MOBILITY HUB AND CENTRAL CAMPUS LINKAGES

PROJECT # 950549

Final Initial Study/
Mitigated Negative Declaration

The following Initial Study has been prepared in compliance with CEQA.

Prepared for:

University of California, Riverside
Campus Planning – Capital Asset Strategies
1223 University Avenue, Suite 240
Riverside, California 92521

Prepared by:

Impact Sciences, Inc.
811 W. 7th Street, Suite 200
Los Angeles, California 90017

December 2018

Contact: Jaime Engbrecht
CEQA@ucr.edu

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1.0 INTRODUCTION

Pursuant to State law and University procedures for the implementation of the California Environmental Quality Act (CEQA), the potential environmental effects of the proposed University of California, Riverside (UCR) Mobility Hub and Central Campus Linkages project (project) have been analyzed in a Draft Initial Study (State Clearinghouse [SCH] No. 2018111013) dated November 2018. The environmental analysis for the proposed project is tiered from the 2005 Long Range Development Plan (LRDP) EIR (SCH No. 2005041164), certified by the University of California Board of Regents (The Regents) in November 2005, as augmented, revised and supplemented by the 2005 LRDP Amendment 2 EIR (SCH No. 2010111034) certified by The Regents on November 28, 2011.

Based on the project-specific analysis presented in the Initial Study, it was determined that for each topical issue the project would have no impact or a less than significant impact with the incorporation of all relevant MMs and continuing adherence to adopted Programs and Practices (PPs) identified in the UCR 2005 LRDP EIR as supplemented and updated by the UCR 2005 LRDP Amendment 2 EIR. The project description includes and incorporates all relevant MMs and campus PPs identified in the Final EIRs to minimize the impacts of projects implementing the LRDP, no project-specific mitigation measures were required to reduce potential environmental impacts to a less than significant level.

The Draft Initial Study/Mitigated Negative Declaration was released for a 30-day public review period that concluded on December 5, 2018. The Draft Initial Study/Mitigated Negative Declaration (IS/MND) was provided to approximately 20 interested agencies and individuals (including tribal representatives), and 15 copies were sent to the State Clearinghouse to distribute to state agencies; it was also made available on the UCR Capital Asset Strategies website and at its offices. Three letters were received during the public review period, one from the State Clearinghouse acknowledging compliance with CEQA review requirements, one from the California Department of Transportation (Caltrans) stating they had no further comments on the project, and one from City of Riverside Parks, Recreation and Community Services Department (PRCS). This document is the Final IS/MND for the UCR Mobility Hub and Central Campus Linkages project.

This document includes:

- the letter from the State Clearinghouse
- the comment letter received from Caltrans and the University's response;
- the comment letter received from City of Riverside PRCS and the University's response;
- the Mitigation Monitoring and Reporting Program; and
- the Draft Initial Study/Mitigated Negative Declaration, November 2018 (included as Attachment A)

2.0 PUBLIC COMMENT LETTERS AND UNIVERSITY RESPONSES

The University received the attached letter from the Governor's Office of Planning and Research, State Clearinghouse and Planning Unit, documenting compliance with CEQA review requirements and indicating that no comment letters were received by their office. In addition, the University received a comment letter from the California Department of Transportation (Caltrans) stating they had no further comments on the project, and a comment letter from the City of Riverside Parks, Recreation and Community Services Department (PRCS); both letters were sent directly to the University.

The two comment letters followed by the University's responses to the comment letter are attached. The numbers provided in the right margin of the comment letter correspond to the response to comments.

SA-1

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

December 6, 2018

Jaime Engbrecht
University of California, Riverside
Office of Campus Planning
Riverside, CA 92521

Subject: Mobility Hub and Central Campus Linkages Project UCR project # 950549
SCH#: 2018111013

Dear Jaime Engbrecht:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on December 5, 2018, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

SA-1-1

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

DEC 11 '18 PM 1:46

UCR CAPITAL PROGRAMS

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
1-916-322-2318 FAX 1-916-558-3184 www.opr.ca.gov

Letter SA-1: Governor's Office of Planning and Research, State Clearinghouse and Planning Unit,

Response SA-1-1

The letter documents compliance with CEQA review requirements and indicates that no comment letters were received by their office, but does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft Initial Study. Therefore, a response is not required pursuant to CEQA. However, the comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

DEPARTMENT OF TRANSPORTATION
DISTRICT 8
PLANNING (MS 722)
464 WEST 4th STREET, 6th Floor
SAN BERNARDINO, CA 92401-1400
PHONE (909) 383-4557
FAX (909) 383-5936
TTY (909) 383-6300
www.dot.ca.gov/dist8

SA-2

Make Conservation
A California Way of Life.

November 28, 2018

UCR Capital Planning
Capital Asset Strategies
Jamie Engbrecht, Planner
12230 University Avenue, Suite 240
Riverside, CA 92507

Ms. Engbrecht:

Mobility Hub and Central Campus Linkage Project UCR#950549 (Riv 215 PM 41.49)

We have received the Notice of Completion and Environmental Document Transmittal for the above named project. Proposal is to create a centralized multi-modal bus transit at the terminus of University Avenue at Canyon Crest Drive. Project is intended to enhance and simplify public transit access to campus, provide a safe drop off area for private vehicles, rideshare services, and tour buses.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. Under the California Environmental Quality Act (CEQA), we are required to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the City of Riverside due to the Project's potential impact to State facilities it is also subject to the policies and regulations that govern the SHS.

SA-2-1

Caltrans encourages the provision of multimodal transportation options for road users in order to mitigate congestion and reduce vehicle miles traveled, which in turn reduces greenhouse gas emissions and our State's effect on climate change. This is reflected in our mission, to "provide a safe, sustainable, integrated and efficient transportation system to enhance California's economy and livability". These measures may include the planning and provision of access for the circulation of bicycles, pedestrians, and transit users.

We have no further comment for this project at this time. However, if this development proposal is later modified in any way, please forward copies of revised plans as necessary so that we may reevaluate all proposed changes for potential impacts to the SHS.

Letter SA-2: California Department of Transportation

Response SA-2-1

The comment states that the agency has no further comments regarding the proposed project, but does not state a specific concern or question regarding the adequacy of the analysis contained in the Draft Initial Study. Therefore, a response is not required pursuant to CEQA. However, the comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

LA-1

MEMO

Parks, Recreation and Community Services Department

DATE: 12/03/2018

TO: JAIME ENGBRECHT, PLANNER, UCR, CAPITAL PLANNING, CAPITAL ASSET STRATEGIES

FROM: RANDY MCDANIEL, PRINCIPAL PARK PLANNER, PRCSD, PLANNING AND DESIGN DIVISION

CC: ALISA SRAMALA, TRAILS COORDINATOR, BRENDA SPOELSTRA, PARK PLANNER

RE: NOI – MITIGATED NEGATIVE DECLARATION.

MOBILITY HUB AND CENTRAL CAMPUS LINKAGES, AT UC RIVERSIDE CAMPUS

Thank you for the opportunity to review the NOI to adopt a MND for the planned project on the campus of UCR. Our office is the department of Parks, Recreation and Community Services Department, 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 recreational Trails Master Plan. In that work, we identify where planned development has the potential of impacting parkland or the planned trail system.

