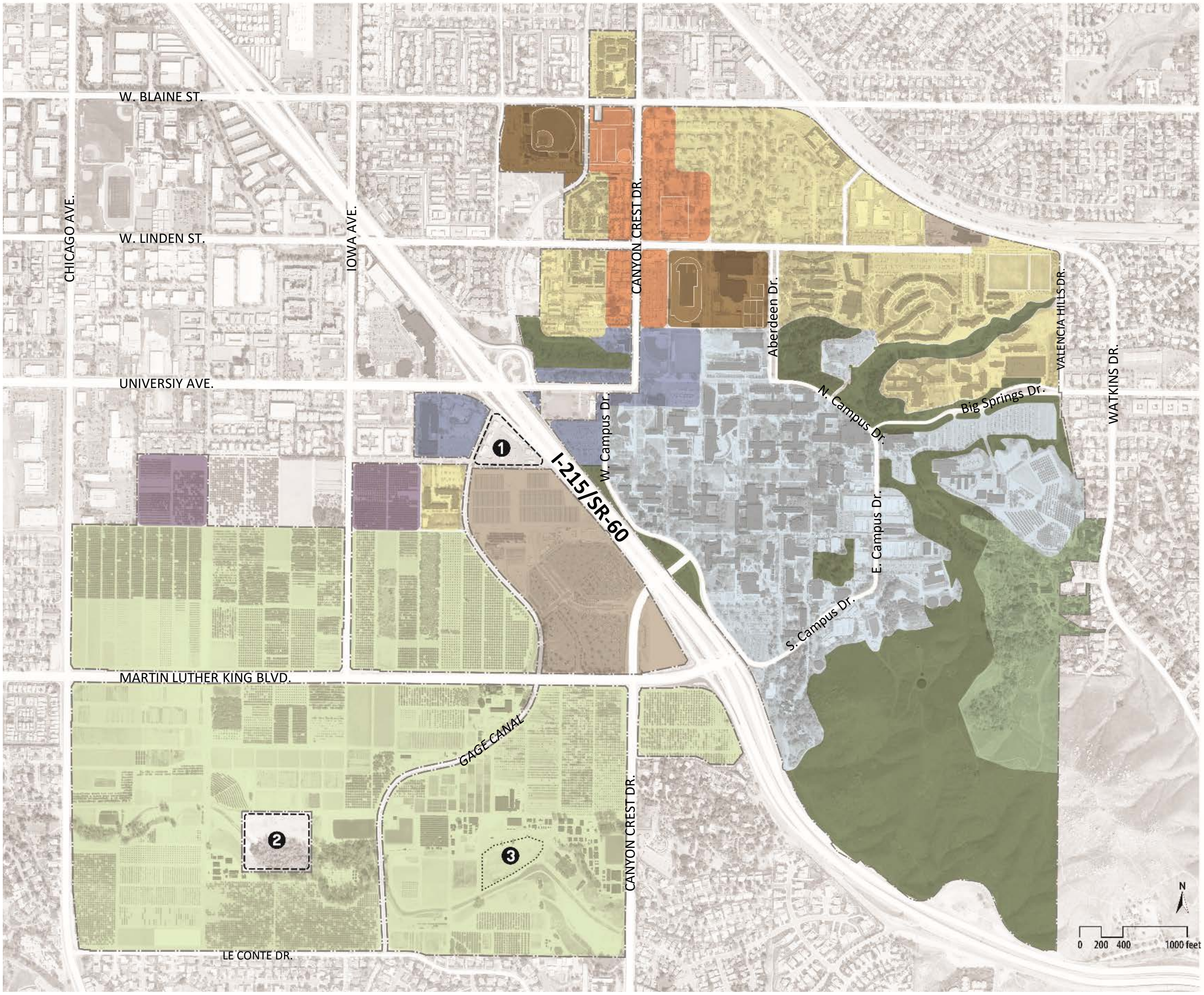
▭ UCR Campus Boundary

EXHIBIT 2
Aerial Map

V:\map_docs\mxd\LRDP\LRDP_Aerial_PrjSite.mxd 5/12/2020



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

- 🟦 ACADEMICS & RESEARCH
- 🟪 AGRICULTURAL/CAMPUS RESEARCH
- 🟩 LAND-BASED RESEARCH
- 🟫 CAMPUS SUPPORT
- 🟩 OPEN SPACE RESERVE
- 🟩 UCR BOTANIC GARDENS
- 🟫 RECREATION & ATHLETICS
- 🟨 STUDENT NEIGHBORHOOD
- 🟧 CANYON CREST GATEWAY
- 🟦 UNIVERSITY AVENUE GATEWAY
- ⬚ NON-UCR LAND OF INTEREST

EXHIBIT 3
Land Use Diagram

Appendix K4

Rincon Band of Luiseño Indians

From: Stephanie Tang
To: Cheryl Madrigal
Cc: Deneen Pelton
Subject: RE: UCR 2021 Long Range Development Plan - AB 52 Consultation
Date: Tuesday, June 29, 2021 9:20:00 PM

Hi Cheryl,

Thank you for your email and agreement on the updated draft MM CUL-2. This will conclude our AB 52 consultation.

Respectfully,

Stephanie Tang
Campus Environmental Planner

UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Cheryl Madrigal <CMadrigal@rincon-nsn.gov>
Sent: Tuesday, June 29, 2021 3:25 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Cc: Deneen Pelton <DPelton@rincon-nsn.gov>
Subject: RE: UCR 2021 Long Range Development Plan - AB 52 Consultation

Thanks Stephanie.

We agree with the revised CUL-2 measures as outlined below. We understand that other Tribes potentially have knowledge particular to this project site and may request additional or revised measures. Please note that the Rincon Band supports all efforts to completely avoid cultural resources as preferred mitigation.

Thank you so much,

Cheryl

Cheryl Madrigal
Cultural Resources Manager
Tribal Historic Preservation Officer
Cultural Resources Department
Rincon Band of Luiseño Indians
1 West Tribal Road | Valley Center, CA 92082
Office: (760) 749 1092 ext. 323|Cell: 760-648-3000
Fax: 760-749-8901
Email: cmadrigal@rincon-nsn.gov

Rincon Band of Luiseño Indians
www.rincon-nsn.gov

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Thursday, June 24, 2021 6:39 PM
To: Cheryl Madrigal <CMadrigal@rincon-nsn.gov>
Cc: Cultural Resources Department <CRD@rincon-nsn.gov>
Subject: RE: UCR 2021 Long Range Development Plan - AB 52 Consultation

Hi Cheryl,

Thank you for your review of the proposed mitigation measures. In response to your comments in the email chain below pertaining to requesting an archaeological and tribal monitoring for ground disturbing activities in the southeastern portion of the LRDP planning area, Mitigation Measure MM CUL-2 below has been clarified to address your comments.

MM CUL-2 Tribal Cultural Resources/Archaeological Monitoring

Prior to commencement of ground-disturbing activities into an area with a medium or high potential to encounter undisturbed native soils, including Holocene alluvium soils, as determined by UCR, UCR shall hire a qualified archeological monitor meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) to identify archaeological resources and cultural resources of potential Native American origin. Where development occurs in the southeastern quadrant of campus and in areas containing Val Verde Pluton geologic features considered highly sensitive to prehistoric archaeological resources, UCR shall hire a qualified archaeologist and a Native American monitor to reduce impacts to potential archaeological and/or TCR. The monitor(s) shall be on-site during any construction activities that involve ground disturbance. The on-site monitoring shall end when project-related ground-disturbing activities are completed, or, in consultation with the lead agency and tribes as appropriate and based on observed conditions, monitoring may be reduced or eliminated prior to completion of ground-disturbing activities, when the monitor(s) has indicated that the project site has a low potential to encounter TCR/archaeological resources. Consolidated monitoring efforts (e.g., archaeological monitoring/tribal cultural/paleontological monitoring) may occur if the individual monitor meets the applicable qualifications, except for development in the southeastern quadrant as detailed above.

Kindly requesting for the Tribe to let us know by June 30, 2021 if there are any additional questions or clarifications otherwise the university will assume that the Tribe is ok with the updated mitigation measure and will thus assume AB 52 consultation has concluded.

Thank you.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Cheryl Madrigal <CMadrigal@rincon-nsn.gov>
Sent: Friday, April 23, 2021 7:35 AM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Cc: Cultural Resources Department <CRD@rincon-nsn.gov>
Subject: RE: UCR 2021 Long Range Development Plan - AB 52 Consultation

Hi Stephanie,

Thank you for providing the proposed mitigation measures.

We request that the Mitigation Measures include archaeological **and** tribal monitoring for ground disturbing activities in the southeastern portion of the planning area.

As per Cultural Resource Constraint Study for the Long-Range Development Plan this area "containing Val Verde Pluton geologic features is considered highly sensitive to prehistoric archaeological resources. This assessment is supported by documented millingstone sites within the area. Earth-moving activities in the area designated as "high cultural sensitivity" (illustrated on Exhibit 2) can inadvertently discover significant prehistoric resources. As such, future projects within this area should implement archaeological and Native American monitoring to reduce the project's impacts."

Please contact me if you have any further questions. We are looking forward to reviewing the Draft EIR during the public review period. Please notify the Rincon Band of its availability.

Thanks,

Cheryl

Cheryl Madrigal
Cultural Resources Manager

Tribal Historic Preservation Officer
Cultural Resources Department
Rincon Band of Luiseño Indians
1 West Tribal Road | Valley Center, CA 92082
Office:760-297-2635 ext. 323|Cell: 760-648-3000
Fax: 760-749-8901
Email: cmadrigal@rincon-nsn.gov

Rincon Band of Luiseño Indians
www.rincon-nsn.gov

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Friday, April 2, 2021 7:30 PM
To: Cheryl Madrigal <CMadrigal@rincon-nsn.gov>; Cultural Resources Department <CRD@rincon-nsn.gov>
Subject: RE: UCR 2021 Long Range Development Plan - AB 52 Consultation

Hi Cheryl,

The University has been working on the Draft Program Environmental Impact Report for the proposed 2021 Long Range Development Plan. During our June 2020 tribal consultation zoom call, the Rincon Band of Luiseño Indians requested to review draft mitigation measures pertaining to cultural resources/tribal cultural resources once they have been prepared. Per the tribe's request, I have attached the draft mitigation measures for your consideration as well as the Cultural Resource Constraints Report and Confidential appendix for your reference - https://o365ucr-my.sharepoint.com/:b:/g/personal/stephant_ucr_edu/EcNUrCgh-W9BmbhqOMqHUdABpy3_jpyoH0AwZ7TqqMQCNg?e=zbMPQd. The AB 52 notice is also attached for your reference as well.