Per the City's *General Plan 2025*, the City of Riverside Trails Master Plan route is located on Canyon Crest Dr. along the east side of the street, and a short segment is located on the southern side of University Avenue, for about 250' to the west of the intersection with Canyon Crest Drive. Both of these segments are adjacent or in close proximity to the proposed project and would be impacted by the project. Although the City of Riverside Pedestrian-Bike Crossing has been identified in the document, there is not currently discussion of how the multi-purpose recreational trail network will connect through the Canyon Crest Drive/University Avenue intersection to provide continuity of the recreational trail system through the mobility hub area. Under "Issue 14 – Public Services" and "Issue 15 - Recreation" of the Initial Study, impacts to the recreational Trails Master Plan needs to be considered and discussed.

LA-1-1

If you have any questions or would like to discuss possible solutions to mitigate the trail impact please contact Alisa Sramala at (951)826-2021.

City of Riverside General Plan 2025 references:

- 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

MEMO

Parks, Recreation and Community Services Department

- 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.

2003 Parks Master Plan references:

- Figure 5: Proposed and Existing Trails and Proposed Trail Hubs and Trail Access Points, page 90 https://www.riversideca.gov/park_rec/sites/riversideca.gov.park_rec/files/pdf/Parks-MP/2003-PARK-MASTER-PLAN.pdf
- Chapter Six – Priorities and Recommendations, 6.4.1 Trail System, Recommendations page 51: "Improving and creating more connections and increasing the safety of the bicycling, equestrian and pedestrian trails system within the City is recommended."

Letter LA-1: City of Riverside Parks, Recreation and Community Services Department

Response LA--1

The City of Riverside PRCS comments primarily address the potential for the project to impact the City's recreational Trails Master Plan. The comment presents no environmental issues within the meaning of CEQA and the CEQA Thresholds and no specific response is required. However, the comment is acknowledged for the record and will be forwarded to the decision-making bodies for their review and consideration.

Notwithstanding the above, the following response is included for the record:

UCR's LRDP Campus and Community Planning Strategy #18, which states that the University will '*Work with the City to link the open spaces of UCR with the Citywide Trail Network*', which is incorporated into the proposed project by reference, addresses the issues raised concerning any potential conflicts with the City's recreational Trails Master Plan. As discussed in Section V.16, Transportation/Traffic, of the IS/MND, the project includes Class II on-street bicycle lanes on Canyon Crest Drive and University Avenue that connect to City of Riverside Bikeways. No changes to the IS/MND were made based on these comments.

3.0 MITIGATION MONITORING AND REPORTING PROGRAM

3.1 INTRODUCTION

The California Environmental Quality Act (CEQA) requires the adoption of feasible mitigation measures to reduce the severity and magnitude of potentially significant environmental impacts associated with project development. The Final Initial Study/Mitigated Negative Declaration (IS/MND) for the proposed Mobility Hub and Central Campus Linkages (CCL) project (proposed project) (State Clearinghouse No. 2018111013) analyzes the impacts of the proposed project, which includes all relevant mitigation measures (MMs) and campus programs and practices (PPs) carried forward from the LRDP EIR. This Mitigation Monitoring and Reporting Program (MMRP), which identifies the LRDP EIR PPs and MMs included as part of the project description, obligates the University to implement the identified PPs and MMs. The MMRP will be reviewed by the University of California Board of Regents (The Regents) or their designee, in conjunction with consideration for approval of the proposed project and adoption of the Final IS/MND.

Following adoption of the Final IS/MND and approval of this MMRP, the applicable PPs and MMs from the LRDP EIRs would be implemented and monitored by UCR Campus Planning under the project's Mitigation Monitoring and Reporting Program. Campus-wide operational or administrative MMs, PPs, and PSs will continue to be monitored through the LRDP EIR's Mitigation Monitoring and Reporting Program. Monitoring will include: (1) verification that each mitigation measure has been implemented; (2) recording of the verification and any necessary notations regarding implementation of each mitigation measure; and (3) retention of records in the Mobility Hub and CCL project mitigation monitoring file.

Purpose

The purpose of the MMRP is to ensure compliance with all PPs and MMs to avoid or reduce adverse environmental impacts resulting from construction and operation of the proposed project, which were identified in the IS/MND. The implementation of the applicable PPs and MMs shall be performed by the University, consultants, contractors, and appropriate agencies during the following:

- Development of the design
- Preparation of the construction contracts
- Construction phase
- Project operation

Project Overview

The Mobility Hub and CCL Project would be located in the northwestern portion of central campus, approximately 2,250 feet east of the University Avenue exit from the I-215/SR-60 Freeway. The proposed Mobility Hub is located south of the UC Riverside Soccer Field and Amy S. Harrison Softball Field, north of the CHASS Interdisciplinary Buildings and a portion of Parking Lot 19 (Lot 19), east of the Arts Building, and west of the Skye Hall (formerly Campus Surge). The proposed Recreation Mall would extend northerly from the northeast corner of the proposed Mobility Hub, border the UC Riverside Student Recreation Center (SRC), and would terminate at Linden Street at the proposed North District Development area.

The proposed conversion of North Campus Drive to a pedestrian mall (North Campus Mall) from the Mobility Hub to the intersection of North Campus Drive and Aberdeen Drive would improve east-west bicycle and pedestrian safety and circulation on the central campus. The new malls would continue to provide emergency vehicular access.

The proposed Mobility Hub would be accessible via an entrance located east of Canyon Crest Drive at the current terminus and in alignment with University Avenue. The entrance would necessitate a signalized intersection with pedestrian crossings where University Avenue meets Canyon Crest Drive. The proposed Mobility Hub would consist of drive aisles with a center median organizing the flow of vehicular traffic in one direction. It would include an information and parking kiosk, six bus bays, pick-up/drop-off areas, accessible parking spaces and parking spaces for Service/Department vehicles. The Mobility Hub portion of the project would necessitate a change in land use designation for 2.5 acres, from *Open Space* to *Campus Support.*

The Central Campus Linkages (CCL) portion of the project would create continuous pedestrian pathways from the proposed Mobility Hub to the Student Recreation Center, the proposed North District Development, and North Campus Drive. A multi-modal Recreation Mall and North Campus Mall would allow for easy pedestrian and bicycle passage, as well as emergency and service vehicle access and limited parking. The CCL portion of the project would eliminate conflicts between pedestrians and vehicles as well as expanding accessibility to the central campus, improving and encouraging active transport within the UC Riverside community..

Construction of the proposed project is anticipated to begin in early 2019 and be completed by the spring of 2020 and would occur over approximately seven acres.

Monitoring Procedures

The Environmental Planning staff from Campus Planning will be responsible for coordinating the reporting of compliance with the measures listed in this MMRP, including

- Coordination with the project manager (PM) and project inspector from the UCR Architects and Engineers office, who would be responsible for ensuring that design and construction contracts contain the relevant mitigation measures adopted in the Final IS/MND, and that mitigation measures are implemented during the design and construction phases of the project.

- Coordination and assistance to other Campus units and/or Departments with monitoring and reporting responsibilities to ensure that they understand their charge and complete their reporting procedures accurately and on schedule, during construction and on-going project operations.

In general, monitoring will consist of demonstrating that mitigation measures were implemented and that the responsible units monitored the implementation of the measures. Monitoring will consist of determining whether the following occurred:

- Specific issues were considered in the design development phase
- Construction contracts included the specified provisions
- Certain actions occurred prior to construction
- The required measures were acknowledged and implemented during construction of the project

Reporting Procedures

Monitoring and reporting of applicable LRDP PPs and MMs included as part of the project will be reported through the project's Mitigation Monitoring and Reporting Program and will consist of responsible entities verifying that the relevant mitigation measures were implemented and documenting confirmed compliance. UCR Campus Planning will coordinate and maintain the reporting records.

3.2 LIST OF CAMPUS PROGRAMS, PRACTICES AND PROCEDURES AND MITIGATION MEASURES

Table 1, Mitigation Monitoring and Reporting Program, lists the MMs and PPs from the certified LRDP EIR applicable to and included as part of the Mobility Hub and CCL project description, the timing for these measures as identified in the Final IS/MND. Detailed information regarding the category, responsible UCR unit, monitoring triggers, and frequency of reporting for each PP and MM is presented.

Table 1
Mitigation Monitoring and Reporting Program

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
Monitoring Triggers 1. Design stage 2. Construction documents (CDs) 3. Construction 4. Commencement of occupancy 5. Post-construction 6. On-going through Project operation		UCR Responsible Entities CAS – Capital Asset Strategies A&E – Architects & Engineers TAPS – Transportation and Parking Services Sustainability – Sustainability Office				
Aesthetics						
Have a substantial adverse effect on a scenic vista.	**Applicable LRDP EIR Programs and Practices:** **PP 4.1-1.** The campus shall provide design architects with the 2007 Campus Design Guidelines and instructions to implement the guidelines, including those sections related to use of consistent scale and massing, compatible architectural style, complementary color palette, preservation of existing site features, and appropriate site and exterior lighting design.	A&E	1	Once to confirm in relation to project design		
	PP 4.1-2(a). The Campus shall continue to provide design professionals with the 2007 Campus Design Guidelines and instructions to develop project-specific landscape plans that are consistent with the Guidelines with respect to the selection of plants, retention of existing trees, and use of water conserving plants, where feasible.	CAS +/or A&E	1	Once to confirm inclusion in project design		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area.	**Applicable LRDP EIR Mitigation Measure:** **MM 4.1-3(b).** All outdoor lighting on campus resulting from new development shall be directed to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) to prevent stray light spillover onto adjacent residential areas. In addition, all fixtures on elevated light standards in parking lots, parking structures, and athletic fields shall be shielded to reduce glare. Lighting plans shall be reviewed and approved prior to project-specific design and construction document approval.	A&E	1 & 2	Once to confirm inclusion in project design documents; Once to confirm inclusion in CDs		
Air Quality						
Violate any air quality standard or contribute substantially to an existing or projected air quality violation.	**Applicable LRDP EIR Programs and Practices:** **PP 4.3-2(a).** Construction contract specifications shall include the following: (i) Compliance with all SCAQMD rules and regulations (ii) Maintenance programs to assure vehicles remain in good operating condition (iii) Avoid unnecessary idling of construction vehicles and equipment (iv) Use of alternative fuel construction vehicles (v) (v) Provision of electrical power to the site, to eliminate the need for on-site generators	A&E	2	Once to confirm inclusion in CDs		
	PP 4.3-2(b). The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of	A&E	2, 3	Once to confirm inclusion in CDs; Ongoing verification during construction		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	the dust generation. The Campus shall implement these measures as necessary to reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor: (i) Apply water and/or approved non-toxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days) (ii) Replace ground cover in disturbed areas as quickly as possible (iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content (iv) Water active grading sites at least twice daily (v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period (vi) All trucks hauling dirt, sand, soil, or other loose materials shall be covered or maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code (vii) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads (viii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip					

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	(ix) Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces (x) (x) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads					
	PP 4.3-2(c). The campus shall continue to implement SCAQMD Rule 1403 – Asbestos when demolishing existing buildings on the campus.	A&E	2, 3	Once to confirm inclusion in CDs; Ongoing verification during demolition		
Cumulative Air Quality	**Applicable LRDP EIR Mitigation Measure:** **MM 4.3-3.** To reduce energy consumption and area-wide emission of criteria pollutants, the campus shall annually inspect and enforce an emissions reduction control strategy, which may include, where feasible, the following: **Design** • Use light-colored roof materials to reduce heat gain • Orient buildings to the north and include passive solar design features • Increase building and attic insulation beyond Title 24 requirements • Provide electric vehicle charging systems at convenient location in campus parking facilities • Provide prominent website and/or kiosks displaying information about alternative transportation • Install electrical outlets outside buildings for the use of electric landscape maintenance equipment **Operation** • Implement a subsidized vanpool	A&E and/or SO	1, 3	Once to confirm inclusion in project design; Ongoing verification during project operation		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	program • Implement staggered or compressed work schedules to reduce vehicular traffic • Use alternative fuel shuttle buses to reduce intra-campus vehicle trips • Provide shuttle service to major off-campus activity centers and Metrolink station(s) • Aggressive expansion of the campus TDM program to achieve an AVR of 1.5 • Expand transit subsidies to encourage use of public transit • Implement incentives for telecommuting • Convert campus fleet to low emission, alternative fuel, and electric vehicles over time • Implement solar or low-emission water heaters • Implement an educational program for faculty and staff and distribute information to students and visitors about air pollution problems and solutions					
Biological Resources						
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 Wildlife or US Fish and	**Applicable LRDP EIR Mitigation Measures:** **MM 4.4-4(a).** Prior to the onset of construction activities that would result in the removal of mature trees that would occur between March and mid-August, surveys for nesting special status avian species and raptors shall be conducted on the affected portion of the campus following USFWS and/or CDFG guidelines. If no active avian nests are identified on or within 250 feet of the construction site, no further mitigation is necessary.	CAS/A&E	2, 3	As needed, prior to start of construction		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
Wildlife Service?	**MM 4.4-4(b)**. If active nests for avian species of concern or raptor nests are found within the construction footprint or a 250-foot buffer zone, exterior construction activities shall be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation have been developed and implemented in consultation with USFWS and CDFG.	CAS/A&E	2, 3	As needed, prior to start of construction		
Cultural Resources						
Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	**Applicable LRDP EIR Programs and Practices:** **PP 4.5-4** Construction specifications shall require that if a paleontological resource is uncovered during construction activities: (i) A qualified paleontologist shall determine the significance of the find. (ii) The Campus shall make an effort to preserve the find intact through feasible project design measures. (iii) If it cannot be preserved intact, then the University shall retain a qualified non-University paleontologist to design and implement a treatment plan to document and evaluate the data and/or preserve appropriate scientific samples. (iv) The paleontologist shall prepare a report of the results of the study, following accepted professional practice. (v) Copies of the report shall be submitted to the University and the Riverside County Museum.	A&E/CAS	2, 3	Confirm inclusion in CDs; Ongoing verification during construction, as required		
	PP 4.5-5 In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the University immediately shall notify the Riverside County	A&E/CAS	2, 3	Confirm inclusion in CDs; Ongoing verification during ground disturbance phases, as required		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.					
Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	**Applicable LRDP EIR Programs and Practices:** Refer to **PP 4.5-4** and **PP 4.5-5.**					
Disturb any human remains, including those interred outside of formal cemeteries	**Applicable LRDP EIR Programs and Practices:** Refer to **PP 4.5-4** and **PP 4.5-5**.					
Geology and Soils						
Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides.	**Applicable LRDP EIR Programs and Practices:** **PP 4.6-1(a).** During project-specific building design, a site-specific geotechnical study shall be conducted under the direct supervision of a California Registered Engineering Geologist or licensed geotechnical engineer to assess seismic, geological, soil, and groundwater conditions at each construction site and develop recommendations to prevent or abate any identified hazards. The study shall follow applicable recommendations of CDMG Special Publication 117 and shall include, but not necessarily be limited to: • Determination of the locations of any suspected fault traces and anticipated ground acceleration at the building site, • Potential for displacement caused by seismically induced shaking, fault/ground surface rupture, liquefaction, differential soil settlement, expansive and compressible soils, landsliding, or other earth movements or soil constraints, and • Evaluation of depth to groundwater.	A&E	1, 2	Once to confirm inclusion in project design; Once to confirm inclusion in CDs		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	• The structural engineer shall incorporate the recommendations made by the geotechnical report when designing building foundations.					
	PP 4.6-1(c). The Campus will continue to fully comply with the University of California's Policy for Seismic Safety, as amended. The intent of this policy is to ensure that the design and construction of new buildings and other facilities shall, as a minimum, comply with seismic provisions of California Code of Regulations, Title 24, California Administrative Code, the California State Building Code, or local seismic requirements, whichever requirements are most stringent.	A&E	1, 2	Once to confirm inclusion in CDs		
Result in substantial soil erosion or the loss of topsoil.	**Applicable LRDP EIR Programs and Practices:** **PP 4.6-2(a).** The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The Campus shall implement these measures as necessary to reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor: (i) Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days) (ii) Replace ground cover in disturbed areas	A&E	2, 3	Once to confirm inclusion in CDs; Ongoing verification during construction		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	as quickly as possible (iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content (iv) Water active grading sites at least twice daily (v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period (vi) All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code (vii) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads (viii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip (ix) Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces (ix) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads *(This is identical to **PP 2.8-3 [c]**).*					