Please let me know if you have any suggested edits in tracked change edits/comments and whether you would like to set up a zoom call to discuss. Requesting any edits/comments you may have by April 16, 2021, if possible, otherwise the University will assume tribal consultation has concluded. Thank you so much.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Stephanie Tang
Sent: Thursday, July 30, 2020 10:41 AM
To: Cheryl Madrigal <CMadrigal@rincon-nsn.gov>
Subject: RE: UCR 2021 Long Range Development Plan - Notice of Preparation Environmental Impact Report

Hi Cheryl,

Please click on the following link for the recorded Scoping Meeting and Presentation slide deck - https://pdc.ucr.edu/environmental-planning-ceqa#scoping_meeting_july_29_2020_

Thank you,

Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

From: Cheryl Madrigal <CMadrigal@rincon-nsn.gov>
Sent: Thursday, July 30, 2020 9:59 AM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: RE: UCR 2021 Long Range Development Plan - Notice of Preparation Environmental Impact Report

Hi Stephanie,

Can you please provide me with the recording of yesterday's scoping meeting?

Thank you so much,

Cheryl

Cheryl Madrigal
Cultural Resources Manager

Tribal Historic Preservation Officer
Cultural Resources Department
Rincon Band of Luiseño Indians
1 West Tribal Road | Valley Center, CA 92082
Office:760-297-2635 ext. 323|Cell: 760-648-3000
Fax: 760-749-8901
Email: cmadrigal@rincon-nsn.gov

From: Stephanie Tang [mailto:stephanie.tang@ucr.edu]
Sent: Tuesday, July 7, 2020 12:20 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: UCR 2021 Long Range Development Plan - Notice of Preparation Environmental Impact Report

Hi,

Attached, please find the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) in compliance with the California Environmental Quality Act (CEQA) for the 2021 Long Range Development Plan (2021 LRDP) at the University of California, Riverside.

We are requesting comments on the scope and contents of the EIR for the proposed 2021 LRDP. Comments can be submitted by US Mail at the address provided in the attached NOP or via email at CEQA@ucr.edu until 5:00 p.m. on August 6, 2020.

The NOP and Initial Study will be available beginning July 7, 2020 on our website: https://pdc.ucr.edu/environmental-planning-ceqa.
Please note that the University will hold a public scoping meeting on July 29, 2020 from 6:00 p.m. to 8:00 p.m. for the EIR. Due to the public safety concerns regarding COVID-19, the meeting will be held virtually. Information on how to join the virtual meeting is included in the attached NOP and at the website above.

Respectfully,

Stephanie Tang
Campus Environmental Planner

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May 26, 2020

Cheryl Madrigal
Tribal Historic Preservation Officer
Cultural Resources Manager
Rincon Band of Luiseño Indians
One Government Center Lane
Valley Center, CA 92082

CMadrigal@rincon-nsn.gov, CRD@rincon-nsn.gov

Subject: Assembly Bill (AB) 52 Consultation (Public Resources Code §21080.3.1) – UC Riverside 2021 Long Range Development Plan, Riverside County, California

Dear Ms. Madrigal:

The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed 2021 Long Range Development Plan (LRDP) located in the City of Riverside, Riverside County, California. The proposed UCR 2021 LRDP is located within Sections 19, 20, 29, and 30 (Township 2 South; Range 4 West) of the USGS **Riverside East, CA** 7.5 Minute Quadrangle.

The approximate 1,108-acre campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway. The two resulting areas of campus is described below. Refer to Exhibit 1 and Exhibit 2 for the regional location and aerial map, respectively.

East Campus

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are located within the Academic Center circumscribed by Campus Drive, including most of the campus' original buildings. The northern half of East Campus is devoted to student housing and recreation. The Belltower marks the heart of the campus, at the center of the Carillon Mall. The terrain steepens to the south and east of East Campus and as a result, these areas are largely unbuilt.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations (Ag Ops) unit of College of Natural and

Agricultural Services (CNAS). Several facilities are also located on West Campus: these include Parking Lot 30, University Extension (UNEX), and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR is at the northern edge of Parking Lot 30. There is a California Department of Transportation (Caltrans) service yard on an approximately 4.1-acre triangular parcel directly west of the I-215/SR-60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses the area north to south.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet (asf) (approximately 6 million gross square feet [gsf][1]) of additional academic buildings and support facilities, including student housing. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf[2]) of total academic, research and support space development by the academic year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (three-quarter average headcount) by the academic year 2035/2036. It is anticipated that approximately 2,800 additional faculty and staff would be needed to support academic year 2035/2036 student enrollment.

A comparison of the projected population and campus development between the 2018/2019 academic year and 2021 LRDP projections are provided in Table 1.

Table 1 – Baseline (2018/2019) and 2021 LRDP (2035/2036) Project Population and Physical Development

Category	**Baseline (2018/2019)**	**2021 LRDP (2035/2036)**	**Net 2021 LRDP Increase from Baseline**
Campus Population			
Undergraduate Student Population (three-quarter average headcount)	20,581	28,000	7,419
Graduate Student Population (three-quarter average)	3,341	7,000	3,659
Total Student Population (three-quarter average)	**23,922**	**35,000**	**11,078**
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963

---

[1] Rounded to the nearest million

[2] Rounded to the nearest million

Total Faculty/Staff Population	**4,739**	**7,545**	**2,806**
Campus Development (asf/gsf)			
Academics and Research	1,220,283 / 1,830,425	1,700,852 / 2,551,278	480,569 / 720,854
Academic Support	1,458,975 / 2,188,463	2,355,204 / 3,532,806	896,229 / 1,344,344
Student Life (including residential, residential dining, student health, student union, indoor recreation, and athletics)	1,875,963 / 2,813,945	4,198,504 / 6,297,756	2,322,541 / 3,483,812
Corporation Yard	248,279 / 372,419	248,279 / 372,419	0 / 0
Total Campus Development (asf/gsf)	**4,803,500 / 7,205,250**	**8,502,839 / 12,754,259**	**3,699,339 / 5,549,009**
On-Campus Housing Beds			
Residential (beds) (includes Freshmen, Triples, Upperclass, and Family Housing)	6,511	14,000	7,489

Source: UCR 2021 LRDP Program Model

Notes:

LRDP = Long Range Development Plan

asf = assignable square feet

gsf = gross square feet

Land Use Descriptions

The proposed 2021 LRDP provides long-term planning for the land uses, activities and facilities on the main UCR campus. Predominant uses can be described by the primary facilities, programs, and/or activities within a geographic area on campus to achieve specific planning objectives. In many instances, other secondary permissible uses are also allowed within the predominant land use category. The proposed 2021 LRDP land uses are described below and are shown on Exhibit 3.

A comparison of the land uses from the 2005 LRDP and proposed 2021 LRDP are shown in Table 2.

Table 2 – 2005 LRDP versus 2021 LRDP Land Uses

Land Use Designations	2005 LRDP (Acres)		2021 LRDP (Acres)	
	West Campus	East Campus	West Campus	East Campus
Academics & Research	54.3	132.2	0.0	184.3
Campus Support	9.1	11.0	51.0	3.0

Land-based Research	294.9	0.0	419.3	0.0
Open Space Reserve	0.0	130.5	0.0	154.8
Recreation & Athletics	14.1	53.4	0.0	28.7
Student Neighborhood	68.5	100.1	5.4	136.4
2021 LRDP-Specific Land Use Designations[1]				
Agricultural/Campus Research	Not Applicable	Not Applicable	19.4	0.0
UCR Botanic Gardens	Not Applicable	Not Applicable	0.0	43.7
Canyon Crest Gateway	Not Applicable	Not Applicable	0.0	31.9
University Avenue Gateway	Not Applicable	Not Applicable	8.3	21.3
Non-UCR Land of Interest	Not Applicable	Not Applicable	12.8[3]	0.0
2005 LRDP-Specific Land Use Designations[2]				
Open Space	25.2	144.2	Not Applicable	Not Applicable
Campus Reserve	37.3	0.0	Not Applicable	Not Applicable
Non-Institutional Agencies	0.0	12.3	Not Applicable	Not Applicable
Parking	7.9	17.1	Not Applicable	Not Applicable
Totals				
Total Acres by Campus	511.3	600.8	503.4	604.1
Total Acres (Rounded)[4]	1,112		1,108	

Source: GIS.

Notes:

[1] These land use designations are new to the 2021 LRDP and were not used as land use categories under the 2005 LRDP.

[2] The acreage from 2005 LRDP Land Use Designations no longer in use have been incorporated into the proposed 2021 LRDP Land Use Designations as appropriate, e.g. 25 acres of parking lots has been allocated among the new land use areas throughout campus based on location.

[3] Non-UCR Land of Interest is not included in the total acreage under the 2021 LRDP.

[4] The difference in the acreage between the 2005 LRDP and 2021 LRDP is related to the acquisition of Oban and Falkirk Apartments and the acquisition of several properties in Frost Court and one on Watkins Ave next to the Chancellor's residence. There was also the sale of approximately 18 acres of land on the West Campus to CARB.

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Academics & Research (~184.3 acres)

The Academics & Research land use areas are located within or adjacent to the core of East Campus, primarily bounded by the campus loop road. This land use designation consists of facilities dedicated to undergraduate and graduate learning and research environments, and daytime student life activities, such as the student union and food services.

Academics & Research facilities may include classrooms; instructional and research laboratories and greenhouses; undergraduate, graduate, and professional schools and associated programs; libraries; advanced scientific research facilities; federal research partnerships; performance and cultural facilities; clinical facilities; and ancillary support facilities, such as general administrative offices, conference rooms, and meeting spaces. Additional uses are those supporting core campus student life activities, and food services, such as the Highlander Union Building and The Barn. Secondary permissible uses include parking, utility infrastructure, and other campus support services.

Agricultural/Campus Research (~19.4 acres)

The Agricultural/Campus Research land use is established to enhance and expand external engagement of UCR's research, education, and public service mission by providing a principal place for facilities and activities that support the University and the City of Riverside's aspirations to make and showcase UCR as a recognized center for innovation in agricultural sciences and technology.

Agricultural/Campus Research facilities may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses include parking, open space, utility infrastructure, and other support uses.

Land-based Research (~419.3 acres)

The Land-based Research land use areas are located on West Campus and retain the existing agricultural land-based teaching and research fields.

Land-based Research land uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses also include parking, storage, utility infrastructure, and related support services/facilities.

Student Neighborhood (~141.8 acres)

The Student Neighborhood land use areas are predominantly located within the northern portions of East Campus and encompass primarily non-academic uses to facilitate vibrant undergraduate and graduate student learning experiences outside of the classroom environment.

Student Neighborhood land uses are meant to accommodate a diverse array of uses to ensure that student needs are met within an interactive, mixed-use environment. Land uses may include student residences for undergraduate and graduate students, and students with families; student services, meeting, and instructional space; food service and retail; appropriately scaled recreation and athletic facilities; childcare and pre-schools proximate to family housing; parking primarily for students; and other residential support services, such as facilities services and public safety.

Recreation & Athletics (~28.7 acres)

The Recreation & Athletics land uses are concentrated in two areas in the northern portion of East Campus and include the Student Recreation Center, the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood-scale facilities would be interspersed within student neighborhoods, as indicated above, to improve student access, and create a more dynamic student experience into the evenings and on weekends.

Recreation & Athletics land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses also include parking, food service, administrative areas, office and meeting space, and other supporting uses.

Campus Support (~54.0 acres)

The Campus Support land use areas would be primarily located on the eastern portion of West Campus, with a small land use area located in the northeast portion of East Campus. Land uses include general campus support services, such as administrative and institutional support functions, including facilities services, public safety, parking and transportation, service yards, maintenance facilities, trade shops, materials handling and storage, inclusive of hazardous materials, shipping and receiving, utility plants and systems, fleet storage, parking, and other support functions.

Open Space Reserve (~154.8 acres)

The Open Space Reserve land use designation would recognize, protect, and enhance areas that have ecological or aesthetic value to campus, including those subject to special development constraints due to native or endangered species habitats, steep or unique terrain such as arroyos, and riparian corridors or other natural features. This land use designation is intended to recognize that these areas are major contributors to UCR’s character and ecology.

The Open Space Reserve land uses would include designated hillsides, storm water management infrastructure, habitat restoration and management activities, trails and minor amenities such as seating and viewing areas, and other features compatible with natural open spaces. Secondary permissible uses include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities.

UCR Botanic Gardens (~43.7 acres)

The UCR Botanic Gardens is in the easternmost portion of East Campus, at the foothills of the Box Springs Mountains, and serves a unique role as a venue for a wide array of teaching, research, and demonstration activities. Approximately one-third of the UCR Botanic Gardens land remains natural, featuring the native habitat of the region.

UCR Botanic Gardens land uses include demonstration gardens, habitat restoration and management, and incidental facilities, such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses include support facilities for the UCR Botanic Gardens and parking.

Canyon Crest Gateway (~31.9 acres)

The Canyon Crest Gateway land use designation is in the northern portion of East Campus, generally bordering Canyon Crest Drive, between Blaine Street to the north and half a block south of Linden Street. The Canyon Crest Gateway is envisioned as a high-density, horizontal and vertical mixed-use gateway environment that will serve as a campus “Main Street” for the campus population to experience on a regular basis. It would accommodate a variety of student housing needs, above an array of student and commercial services that meet the needs of the campus and the local community. This corridor will continue to serve as a multi-modal arterial, but with increased focus on pedestrian-oriented uses at the lower levels of mid-rise structures. Parking would be carefully integrated into this area to allow for safe and convenient access from adjacent side streets, supportive of the desired pedestrian experience along the main street.

Canyon Crest Gateway uses may include student housing, recreation and athletics facilities, university-oriented services, administrative and support service offices, neighborhood-serving commercial and retail space such as banks, pharmacies, grocery outlets, etc., restaurants, professional services space inclusive of outpatient clinical facilities, hotel/conference center(s), alumni center, public safety, and other complementary uses, including affiliated and non-affiliated educational facilities. Secondary permissible uses include parking, academic uses, open space, and other support uses, as well as multi-modal transportation support facilities.

University Avenue Gateway (~21.3 acres)

The University Avenue Gateway land use designation begins on the northern portion of West Campus and continues east under I-215 along University Avenue into the core of East Campus. The University Avenue Gateway is envisioned as the campus’ primary entryway, connecting campus to Downtown Riverside and the broader Riverside community. The area is intended to encourage activities that express a welcoming and identifiable approach to campus, create identity, and that are active during the daytime and evening hours as well as on weekends, with an emphasis on street-oriented interaction and engagement. The University Avenue Gateway is envisioned to include a dense and diverse mix of uses that provide opportunities for greater campus-community interaction, and that collectively reinforce the importance of the area as the terminus of the University Avenue corridor, which connects campus with Downtown Riverside, approximately 3 miles to the west.

University Avenue Gateway uses may include academic instruction and research facilities above, or in conjunction with, large lecture halls or assembly and exhibition spaces, a visitor's center, food services and cafes, student services, multi-modal transportation support facilities, and other compatible non-UCR uses. Secondary permissible uses include parking, open space, and other support uses.

Non-UCR Land of Interest (~12.8 acres)

While not a designated land use, the 2021 LRDP identifies two properties not currently owned by UCR as potential opportunity areas for University-related uses, should they become available for University use in the future. They include the existing Caltrans Yard at the east end of Everton Drive and a City of Riverside-owned, eight-acre parcel of land that is landlocked within West Campus.

Assembly Bill (AB) 52 requires lead agencies to consult with California Native American Tribes that request such consultation in writing prior to the agency's release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. UCR received your May 26, 2020 letter requesting formal notification of proposed campus projects. This letter is intended as formal notification of the proposed 2021 LRDP pursuant to AB 52.

Your participation in this local planning process is important. A Cultural Resources Constraint Study for the 2021 LRDP has been prepared. The Sacred Lands File Search (SLF) conducted by the Native American Heritage Commission (NAHC) for the proposed 2021 LRDP had positive results. If you possess any information or knowledge regarding Native American Sacred Lands or other tribal cultural resources in and around the campus area, and wish to consult with the UCR regarding these resources or mitigation measures to reduce impacts of the proposed 2021 LRDP, please direct your email to stephanie.tang@ucr.edu or any correspondence on this matter to:

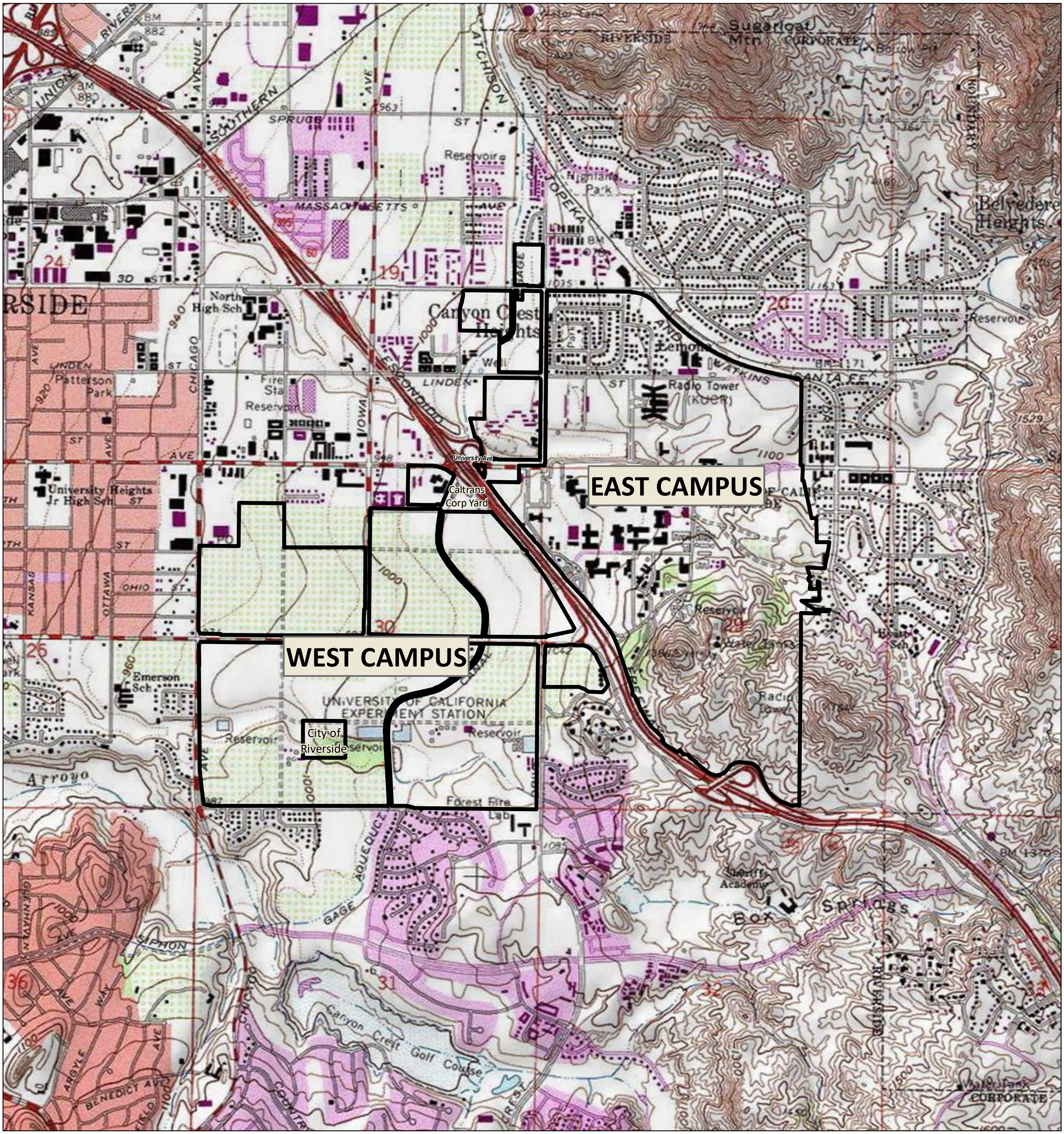
Stephanie Tang
Campus Environmental Planner
University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507-7209

Please let me know if you have any questions or would like to discuss the proposed 2021 LRDP. I can be reached by phone at (951) 827-1484 or via email at stephanie.tang@ucr.edu. Thank you for your interest on projects at UCR.