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
Hazards and Hazardous Materials						
Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	**Applicable LRDP EIR Programs and Practices:** **PP 4.7-7(a).** 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 appropriate signage indicating alternative routes.	A&E	2, 3	Once to confirm inclusion in CDs; Ongoing verification during demolition phase of construction, as applicable		
	PP 4.7-7(b). 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 UCPD, EH&S, and the RFD to disclose roadway closures and identify alternative travel routes.	A&E	3	Ongoing verification during construction		
Hydrology and Water Quality						
Violate any water quality standards or waste discharge requirements.	**Applicable LRDP EIR Programs and Practices:** **PP 4.8-1.** The Campus will continue to comply with all applicable water quality requirements established by the SARWQCB.	A&E	2, 3	Once to confirm inclusion in construction documents and SWPPP.		
Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site	**Applicable LRDP EIR Programs and Practices:** **PP 4.8-3(c)**. The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The Campus shall implement these measures as necessary to	A&E	2, 3	Once to confirm inclusion in construction documents.		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor: (i) Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days) (ii) Replace ground cover in disturbed areas as quickly as possible (iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content (iv) Water active grading sites at least twice daily (v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period (vi) All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code (vi) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads (vii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip (viii) Apply water three times daily or chemical soil stabilizers according to					

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces (ix) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads *This is identical to **Air Quality PP 4.3-2[b]** and **Geology PP 4.6-2[a].)***					
	PP 4.8-3(d). In compliance with NPDES, the Campus would continue to implement Best Management Practices, as identified in the UCR Stormwater Management Plan (UCR 2003): (i) Public education and outreach on stormwater impacts (ii) Public involvement/participation (iii) Illicit discharge detection and elimination (iv) Pollution prevention/good housekeeping for facilities (v) Construction site stormwater runoff control (vi) Post-construction stormwater management in new development and redevelopment	A&E	2, 3, 6	Once to confirm inclusion in CDs		
	PP 4.8-3(e). Prior to the time of design approval, the Campus will evaluate each specific project to determine if the project runoff would exceed the capacity of the existing storm drain system. If it is found that the capacity would be exceeded, one or more of the following components of the storm drain system would be implemented to minimize the occurrence of local flooding: (i) Multi-project stormwater detention basins (ii) Single-project detention basins (iii) Surface detention design	A&E	1, 2	Once to confirm inclusion in project design		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	(iv) Expansion or modification of the existing storm drain system (v) Installation of necessary outlet control facilities					
Otherwise substantially degrade water quality.	**Applicable LRDP EIR Programs and Practices:** Refer to **PP 4.8-1**.					
Noise						
Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies	**Applicable LRDP EIR Programs and Practices:** **PP 4.10-2**. The UCR campus shall limit the hours of exterior construction activities from 7:00 A.M. to 9:00 P.M. Monday through Friday and 8:00 A.M. to 6:00 P.M. on Saturday when necessary. Construction traffic shall follow transportation routes prescribed for all construction traffic to minimize the impact of this traffic (including noise impacts) on the surrounding community.	A&E	2, 3	Once to confirm inclusion in CDs; Ongoing verification during construction		
	PP 4.10-7(a). To the extent feasible, construction activities shall be limited to 7:00 A.M. to 9:00 P.M. Monday through Friday, 8:00 A.M. to 6:00 P.M. on Saturday, and no construction on Sunday and national holidays, as appropriate, in order to minimize disruption to area residences surrounding the campus and to on-campus uses that are sensitive to noise.	A&E	2, 3	Once to confirm inclusion in CDs; Ongoing verification during construction		
	PP 4.10-7(b). The Campus shall continue to require by contract specifications that construction equipment be required to be muffled or otherwise shielded. Contracts shall specify that engine-driven equipment be fitted with appropriate noise mufflers.	A&E	2, 3	Once to confirm inclusion in CDs		
	PP 4.10-7(c). The Campus shall continue to require that stationary construction equipment material and vehicle staging be placed to direct noise away from sensitive receptors.	A&E	2, 3	Once to confirm inclusion in CDs		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	PP 4.10-7(d). The Campus shall continue to conduct regular meetings, as needed, with on campus constituents to provide advance notice of construction activities in order to coordinate these activities with the academic calendar, scheduled events, and other situations, as needed.	A&E	2, 3	Once to confirm communication prior to commencement of construction activities; Ongoing verification during construction		
	PP 4.10-8. The campus shall continue to conduct meetings, as needed, with off-campus constituents that are affected by campus construction to provide advance notice of construction activities and ensure that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.	CAS	2	Ongoing to confirm notification of construction activities		
	Applicable LRDP EIR Mitigation Measures: **MM 4.10-2.** The campus shall notify all academic and residential facilities within 300 feet of approved construction sites of the planned schedule of vibration causing activities so that the occupants and/or researchers can take necessary precautionary measures to avoid negative effects to their activities and/or research.	A&E	2	Once to confirm notification prior to commencement of vibration causing activities; Ongoing verification of precautionary measures, if any, during construction.		
Transportation and Traffic						
Cumulative Traffic	**Applicable LRDP EIR Programs and Practices:** **PP 4.14-2.** 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.	A&E	3	Ongoing verification during construction		

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	PP 4.14-5. 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. *(This is identical to Hazards **PP 4.7-7[a].**)*					
	PP 4.14-6. 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.	A&E	3	Ongoing verification during construction		
	PP 4.14-8. To maintain adequate access for emergency vehicles when construction projects would result in roadway closures, the Office of Architects and Engineers shall consult with the UCPD, EH&S, and the RFD to disclose roadway closures and identify alternative travel routes. *(This is identical to Hazards **PP 4.7-7[b].**)*					
Tribal Cultural Resources						
Cumulative Tribal Cultural	**Applicable LRDP EIR Programs and Practices:** **PP 4.5-4.** Construction specifications shall require that if a paleontological resource is uncovered during construction activities: (i) A qualified paleontologist shall determine the significance of the find. (ii) The Campus shall make an effort to preserve the find intact through feasible project design measures. (iii) If it cannot be preserved intact, then the University shall retain a qualified non-					

Impact	Mitigation Measures	Responsible Entity	Monitoring Triggers	Frequency of Reporting	Verification of Compliance	
					Initial if Completed	Remarks
	University paleontologist to design and implement a treatment plan to document and evaluate the data and/or preserve appropriate scientific samples. (iv) The paleontologist shall prepare a report of the results of the study, following accepted professional practice. **(v)** (v) Copies of the report shall be submitted to the University and the Riverside County Museum. *(This is identical to Cultural Resources **PP 4.5-4.**)*					
	PP 4.5-5. In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the University immediately shall notify the Riverside County Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary. *(This is identical to Cultural Resources **PP 4.5-5.**)*					

ATTACHMENT A

MOBILITY HUB AND CENTRAL CAMPUS LINAKGES PROJECT
DRAFT INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

MOBILITY HUB AND CENTRAL CAMPUS LINKAGES

PROJECT # 950549

Draft Initial Study/
Mitigated Negative Declaration

The following Initial Study has been prepared in compliance with CEQA.