Respectfully,

Stephanie Tang

Stephanie Tang
Campus Environmental Planner



UCR

UCR Campus Boundary

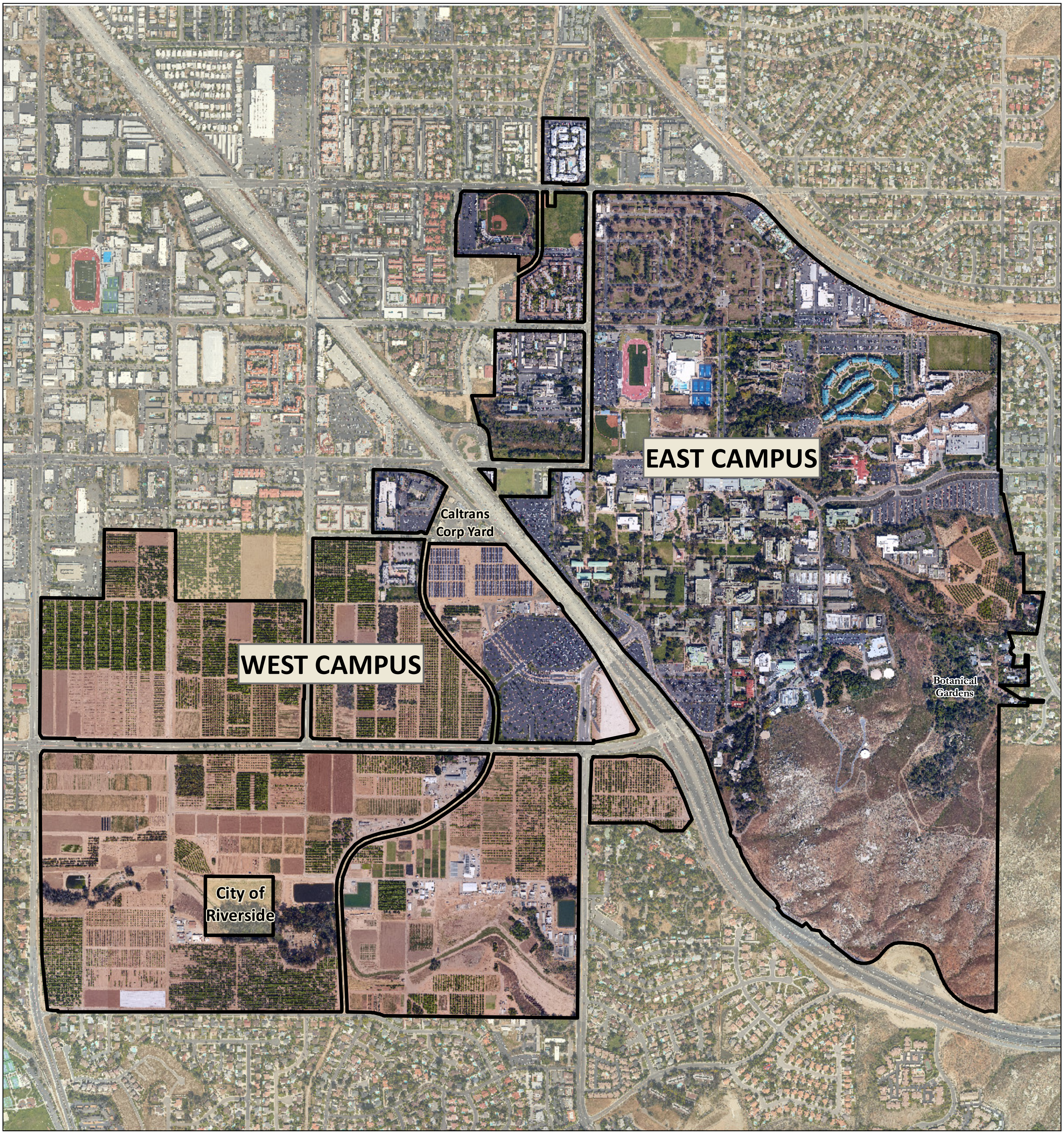
2,000 1,000 0 2,000

Feet

EXHIBIT 1
Regional Location

Source: USGS 7.5 min Riverside East

V:\map_docs\mxd\LRDP\LRDP_regloc_2000.mxd 5/12/2020

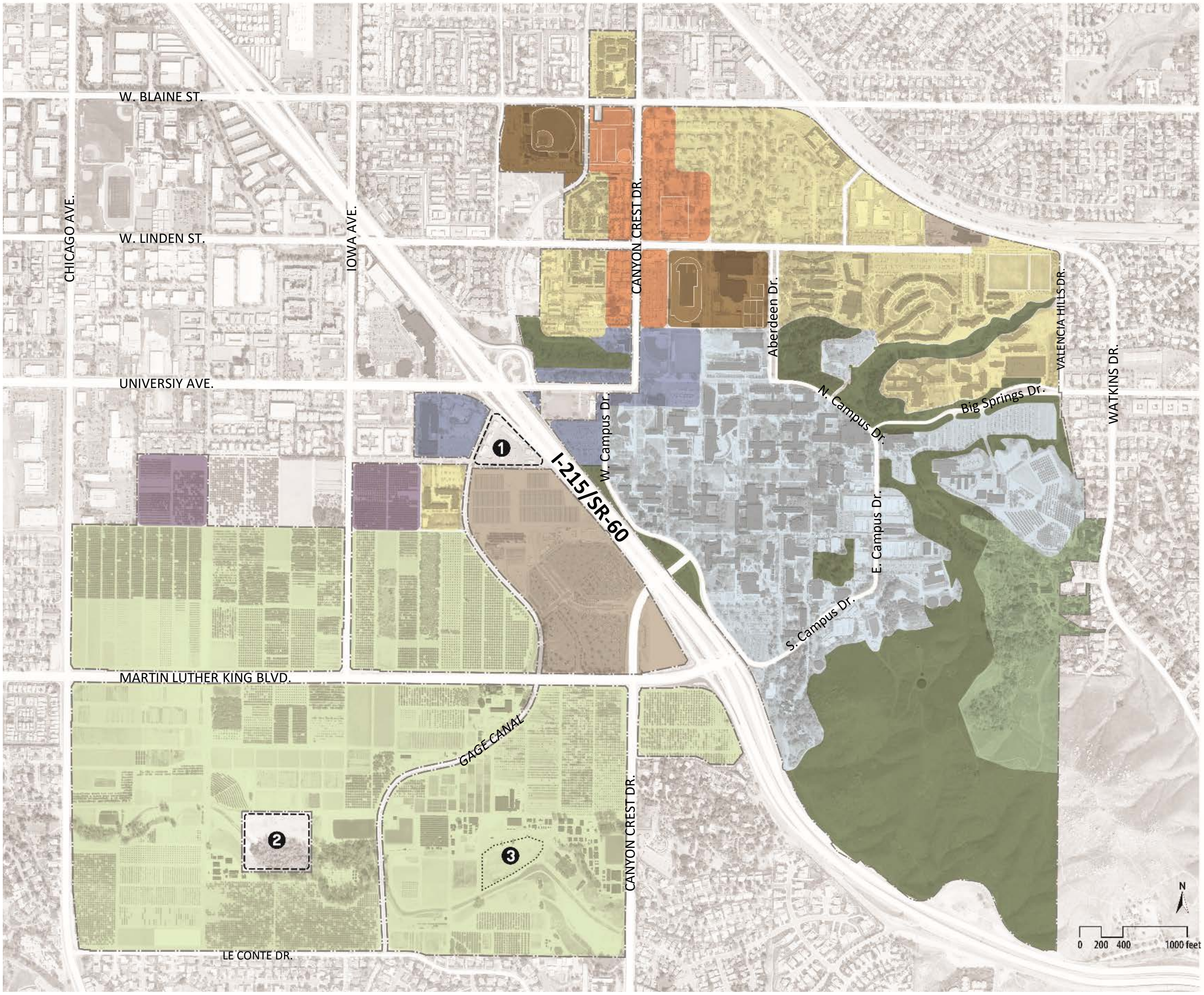


UCR

▭ UCR Campus Boundary

EXHIBIT 2
Aerial Map

V:\map_docs\mxd\LRDP\LRDP_Aerial_PrjSite.mxd 5/12/2020



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

🟦 ACADEMICS & RESEARCH
🟪 AGRICULTURAL/CAMPUS RESEARCH
🟩 LAND-BASED RESEARCH
⬜ CAMPUS SUPPORT
🟩 OPEN SPACE RESERVE
🟩 UCR BOTANIC GARDENS
🟫 RECREATION & ATHLETICS
🟨 STUDENT NEIGHBORHOOD
🟧 CANYON CREST GATEWAY
🟦 UNIVERSITY AVENUE GATEWAY
⬚ NON-UCR LAND OF INTEREST

EXHIBIT 3
Land Use Diagram

Appendix K5

San Manuel Band of Mission Indians

From:	Ryan Nordness
To:	Stephanie Tang
Subject:	RE: AB 52 - UCR 2021 Long Range Development Plan
Date:	Wednesday, April 7, 2021 1:58:42 PM
Attachments:	image003.png image001.png image1b1bb4.PNG

Hey Stephanie,
Thank you for sending that over our department's review. We ask only to include information regarding unanticipated discovery of human remains which I have attached below.

Inadvertent Discoveries of Human Remains/Funerary Objects
In the event that any human remains are discovered within the project area, ground disturbing activities shall be suspended 100 feet around the resource(s) and an Environmentally Sensitive Area (ESA) physical demarcation/barrier constructed. The on-site lead/foreman shall then immediately who shall notify SMBMI, the applicant/developer, and the Lead Agency. The Lead Agency and the applicant/developer shall then immediately contact the County Coroner regarding the discovery. If the Coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, the Coroner shall ensure that notification is provided to the NAHC within twenty-four (24) hours of the determination, as required by California Health and Safety Code § 7050.5 (c). The NAHC-identified Most Likely Descendant (MLD), shall be allowed, under California Public Resources Code § 5097.98 (a), to (1) inspect the site of the discovery and (2) make determinations as to how the human remains and funerary objects shall be treated and disposed of with appropriate dignity. The MLD, Lead Agency, and landowner agree to discuss in good faith what constitutes "appropriate dignity" as that term is used in the applicable statutes. The MLD shall complete its inspection and make recommendations within forty-eight (48) hours of the site visit, as required by California Public Resources Code § 5097.98.

Reburial of human remains and/or funerary objects (those artifacts associated with any human remains or funerary rites) shall be accomplished in compliance with the California Public Resources Code § 5097.98 (a) and (b). The MLD in consultation with the landowner, shall make the final discretionary determination regarding the appropriate disposition and treatment of human remains and funerary objects. All parties are aware that the MLD may wish to rebury the human remains and associated funerary objects on or near the site of their discovery, in an area that shall not be subject to future subsurface disturbances. The applicant/developer/landowner should accommodate on-site reburial in a location mutually agreed upon by the Parties.

It is understood by all Parties that unless otherwise required by law, the site of any reburial of Native American human remains or cultural artifacts shall not be disclosed and shall not be governed by public disclosure requirements of the California Public Records Act. The Coroner, parties, and Lead Agencies, will be asked to withhold public disclosure information related to such reburial, pursuant to the specific exemption set forth in California Government Code § 6254 (r).

Ryan Nordness
CULTURAL RESOURCE ANALYST
Email: Ryan.Nordness@sanmanuel-nsn.gov
O: (909) 864-8933 x50-2022
Internal: 50-2022
M: 909-838-4053
26569 Community Center Dr Highland California 92346
SAN MANUEL
BAND OF MISSION INDIANS

From: Stephanie Tang <stephanie.tang@ucr.edu>
Sent: Friday, April 2, 2021 7:50 PM
To: Jessica Mauck <Jessica.Mauck@SanManuel-NSN.Gov>; Ryan Nordness <Ryan.Nordness@sanmanuel-nsn.gov>
Subject: RE: AB 52 - UCR 2021 Long Range Development Plan

Hi Jessica and Ryan,

The University has been working on the Draft Program Environmental Impact Report (PEIR) for the proposed 2021 Long Range Development Plan and appreciate the Soboba Band of Mission Indians' comments and proposed mitigation measures for consideration during the University's preparation of the PEIR. I have attached the draft cultural resources/tribal cultural resources mitigation measures for your review and feedback.

In regards to the tribe's comment to have a mitigation measure for discovery of human remains: California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097. If human remains are discovered during any construction activities, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and UCR shall notify the Riverside County coroner and the NAHC immediately, according to PRC Section 5097.98 and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings, UCR and the NAHC-designated most likely descendant shall recommend the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California PRC Section 5097.94. Compliance with California Health and Safety Code Sections 7050.5 and 7052 and California PRC Section 5097 would provide an opportunity to avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. No mitigation is proposed based on the above discussion which is also standard contract language for contractors to abide by in all our campus projects.

I have attached the LRDP Cultural Resource Constraint Study, for your reference.

Please let me know if you have any suggested edits in tracked change edits/comments and whether you would like to set up a zoom call to discuss. Requesting your any edits/comments you may have by April 16, 2021, if possible, otherwise the University will assume tribal consultation has concluded. Thank you so much.

Respectfully,

Stephanie Tang
Campus Environmental Planner
UNIVERSITY OF CALIFORNIA, RIVERSIDE
PLANNING, DESIGN & CONSTRUCTION
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951.827.1484 | cpp.ucr.edu

From: Jessica Mauck <JMauck@sanmanuel-nsn.gov>
Sent: Wednesday, June 17, 2020 3:56 PM
To: Stephanie Tang <stephanie.tang@ucr.edu>
Subject: RE: AB 52 Courtesy Notice for UC Riverside Projects

Hi Stephanie,

Thank you for contacting the San Manuel Band of Mission Indians (SMBMI) regarding the above referenced project. SMBMI appreciates the opportunity to review the project documentation, which was received by our Cultural Resources Management Department on 19 May 2020. While the East Campus area exists within Serrano ancestral territory and, therefore, is of interest to the Tribe, the West Campus is just outside of Serrano ancestral territory. As such, SMBMI will not provide comments or consult on the proposed West Campus efforts. Further, given the amount of existing disturbance within the East Campus, SMBMI does not have any concerns with the project's implementation, as planned, at this time. As a result, SMBMI requests that the following language, or some variation thereof, be made a part of the project/permit/plan conditions:

CUL MMs

1. In the event that cultural resources are discovered during project activities, all work in the immediate vicinity of the find (within a 60-foot buffer) shall cease and a qualified archaeologist meeting Secretary of Interior standards shall be hired to assess the find. Work on the other portions of the project outside of the buffered area may continue during this assessment period. Additionally, the San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed within TCR-1, regarding any pre-contact finds and be provided information after the archaeologist makes his/her initial assessment of the nature of the find, so as to provide Tribal input with regards to significance and treatment.

2. If significant pre-contact cultural resources, as defined by CEQA (as amended, 2015), are discovered and avoidance cannot be ensured, the archaeologist shall develop a Monitoring

and Treatment Plan, the drafts of which shall be provided to SMBMI for review and comment, as detailed within TCR-1. The archaeologist shall monitor the remainder of the project and implement the Plan accordingly.

3. If human remains or funerary objects are encountered during any activities associated with the project, work in the immediate vicinity (within a 100-foot buffer of the find) shall cease and the County Coroner shall be contacted pursuant to State Health and Safety Code §7050.5 and that code enforced for the duration of the project.

TCR MMs

1. The San Manuel Band of Mission Indians Cultural Resources Department (SMBMI) shall be contacted, as detailed in CR-1, of any pre-contact cultural resources discovered during project implementation, and be provided information regarding the nature of the find, so as to provide Tribal input with regards to significance and treatment. Should the find be deemed significant, as defined by CEQA (as amended, 2015), a cultural resources Monitoring and Treatment Plan shall be created by the archaeologist, in coordination with SMBMI, and all subsequent finds shall be subject to this Plan. This Plan shall allow for a monitor to be present that represents SMBMI for the remainder of the project, should SMBMI elect to place a monitor on-site.

2. Any and all archaeological/cultural documents created as a part of the project (isolate records, site records, survey reports, testing reports, etc.) shall be supplied to the applicant and Lead Agency for dissemination to SMBMI. The Lead Agency and/or applicant shall, in good faith, consult with SMBMI throughout the life of the project.

Note: San Manuel Band of Mission Indians realizes that there may be additional tribes claiming cultural affiliation to the area; however, San Manuel Band of Mission Indians can only speak for itself. The Tribe has no objection if the agency, developer, and/or archaeologist wishes to consult with other tribes in addition to SMBMI and if the Lead Agency wishes to revise the conditions to recognize additional tribes.

Please provide the final copy of the project/permit/plan conditions so that SMBMI may review the included language. This communication concludes SMBMI's input on this project, at this time, and no additional consultation is requested unless there is an unanticipated discovery of cultural resources during project implementation. If you should have any further questions with regard to this matter, please do not hesitate to contact me at your convenience, as I will be your Point of Contact (POC) for SMBMI with respect to this project.

Respectfully,

Jessica Mauck

DIRECTOR OF CULTURAL RESOURCES MANAGEMENT
O: (909) 864-8933 x3249
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26569 Community Center Dr Highland California 92346
SAN MANUEL
BAND OF MISSION INDIANS

From: Stephanie Tang [mailto:stephanie.tang@ucr.edu]
Sent: Tuesday, May 19, 2020 12:00 PM
To: Jessica Mauck
Subject: AB 52 Courtesy Notice for UC Riverside Projects

Hi,

Assembly Bill 52 (AB 52) requires lead agencies to consult with California Native American Tribes that request such consultation in writing prior to the agency's release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for campus projects. The purpose of this letter serves as a courtesy notice to seek other tribes who would like to be a part of the AB 52 tribal consultation process for UCR campus projects.

The approximate 1,108-acre UCR campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway.

In December 2015, UCR contacted California Native American tribes traditionally and culturally affiliated with the Riverside Region to solicit their interest in being notified of proposed campus development projects as part of the planning process pursuant to AB 52. UCR received responses from two tribes (Agua Caliente Band of Cahuilla Indians and Torres-Martinez Desert Cahuilla Indians) who requested to be part of the AB 52 tribal consultation process. Accordingly, UCR has been sending formal notification letters to the above-mentioned tribes in compliance with AB 52 and offering the opportunity for tribal consultation.

Your participation in this local planning process is important. If you possess any information or knowledge regarding Native American Sacred Lands or other tribal cultural resources in and around the UCR campus, and wish to be a part of the tribal consultation process, please let me know. See attached PDF for further information.

Kind regards,

Stephanie Tang
Campus Environmental Planner
UCR | Planning, Design & Construction
UNIVERSITY OF CALIFORNIA, RIVERSIDE
1223 UNIVERSITY AVE | SUITE 240 | RIVERSIDE CA 92507
951.827.1484 | cpp.ucr.edu

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San Manuel Band of Mission Indians

June 17, 2020

University of California, Riverside
1223 University Ave., Ste. 240
Riverside, CA 92507

RE: AB 52 (PRC Subsections 21073, 21074, 21080.3.1, 21080.3.2., 21082.3, 21083.09, 21084.2, and 5097.94.) Consultation

Dear Ms. Tang:

The San Manuel Band of Mission Indians (SMBMI) respectfully requests that consultations on a government-to-government basis be incorporated into your Agency's processes and procedures for all projects within your jurisdiction that have the potential to impact tribal cultural resources as required by AB 52 that was signed into law in 2014. AB 52 amended CEQA with requirements that tribal cultural resources be considered along with historic, archaeological and paleontological resources when developments occur. This letter serves as a formal request for consultation.

San Manuel Band of Mission Indians

The San Manuel Band of Mission Indians (the "Tribe") is a federally recognized American Indian tribe located near the city of Highland, San Bernardino County, California. Since 1891, the Tribe has been recognized as a sovereign nation with the right of self-government by the United States. Since time immemorial, the San Manuel tribal community has endured change and hardship. Amidst these challenges the tribe continued to maintain its unique form of governance. Like other governments, it seeks to provide services for its citizens by building infrastructure, maintaining civil services and promoting social, economic and cultural development. Today San Manuel tribal government oversees many governmental units including the departments of fire, public safety, education, cultural resources, and environment.

Tribal Traditional Territory and CEQA Consultation

The Tribe, also known as the *Yuhaaviatam* Clan, or "People of the Pines", is one of several clans of the greater Serrano Indian Nation whose aboriginal territories encompass much of present-day San Bernardino County, southeast Kern County, Eastern Los Angeles County and northwestern Riverside County. The Tribe has maintained a close connection with its ancestral territories and has been designated as the Most Likely Descendants by the California Native American Heritage Commission on numerous occasions when inadvertent discoveries of human remains and cultural resources were made within its ancestral territory.

The attached map depicts the boundaries of the Tribe's traditional territory and is provided for your use as a planning tool. Your city/agency is within the Tribe's ancestral territory and we hereby request to review all of your CEQA projects so that we may have an opportunity to comment on the identification and protection of potential Tribal Cultural Resources. These resources and this opportunity are of great importance to the Tribe.

Other Legal Compliance Requirements

As you are aware, there are other legal compliance requirements for tribal consultation, such as CEQA and the requirements contained in SB 18 for any proposed general plan amendments, specific plans and their amendments, and certain other applications that would designate large areas of open space. The new provisions in the Public Resources Code proscribe specific steps and timelines governing the notice and consultation process. Please note that in providing information to the Tribe about specific projects under any of the afore-mentioned requirements, we are requesting the following information be included, at minimum: a comprehensive project description; a discussion of past land use history; the proposed project's location identified on a U.S.G.S. 7.5' topographic map, as well as aerial map and; the results of both a 1-mile radius Records Search from the appropriate CHRIS Information Center and Phase I archaeological field survey. This information will help expedite a timely response and enhance success toward meaningful consultation.

If you would like to further speak on the subject of this correspondence, whether via phone or in person, please do not hesitate to contact me.