Prepared for:

University of California, Riverside
Campus Planning – Capital Asset Strategies
1223 University Avenue, Suite 240
Riverside, California 92521

Prepared by:

Impact Sciences, Inc.
811 W. 7th Street, Suite 200
Los Angeles, California 90017

November 2018

Contact: Jaime Engbrecht
CEQA@ucr.edu

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INTRODUCTION

Initial Study

Pursuant to Section 15063 of the *California Environmental Quality Act (CEQA) Guidelines* (Title 14, California Code of Regulations, Sections 15000 et seq.), an Initial Study is a preliminary environmental analysis that is used by the lead agency (the public agency principally responsible for approving or carrying out the proposed project) as a basis for determining whether an Environmental Impact Report, a Mitigated Negative Declaration, or a Negative Declaration is required for a project. The *State CEQA Guidelines* require that an Initial Study contain a project description, description of environmental setting, identification of environmental effects by checklist or other similar form, explanation of environmental effects, discussion of mitigation for significant environmental effects, evaluation of the project's consistency with existing, applicable land use controls, and the name of persons who prepared the study.

The purpose of this Initial Study is to evaluate the potential environmental impacts of the proposed University of California Riverside (UC Riverside) Mobility Hub and Central Campus Linkages project (Mobility Hub and CCL) to determine what level of additional environmental review, if any, is appropriate. As shown in the Determination in Section IV of this document and based on the analysis contained in this Initial Study, it has been determined that the proposed Mobility Hub and CCL could result in potentially significant impacts; however, mitigation from the 2005 LRDP EIR, as supplemented and updated by the 2005 LRDP Amendment 2 EIR, would reduce these impacts to a less than significant level.

The University of California (University), as the lead agency pursuant to CEQA, requires each campus of the University of California to prepare a Long Range Development Plan (LRDP) that sets forth concepts, principles, and plans to guide the future growth of the campus. Pursuant to this obligation, UC Riverside prepared the 2005 LRDP and the supporting Final Environmental Impact Report (referred to hereinafter as the 2005 LRDP EIR) for the UC Riverside campus (State Clearinghouse No. 2005041164). In November 2005, The Board of Regents of the University of California (The Regents) certified the Final EIR and approved the 2005 LRDP. In 2006, UC Riverside amended the 2005 LRDP to allow a 3.25-acre deed restriction in the Agricultural Operations fields south of MLK (LRDP Amendment 1). In 2011, UC Riverside approved a major amendment (LRDP Amendment 2) to the 2005 LRDP and the supporting Final Environmental Impact Report (referred to hereinafter as the 2005 LRDP Amendment 2 EIR) based on an evaluation of its environmental impacts (State Clearinghouse No. 2010111034). The LRDP Amendment 2 EIR supplemented and updated the 2005 LRDP EIR, focusing on the incremental environmental effects of LRDP Amendment 2. In 2013, the 2005 LRDP was amended (Amendment 3) to add an overlay to the land use designation of one 10-acre site on the West Campus to allow for the siting of a solar array project. The 2005 LRDP, as amended by Amendments 1, 2 and 3 (collectively referred to as the "2005 LRDP, as amended"), is the land use planning document used by UC Riverside to guide the development of the campus to eventually support a projected student body of 25,000 full time equivalent (FTE) students. The 2005 LRDP EIR, as augmented and updated by the 2011 LRDP Amendment 2 EIR are

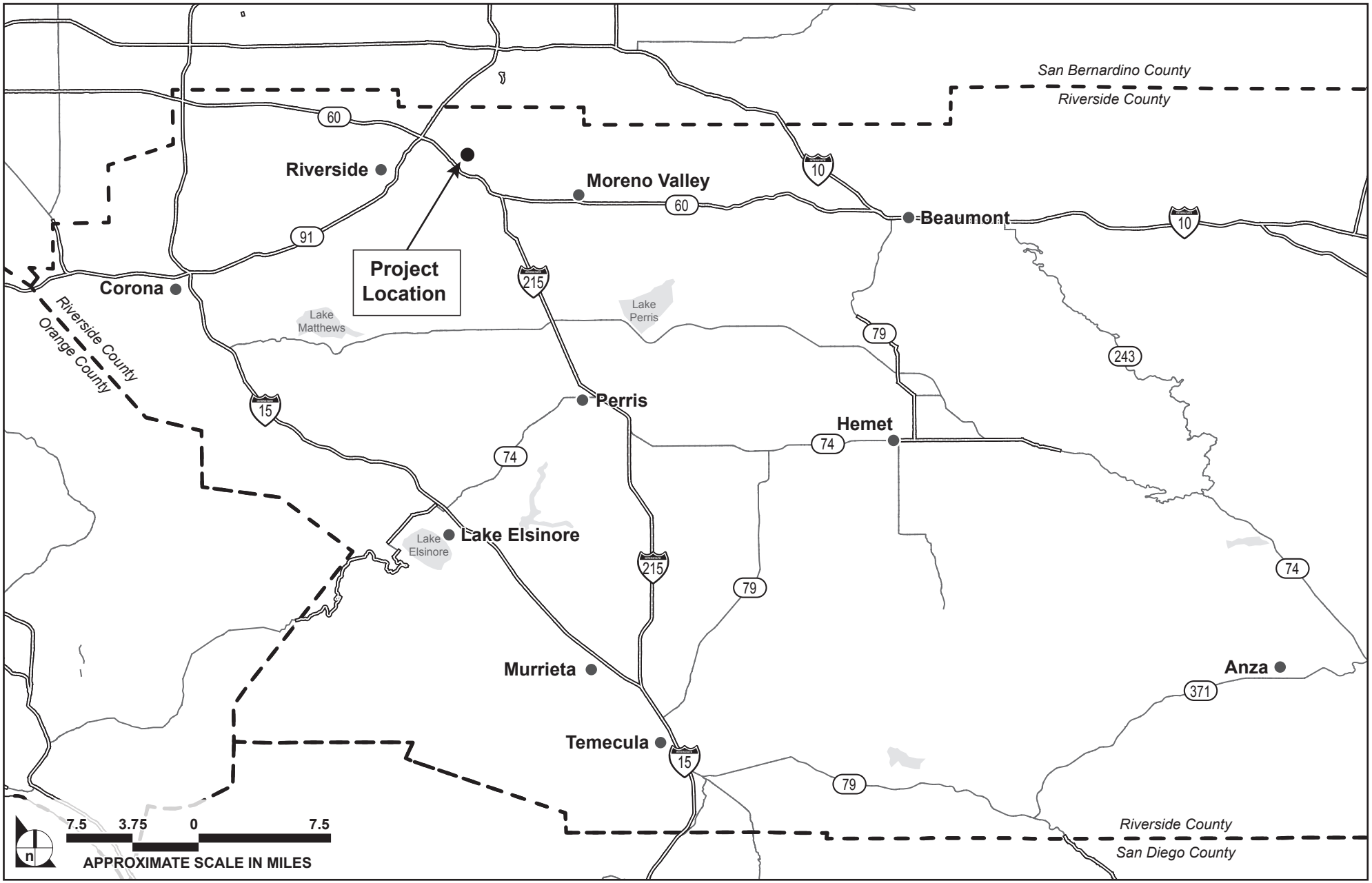
the environmental documents that provide full evaluation of the environmental effects of campus development through an enrollment of 25,000 students and are used by the campus to conduct tiered environmental review of specific development projects proposed on the campus, pursuant to CEQA Guidelines Section 15152.