Sincerely,

DocuSigned by:
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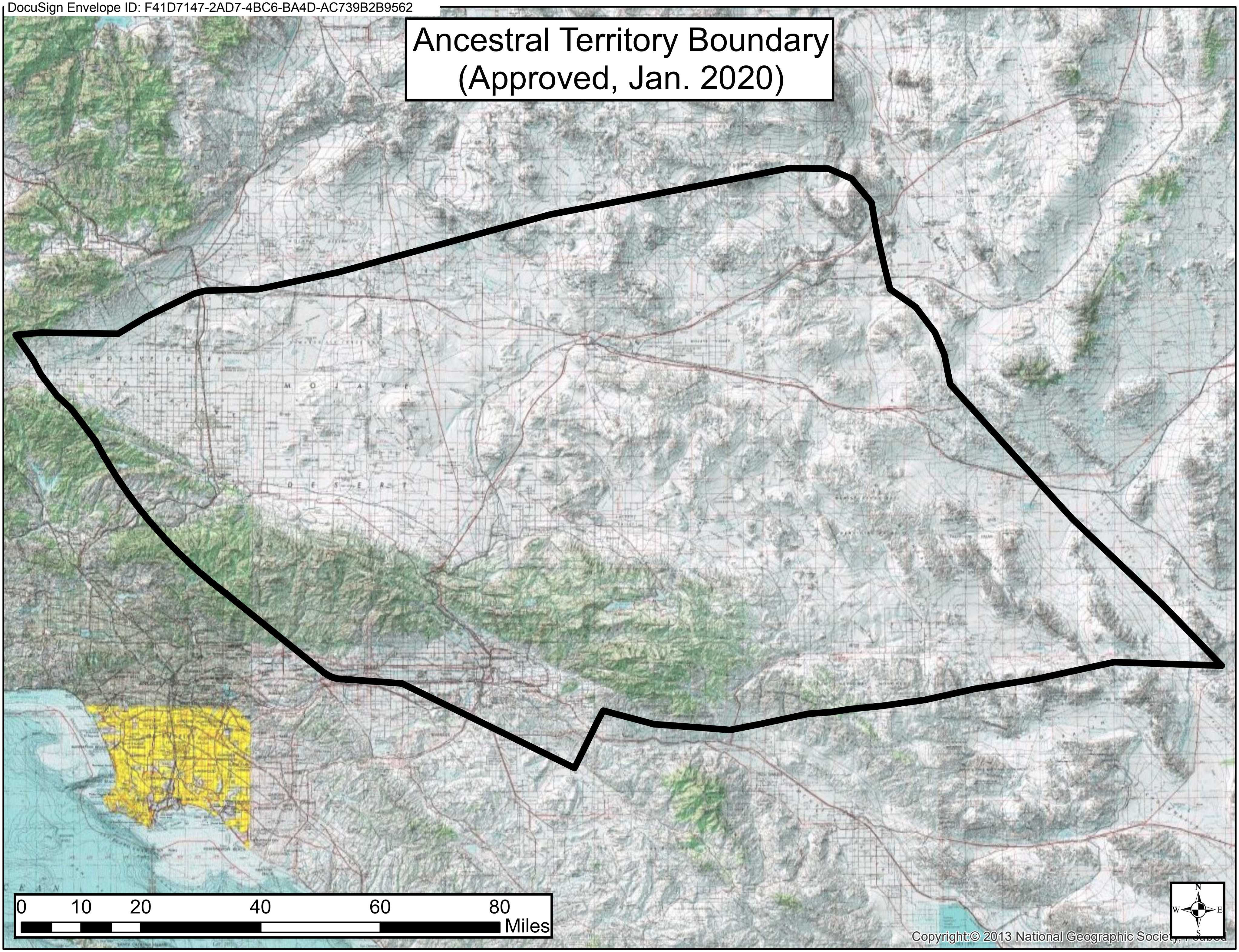
Jessica Mauck, Director-CRM Department

Attachments:
Serrano Ancestral Territory Map

Ancestral Territory Boundary (Approved, Jan. 2020)



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Appendix K6

Torres-Martinez Desert Cahuilla Indians

From: Stephanie Tang
To: mmirelez@tmdci.org
Subject: RE: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan
Date: Friday, April 2, 2021 7:35:00 PM
Attachments: AB52_NoticeLtr_TMDCI_05-19-2020.pdf
image001.png

Hi Michael,

The 2021 Long Range Development Plan AB 52 notice was emailed to the Torres-Martinez Desert Cahuilla Indians on May 19, 2020 and the University has not heard from the tribe whether the tribe would like to consult on this project. I have attached the AB 52 notice again for your reference. Please kindly let me know by April 9, 2021 if the tribe would like to consult on this project otherwise I will assume the tribe does not wish to consult. Thank you so much.

Respectfully,

Stephanie Tang
Campus Environmental Planner

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PLANNING, DESIGN & CONSTRUCTION
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From: Stephanie Tang
Sent: Tuesday, May 19, 2020 11:00 AM
To: mmirelez@tmdci.org
Subject: AB 52 Consultation - UC Riverside 2021 Long Range Development Plan

Hi,

The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed 2021 Long Range Development Plan (LRDP). The approximate 1,108-acre campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway. Please see attached PDF for a description of the proposed UCR 2021 LRDP.

Assembly Bill 52 (AB 52) requires lead agencies to consult with California Native American tribes that request such consultation in writing prior to the agency's release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. UCR received your May 2, 2016 letter requesting formal notification of proposed projects within the Torres-Martinez Desert Cahuilla Indians Traditional Use Area. The attached letter is intended as formal notification of the proposed project pursuant to AB 52.

Please let me know if you have any questions or would like to discuss the proposed 2021 LRDP. Thank you for your interest on projects at UCR.

Kind regards,

Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507

May 19, 2020

Michael Mirelez
Cultural Resource Coordinator
Torres-Martinez Desert Cahuilla Indians
P.O. Box 1160
Thermal, CA 92274

mmirelez@tmdci.org

Subject: Assembly Bill (AB) 52 Consultation (Public Resources Code §21080.3.1) – UC Riverside 2021 Long Range Development Plan, Riverside County, California

Dear Mr. Mirelez:

The University of California, Riverside (UCR) is the lead agency, pursuant to the California Environmental Quality Act (CEQA), for the proposed 2021 Long Range Development Plan (LRDP) located in the City of Riverside, Riverside County, California. The proposed UCR 2021 LRDP is located within Sections 19, 20, 29, and 30 (Township 2 South; Range 4 West) of the USGS **Riverside East, CA** 7.5 Minute Quadrangle.

The approximate 1,108-acre campus is generally bounded by Blaine Street on the north, Watkins Drive on the east, Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the Interstate 215/State Route 60 (I-215/SR-60) freeway. The two resulting areas of campus is described below. Refer to Exhibit 1 and Exhibit 2 for the regional location and aerial map, respectively.

East Campus

East Campus comprises approximately 604 acres and contains most of the University's built space. Nearly all the academic, research, and support facilities are located within the Academic Center circumscribed by Campus Drive, including most of the campus' original buildings. The northern half of East Campus is devoted to student housing and recreation. The Belltower marks the heart of the campus, at the center of the Carillon Mall. The terrain steepens to the south and east of East Campus and as a result, these areas are largely unbuilt.

West Campus

West Campus comprises approximately 504 acres and is largely used as agricultural teaching and research fields managed by the Agricultural Operations (Ag Ops) unit of College of Natural and Agricultural Services (CNAS). Several facilities are also located on West Campus: these include

Parking Lot 30, University Extension (UNEX), and International Village, a housing complex intended for visiting international students. The University Substation, jointly owned by the City of Riverside and UCR is at the northern edge of Parking Lot 30. There is a California Department of Transportation (Caltrans) service yard on an approximately 4.1-acre triangular parcel directly west of the I-215/SR-60 freeway, at the eastern terminus of Everton Place. The Gage Canal traverses the area north to south.

The 2021 LRDP proposes a net increase in development of approximately 3.7 million assignable square feet (asf) (approximately 6 million gross square feet [gsf][1]) of additional academic buildings and support facilities, including student housing. Therefore, the 2021 LRDP proposes a maximum of approximately 8.5 million asf (approximately 13 million gsf[2]) of total academic, research and support space development by the academic year 2035/2036 to accommodate the enrollment growth and meet program needs. The housing goal under the proposed 2021 LRDP would be to provide on-campus or campus-controlled student housing for 40 percent of the student population. The 2021 LRDP proposes to accommodate a total enrollment of approximately 35,000 students (three-quarter average headcount) by the academic year 2035/2036. It is anticipated that approximately 2,800 additional faculty and staff would be needed to support academic year 2035/2036 student enrollment.

A comparison of the projected population and campus development between the 2018/2019 academic year and 2021 LRDP projections are provided in Table 1.

Table 1 – Baseline (2018/2019) and 2021 LRDP (2035/2036) Project Population and Physical Development

Category	Baseline (2018/2019)	2021 LRDP (2035/2036)	Net 2021 LRDP Increase from Baseline
Campus Population			
Undergraduate Student Population (three-quarter average headcount)	20,581	28,000	7,419
Graduate Student Population (three-quarter average)	3,341	7,000	3,659
Total Student Population (three-quarter average)	**23,922**	**35,000**	**11,078**
Academic Faculty and Staff	1,702	2,545	843
Non-Academic Staff	3,037	5,000	1,963
Total Faculty/Staff Population	**4,739**	**7,545**	**2,806**

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1 Rounded to the nearest million

2 Rounded to the nearest million

Campus Development (asf/gsf)			
Academics and Research	1,220,283 / 1,830,425	1,700,852 / 2,551,278	480,569 / 720,854
Academic Support	1,458,975 / 2,188,463	2,355,204 / 3,532,806	896,229 / 1,344,344
Student Life (including residential, residential dining, student health, student union, indoor recreation, and athletics)	1,875,963 / 2,813,945	4,198,504 / 6,297,756	2,322,541 / 3,483,812
Corporation Yard	248,279 / 372,419	248,279 / 372,419	0 / 0
Total Campus Development (asf/gsf)	**4,803,500 / 7,205,250**	**8,502,839 / 12,754,259**	**3,699,339 / 5,549,009**
On-Campus Housing Beds			
Residential (beds) (includes Freshmen, Triples, Upperclass, and Family Housing)	6,511	14,000	7,489
Source: UCR 2021 LRDP Program Model Notes: LRDP = Long Range Development Plan asf = assignable square feet gsf = gross square feet			

Land Use Descriptions

The proposed 2021 LRDP provides long-term planning for the land uses, activities and facilities on the main UCR campus. Predominant uses can be described by the primary facilities, programs, and/or activities within a geographic area on campus to achieve specific planning objectives. In many instances, other secondary permissible uses are also allowed within the predominant land use category. The proposed 2021 LRDP land uses are described below and are shown on Exhibit 3.

A comparison of the land uses from the 2005 LRDP and proposed 2021 LRDP are shown in Table 2.

Table 2 – 2005 LRDP versus 2021 LRDP Land Uses

Land Use Designations	2005 LRDP (Acres)		2021 LRDP (Acres)	
	West Campus	East Campus	West Campus	East Campus
Academics & Research	54.3	132.2	0.0	184.3
Campus Support	9.1	11.0	51.0	3.0
Land-based Research	294.9	0.0	419.3	0.0

Open Space Reserve	0.0	130.5	0.0	154.8
Recreation & Athletics	14.1	53.4	0.0	28.7
Student Neighborhood	68.5	100.1	5.4	136.4
2021 LRDP-Specific Land Use Designations[1]				
Agricultural/Campus Research	Not Applicable	Not Applicable	19.4	0.0
UCR Botanic Gardens	Not Applicable	Not Applicable	0.0	43.7
Canyon Crest Gateway	Not Applicable	Not Applicable	0.0	31.9
University Avenue Gateway	Not Applicable	Not Applicable	8.3	21.3
Non-UCR Land of Interest	Not Applicable	Not Applicable	12.8[3]	0.0
2005 LRDP-Specific Land Use Designations[2]				
Open Space	25.2	144.2	Not Applicable	Not Applicable
Campus Reserve	37.3	0.0	Not Applicable	Not Applicable
Non-Institutional Agencies	0.0	12.3	Not Applicable	Not Applicable
Parking	7.9	17.1	Not Applicable	Not Applicable
Totals				
Total Acres by Campus	511.3	600.8	503.4	604.1
Total Acres (Rounded)[4]	1,112		1,108	

Source: GIS.

Notes:

[1] These land use designations are new to the 2021 LRDP and were not used as land use categories under the 2005 LRDP.

[2] The acreage from 2005 LRDP Land Use Designations no longer in use have been incorporated into the proposed 2021 LRDP Land Use Designations as appropriate, e.g. 25 acres of parking lots has been allocated among the new land use areas throughout campus based on location.

[3] Non-UCR Land of Interest is not included in the total acreage under the 2021 LRDP.

[4] The difference in the acreage between the 2005 LRDP and 2021 LRDP is related to the acquisition of Oban and Falkirk Apartments and the acquisition of several properties in Frost Court and one on Watkins Ave next to the Chancellor's residence. There was also the sale of approximately 18 acres of land on the West Campus to CARB.

Academics & Research (~184.3 acres)

The Academics & Research land use areas are located within or adjacent to the core of East Campus, primarily bounded by the campus loop road. This land use designation consists of facilities dedicated to undergraduate and graduate learning and research environments, and daytime student life activities, such as the student union and food services.

Academics & Research facilities may include classrooms; instructional and research laboratories and greenhouses; undergraduate, graduate, and professional schools and associated programs; libraries; advanced scientific research facilities; federal research partnerships; performance and cultural facilities; clinical facilities; and ancillary support facilities, such as general administrative offices, conference rooms, and meeting spaces. Additional uses are those supporting core campus student life activities, and food services, such as the Highlander Union Building and The Barn. Secondary permissible uses include parking, utility infrastructure, and other campus support services.

Agricultural/Campus Research (~19.4 acres)

The Agricultural/Campus Research land use is established to enhance and expand external engagement of UCR's research, education, and public service mission by providing a principal place for facilities and activities that support the University and the City of Riverside's aspirations to make and showcase UCR as a recognized center for innovation in agricultural sciences and technology.

Agricultural/Campus Research facilities may include space for interdisciplinary research and education; support of land-based research activities; external research partnerships; and public-private innovation partnerships. Secondary permissible uses include parking, open space, utility infrastructure, and other support uses.

Land-based Research (~419.3 acres)

The Land-based Research land use areas are located on West Campus and retain the existing agricultural land-based teaching and research fields.

Land-based Research land uses may include agricultural field research; instructional and research laboratories; greenhouses; and services supporting agricultural research. Secondary permissible uses also include parking, storage, utility infrastructure, and related support services/facilities.

Student Neighborhood (~141.8 acres)

The Student Neighborhood land use areas are predominantly located within the northern portions of East Campus and encompass primarily non-academic uses to facilitate vibrant undergraduate and graduate student learning experiences outside of the classroom environment.

Student Neighborhood land uses are meant to accommodate a diverse array of uses to ensure that student needs are met within an interactive, mixed-use environment. Land uses may include student residences for undergraduate and graduate students, and students with families; student services, meeting, and instructional space; food service and retail; appropriately scaled recreation and athletic facilities; childcare and pre-schools proximate to family housing; parking primarily for students; and other residential support services, such as facilities services and public safety.

Recreation & Athletics (~28.7 acres)

The Recreation & Athletics land uses are concentrated in two areas in the northern portion of East Campus and include the Student Recreation Center, the track facility, tennis courts, and the baseball stadium on Blaine Street. Additional neighborhood-scale facilities would be interspersed within student neighborhoods, as indicated above, to improve student access, and create a more dynamic student experience into the evenings and on weekends.

Recreation & Athletics land uses may include facilities to accommodate intercollegiate athletics, and campus recreation, such as large scale indoor and outdoor athletic and recreation facilities, playfields, and courts. Secondary permissible uses also include parking, food service, administrative areas, office and meeting space, and other supporting uses.

Campus Support (~54.0 acres)

The Campus Support land use areas would be primarily located on the eastern portion of West Campus, with a small land use area located in the northeast portion of East Campus. Land uses include general campus support services, such as administrative and institutional support functions, including facilities services, public safety, parking and transportation, service yards, maintenance facilities, trade shops, materials handling and storage, inclusive of hazardous materials, shipping and receiving, utility plants and systems, fleet storage, parking, and other support functions.

Open Space Reserve (~154.8 acres)

The Open Space Reserve land use designation would recognize, protect, and enhance areas that have ecological or aesthetic value to campus, including those subject to special development constraints due to native or endangered species habitats, steep or unique terrain such as arroyos, and riparian corridors or other natural features. This land use designation is intended to recognize that these areas are major contributors to UCR’s character and ecology.

The Open Space Reserve land uses would include designated hillsides, storm water management infrastructure, habitat restoration and management activities, trails and minor amenities such as seating and viewing areas, and other features compatible with natural open spaces. Secondary permissible uses include facilities that support campus open space resources such as maintenance roads, storage structures, and incidental field research facilities.

UCR Botanic Gardens (~43.7 acres)

The UCR Botanic Gardens is in the easternmost portion of East Campus, at the foothills of the Box Springs Mountains, and serves a unique role as a venue for a wide array of teaching, research, and demonstration activities. Approximately one-third of the UCR Botanic Gardens land remains natural, featuring the native habitat of the region.

UCR Botanic Gardens land uses include demonstration gardens, habitat restoration and management, and incidental facilities, such as interpretive centers, seating and viewing areas, and other amenities typically compatible with a botanic garden program. Secondary permissible uses include support facilities for the UCR Botanic Gardens and parking.

Canyon Crest Gateway (~31.9 acres)

The Canyon Crest Gateway land use designation is in the northern portion of East Campus, generally bordering Canyon Crest Drive, between Blaine Street to the north and half a block south of Linden Street. The Canyon Crest Gateway is envisioned as a high-density, horizontal and vertical mixed-use gateway environment that will serve as a campus “Main Street” for the campus population to experience on a regular basis. It would accommodate a variety of student housing needs, above an array of student and commercial services that meet the needs of the campus and the local community. This corridor will continue to serve as a multi-modal arterial, but with increased focus on pedestrian-oriented uses at the lower levels of mid-rise structures. Parking would be carefully integrated into this area to allow for safe and convenient access from adjacent side streets, supportive of the desired pedestrian experience along the main street.

Canyon Crest Gateway uses may include student housing, recreation and athletics facilities, university-oriented services, administrative and support service offices, neighborhood-serving commercial and retail space such as banks, pharmacies, grocery outlets, etc., restaurants, professional services space inclusive of outpatient clinical facilities, hotel/conference center(s), alumni center, public safety, and other complementary uses, including affiliated and non-affiliated educational facilities. Secondary permissible uses include parking, academic uses, open space, and other support uses, as well as multi-modal transportation support facilities.

University Avenue Gateway (~21.3 acres)

The University Avenue Gateway land use designation begins on the northern portion of West Campus and continues east under I-215 along University Avenue into the core of East Campus. The University Avenue Gateway is envisioned as the campus’ primary entryway, connecting campus to Downtown Riverside and the broader Riverside community. The area is intended to encourage activities that express a welcoming and identifiable approach to campus, create identity, and that are active during the daytime and evening hours as well as on weekends, with an emphasis on street-oriented interaction and engagement. The University Avenue Gateway is envisioned to include a dense and diverse mix of uses that provide opportunities for greater campus-community interaction, and that collectively reinforce the importance of the area as the terminus of the University Avenue corridor, which connects campus with Downtown Riverside, approximately 3 miles to the west.

University Avenue Gateway uses may include academic instruction and research facilities above, or in conjunction with, large lecture halls or assembly and exhibition spaces, a visitor's center, food services and cafes, student services, multi-modal transportation support facilities, and other compatible non-UCR uses. Secondary permissible uses include parking, open space, and other support uses.

Non-UCR Land of Interest (~12.8 acres)

While not a designated land use, the 2021 LRDP identifies two properties not currently owned by UCR as potential opportunity areas for University-related uses, should they become available for University use in the future. They include the existing Caltrans Yard at the east end of Everton Drive and a City of Riverside-owned, eight-acre parcel of land that is landlocked within West Campus.

Assembly Bill (AB) 52 requires lead agencies to consult with California Native American Tribes that request such consultation in writing prior to the agency's release of a Notice of Preparation (NOP) of an Environmental Impact Report (EIR), or notice of a Mitigated Negative Declaration (MND), or Negative Declaration (ND) on or after July 1, 2015. UCR received your May 2, 2016 letter requesting formal notification of proposed projects within the Torres-Martinez Desert Cahuilla Indians Traditional Use Area. This letter is intended as formal notification of the proposed 2021 LRDP pursuant to AB 52.

Your participation in this local planning process is important. A Cultural Resources Constraint Study for the 2021 LRDP has been prepared. The Sacred Lands File Search (SLF) conducted by the Native American Heritage Commission (NAHC) for the proposed 2021 LRDP had positive results. If you possess any information or knowledge regarding Native American Sacred Lands or other tribal cultural resources in and around the campus area, and wish to consult with the UCR regarding these resources or mitigation measures to reduce impacts of the proposed 2021 LRDP, please direct your email to stephanie.tang@ucr.edu or any correspondence on this matter to:

Stephanie Tang
Campus Environmental Planner
University of California, Riverside
Planning, Design & Construction
1223 University Avenue, Suite 240
Riverside, CA 92507-7209

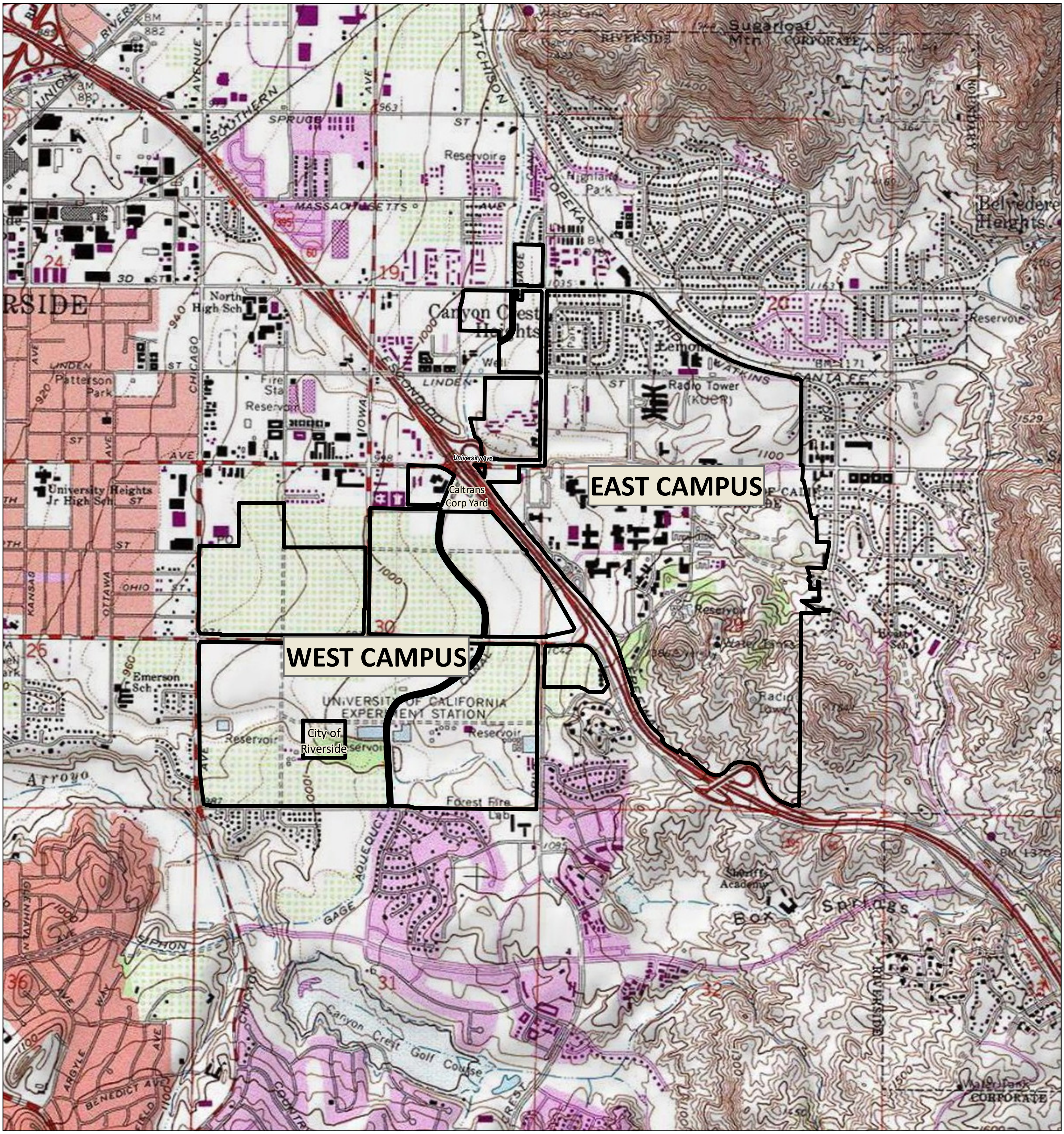
Please let me know if you have any questions or would like to discuss the proposed 2021 LRDP. I can be reached by phone at (951) 827-1484 or via email at stephanie.tang@ucr.edu. Thank you for your interest on projects at UCR.