UC Riverside proposes to create a centralized multi-modal bus transit center known as the Mobility Hub at the terminus of University Avenue at Canyon Crest Drive, and expand and enhance pedestrian and bicycle networks to address current and future campus transportation needs. The Mobility Hub and CCL Project is intended to enhance and simplify public transit access to campus, provide a safe drop off area for private vehicles, rideshare services, and tour buses, and improve emergency and service access routes to the campus core. Furthermore, the Mobility Hub and CCL Project will create safe pedestrian and bicycle-friendly environments along key east-west and north-south alignments, comprised of the Recreation Mall and a portion of North Campus Drive, collectively known as Central Campus Linkages. The 2005 LRDP, as amended, proposes transportation hubs at key campus gateways (including the intersection of University Avenue and Canyon Crest Drive) to encourage the use of alternative transportation modes. The project is in close alignment with the 2005 LRDP, as amended, which envisioned an improved gateway arrival point at the project location to provide visitors with a sense of arrival and orientation. Amending the LRDP would also support the campus' Open Space objectives by integrating park-like spaces and walkways that create connections to campus.

The proposed use for the approximately 2.5-acre Mobility Hub site is not consistent with the *Open Space* land use currently designated for the site in the 2005 LRDP, as amended. Accordingly, this minor amendment #4 (Amendment) to the 2005 LRDP, as amended proposes to modify the land use designation for approximately 2.5 acres of the approximately 7-acre project site (approximately six acres on campus property) from *Open Space* to *Campus Support*. Approximately three acres of the project is currently designated *Open Space* and does not require re-designation as the proposed use is allowed under that designation. Parking Lot 19 (Lot 19) is an existing non-conforming land use on an area designated as *Academic*. It will be reduced to approximately one acre and reconfigured as part of this project, but the land use will not be re-designated as it is not considered a permanent temporary use. This Amendment makes no other modifications to the land use principles or designations within the 2005 LRDP, as amended.

The Mobility Hub and CCL Project would provide an entrance into the Mobility Hub in an alignment with the current terminus of University Avenue. This would act as an arrival gateway into campus, featuring an information and parking kiosk. A portion of the current Lot 19 would be converted to a transit center with six bus bays, passenger pick-up and drop-off zones, and improved pathways for active transport. The proposed Mobility Hub and CCL would also include new pedestrian malls to support the campus's *Open Space* objectives while creating an efficient and attractive entranceway to central campus.

Developed as a partnership between UCR and Riverside Transit Agency (RTA), the Mobility Hub and CCL Project would enhance public transportation access to campus, and create safe pedestrian and bicycle-friendly environments.



SOURCE: Impact Sciences, 2018

FIGURE **1**

IMPACT SCIENCES

Regional Location

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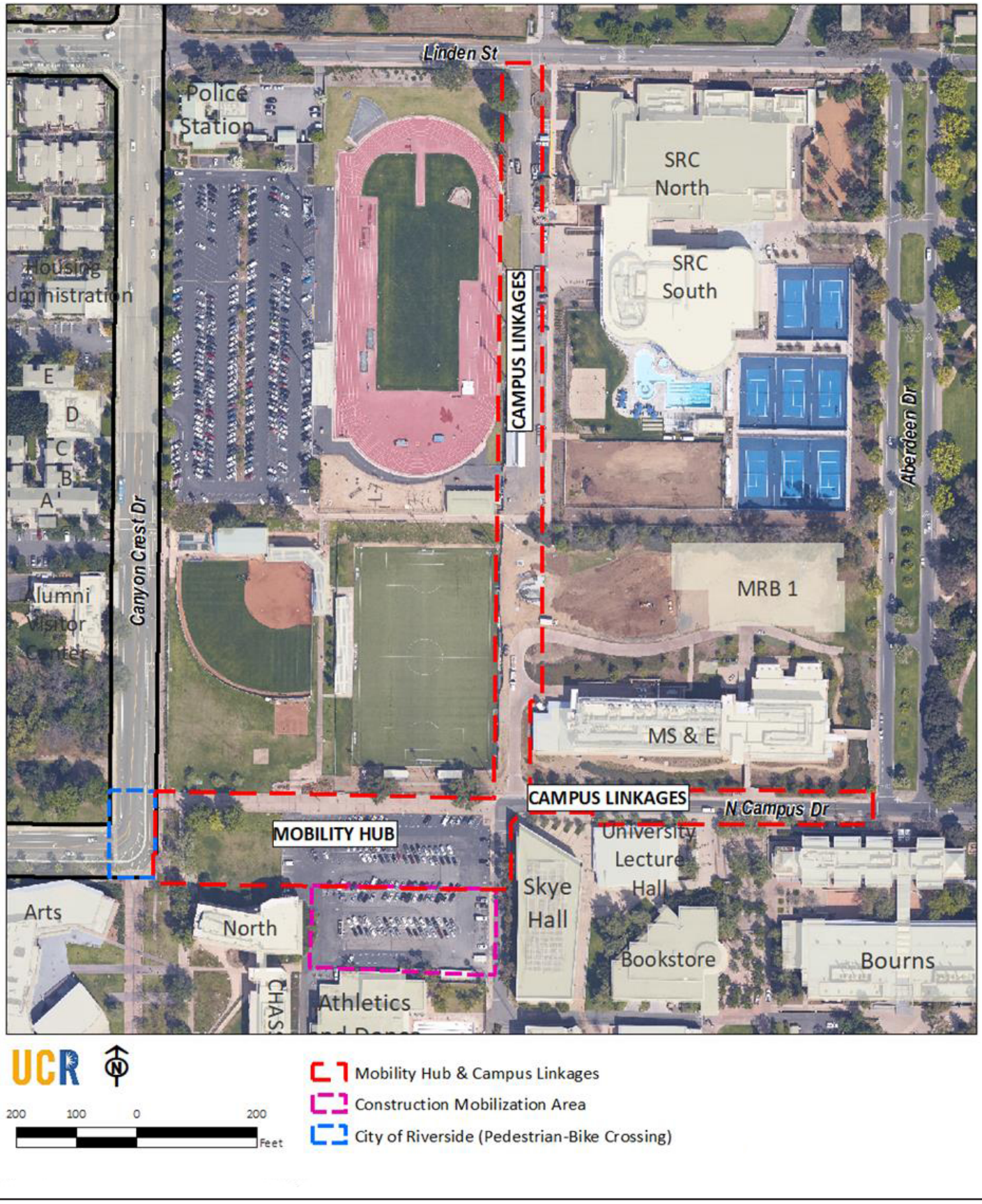


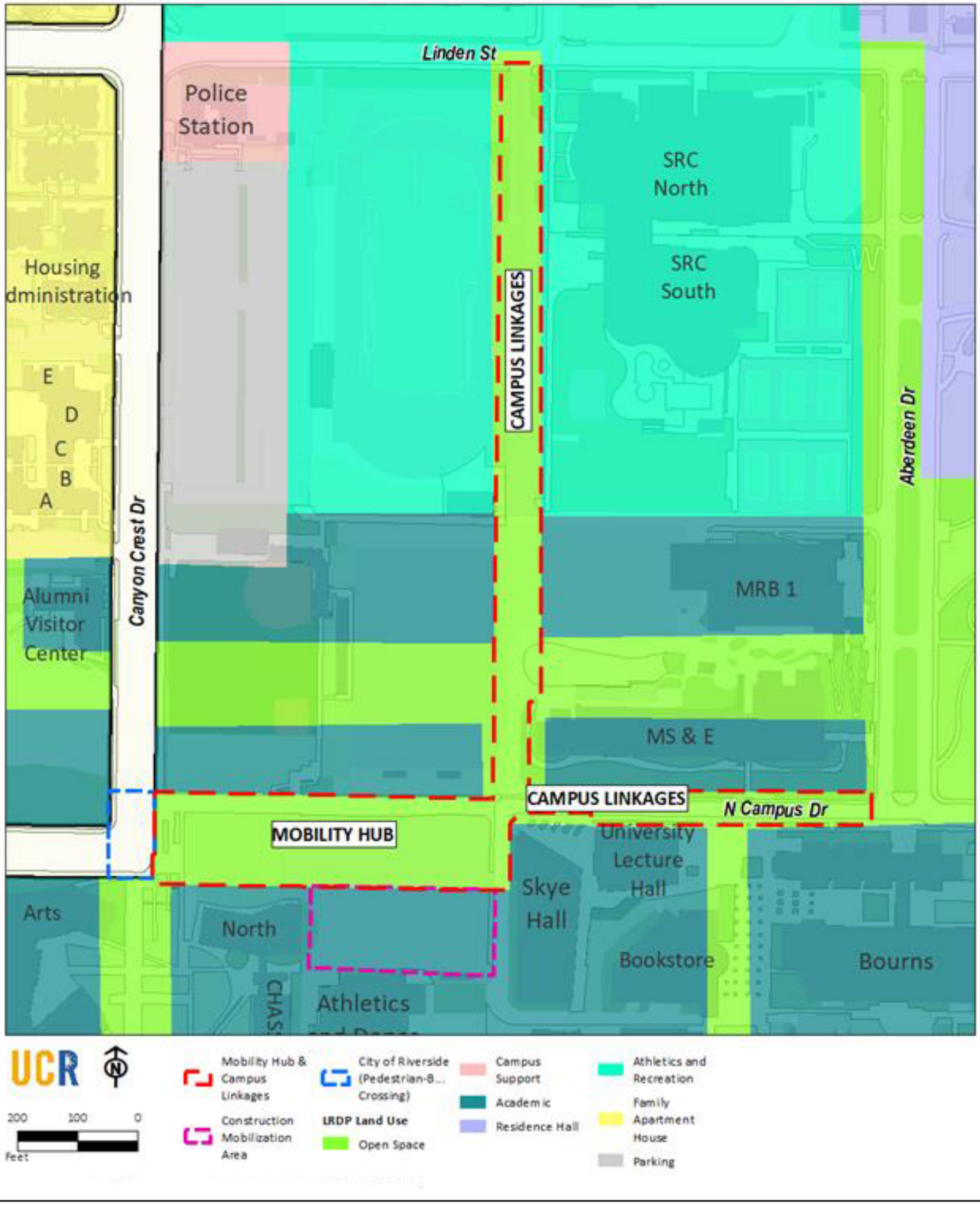
SOURCE: University of California, Riverside, 2018

FIGURE **2**

IMPACT SCIENCES

Project Vicinity

1031.006•08/18



SOURCE: University of California, Riverside, 2018

FIGURE 3

IMPACT SCIENCES

Existing LRDP Land Use

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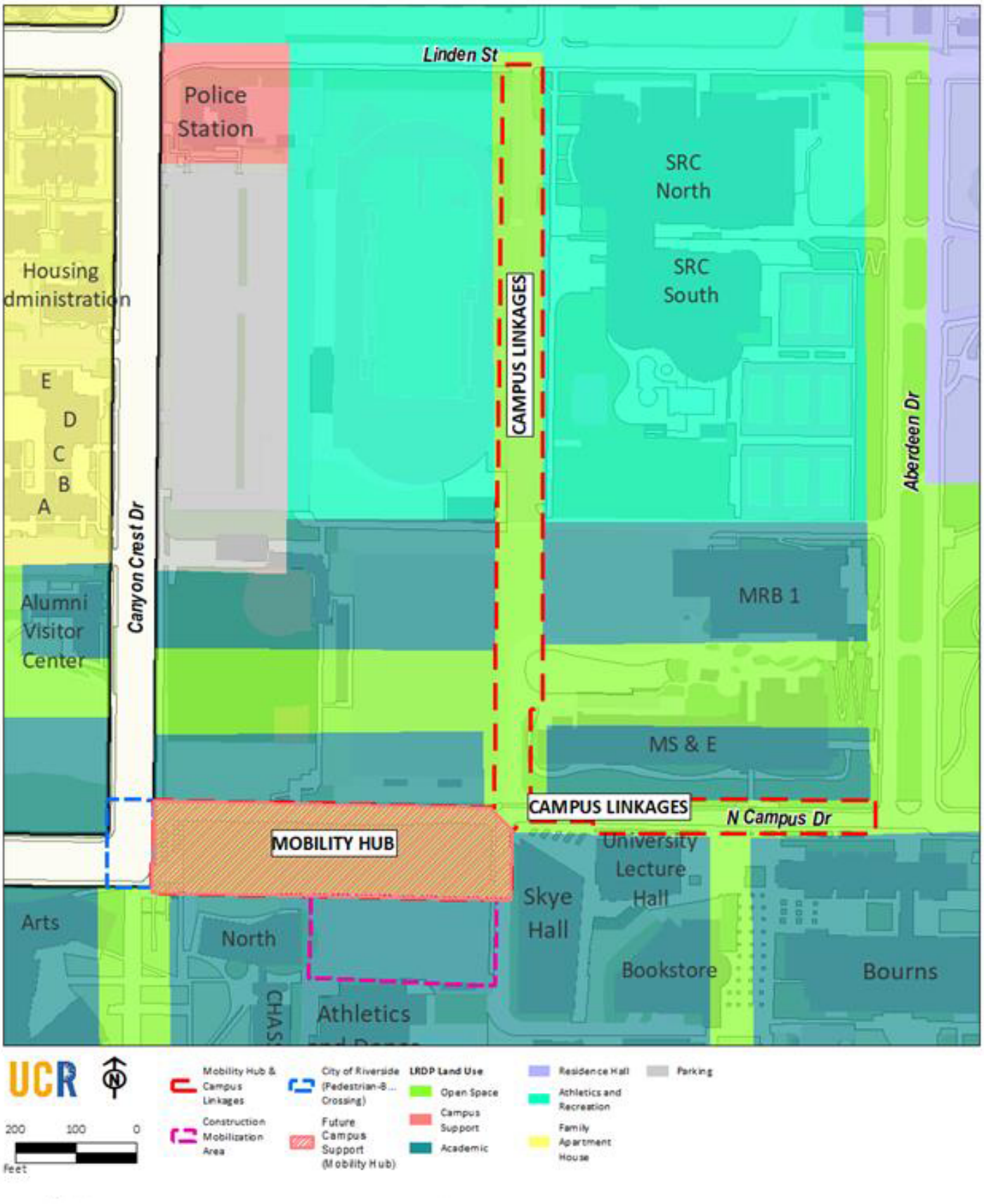

SOURCE: University of California, Riverside, 2018

FIGURE **4**

IMPACT SCIENCES

Proposed LRDP Land Use

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Anticipated Project Approvals

As a public agency principally responsible for approving or carrying out the proposed Mobility Hub and CCL Project, the University is the Lead Agency under CEQA and is responsible for reviewing the adequacy of the environmental document, adopting the CEQA determination, and approving the proposed project. Necessary project actions and approvals are anticipated to include, but are not limited to, consideration of the following by The Regents, its delegated committee or administrative official (anticipated in January 2019):

1. Adoption of the Tiered Initial Study and Mitigated Negative Declaration for the Mobility Hub and Central Campus Linkages Project and 2005 Long Range Development Plan (LRDP) Amendment #4.