UC RIVERSIDE
UNIVERSITY OF CALIFORNIA

Respectfully,

Stephanie Tang

Stephanie Tang
Campus Environmental Planner



UCR

▭ UCR Campus Boundary

2,000 1,000 0 2,000
Feet

EXHIBIT 1
Regional Location

Source: USGS 7.5 min Riverside East
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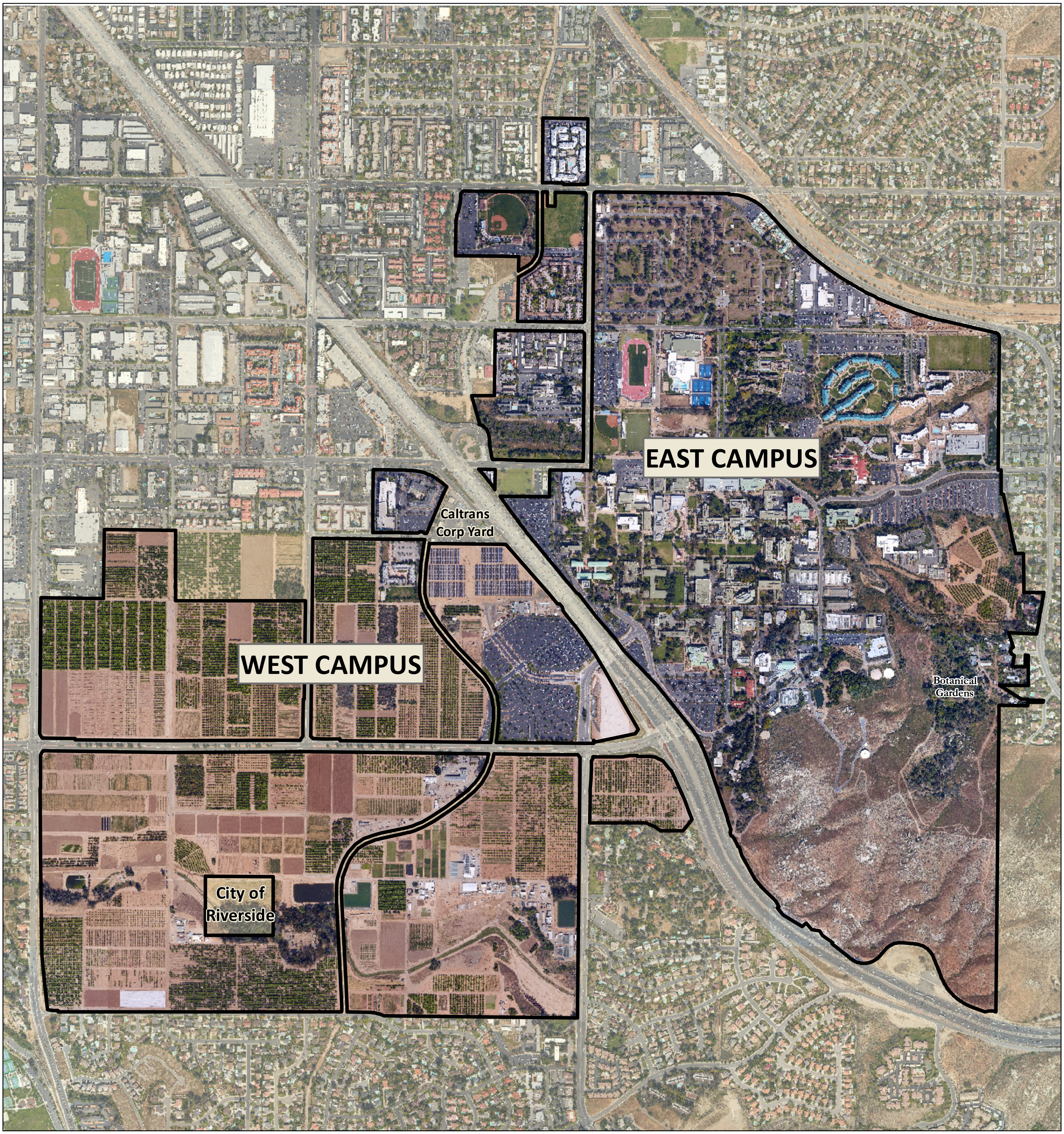

UCR

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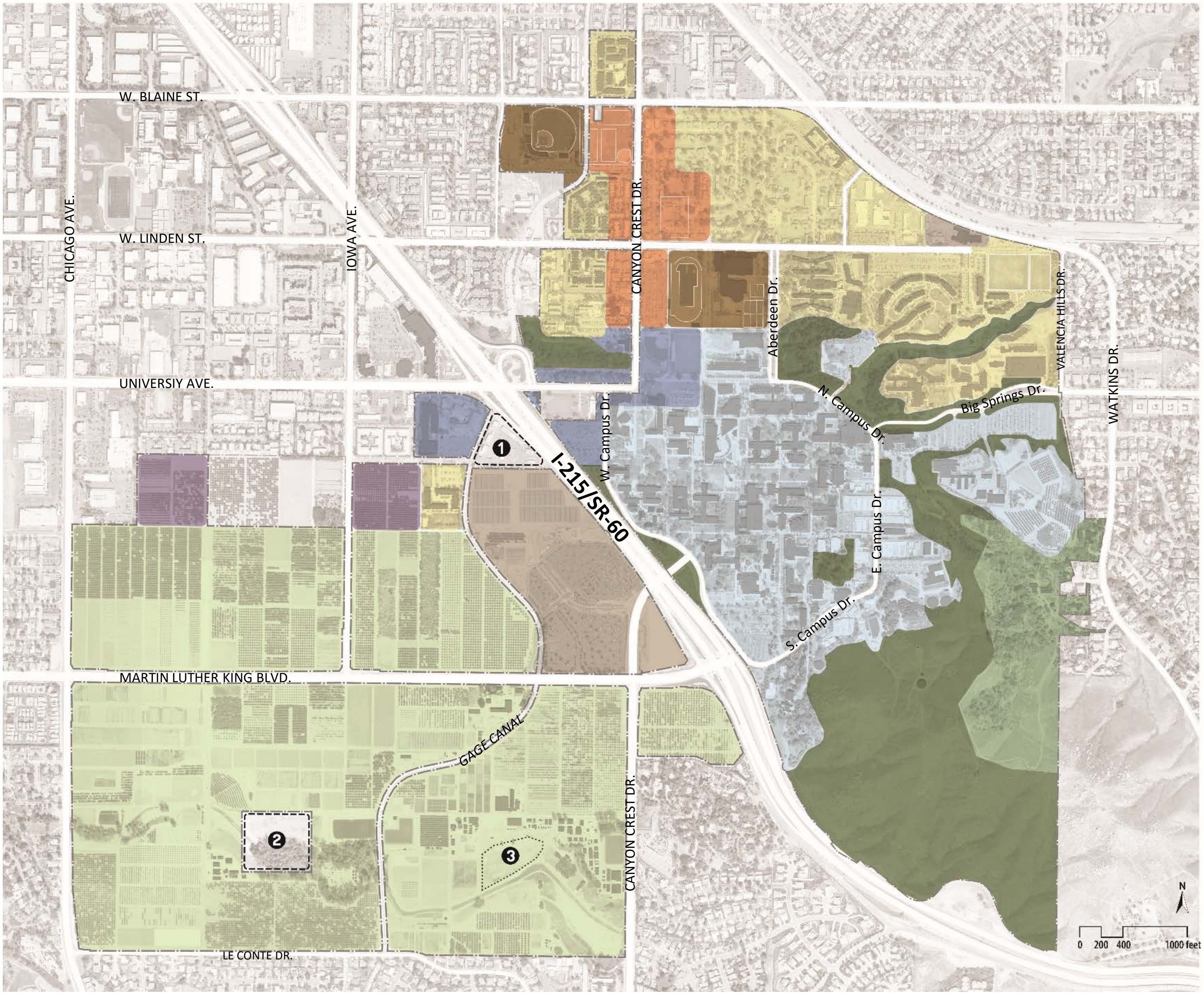
▭ UCR Campus Boundary

EXHIBIT 2
Aerial Map

V:\map_docs\mxd\LRDP\LRDP_Aerial_PrjSite.mxd 5/12/2020



LEGEND: LAND USE DIAGRAM

❶ Caltrans Yard, not in LRDP planning scope

❷ City of Riverside property, not in LRDP planning scope

❸ Development of this approximately 3.25-acre site shall be prohibited from developing uses per a Covenant to Restrict Use of Property entered into between the Department of Toxic Substances Control and The Regents of the University of California, in which a deed restriction was filed on July 26, 2006

- 🟦 ACADEMICS & RESEARCH
- 🟪 AGRICULTURAL/CAMPUS RESEARCH
- 🟩 LAND-BASED RESEARCH
- 🟫 CAMPUS SUPPORT
- 🟩 OPEN SPACE RESERVE
- 🟩 UCR BOTANIC GARDENS
- 🟫 RECREATION & ATHLETICS
- 🟨 STUDENT NEIGHBORHOOD
- 🟧 CANYON CREST GATEWAY
- 🟦 UNIVERSITY AVENUE GATEWAY
- ⬚ NON-UCR LAND OF INTEREST

EXHIBIT 3
Land Use Diagram