2. University's approval of an amendment of the 2005 LRDP, as amended, to redesignate 2.5 acres of the project site from *Open Space* to *Campus Support* land use designation.

3. Approve the proposed Mobility Hub and Central Campus Linkages project.

Public and Agency Review

This Initial Study will be circulated for public and agency review from November 6, 2018 through December 5, 2018. Copies of the Initial Study are available during normal operating hours at Campus Planning – Capital Asset Strategies, UCR and online at http://cpp.ucr.edu/environmental/. Comments on the Initial Study must be received by 5:00 PM on December 5, 2018. They may be e-mailed to CEQA@ucr.edu or sent to:

Campus Planning – Capital Asset Strategies
1223 University Avenue, Suite 240
Riverside, California 92521
Attn: Jaime Engbrecht

Organization of the Initial Study

This Initial Study is organized into the following sections:

Section I – Project Information: provides summary background information about the proposed project, including project location, lead agency, and contact information.

Section II – Project Location and Description: includes a description of the proposed project, including the need for the project, the project's objectives, and the elements included in the project.

Section III – Environmental Factors Potentially Affected: identifies which environmental factors, if any, involve at least one significant or potentially significant impact that cannot be reduced to a less than significant level.

Section IV – Determination: indicates whether impacts associated with the proposed project would be significant, and what, if any, additional environmental documentation is required.

Section V – Evaluation of Environmental Impacts: contains the Environmental Checklist form for each resource and presents an explanation of all checklist answers. The checklist is used to assist in evaluating the potential environmental impacts of the proposed project and determining which impacts, if any, need to be mitigated or to be further evaluated in an EIR.

Section VI – Supporting Information Sources: lists references used in the preparation of this document.

Section VII – Initial Study Preparers: lists the names of individuals involved in the preparation of this document.

I. PROJECT INFORMATION

1. Project title:

   Mobility Hub and Central Campus Linkages

2. Lead agency name and address:

   The Regents of the University of California
   1111 Franklin Street
   Oakland, CA 94607

3. Contact person and phone number:

   Jaime Engbrecht
   Planner
   University of California, Riverside
   (951) 827-2421
   CEQA@ucr.edu

4. Project location:

   University of California, Riverside
   Riverside, California 92507
   (Refer to Figures 1 and 2)

5. Project sponsor's name and address:

   University of California, Riverside
   Campus Planning – Capital Asset Strategies
   1223 University Avenue, Suite 240
   Riverside, California 92521

6. Custodian of the administrative record for this project (if different from response to item 3 above.):

   Same as above.

II. PROJECT LOCATION AND DESCRIPTION

The proposed Mobility Hub and Central Campus Linkages Project analyzed in this Initial Study is composed of:

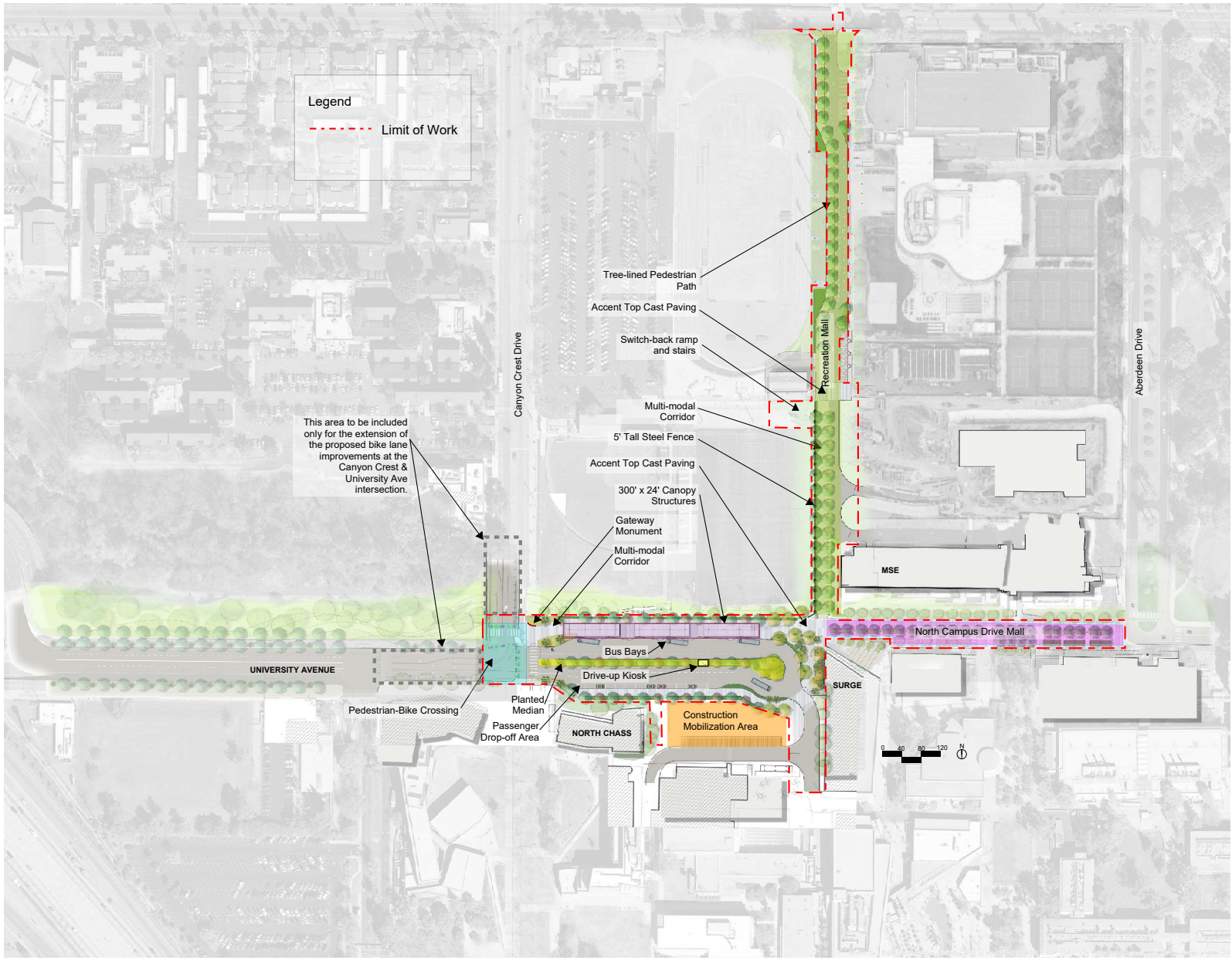
- The construction and operation of the Mobility Hub and Central Campus Linkages Project;
- The amendment of the UCR LRDP to redesignate 2.5 acres of the project site from *Open Space* to *Campus Support* land use designation.

The following sections present information with respect to the project site, followed by a detailed description of the two elements of the Mobility Hub and CCL Project.

Location: The UC Riverside campus is located in the City of Riverside, three miles east of downtown Riverside and just west of the Box Springs Mountains. The City of Riverside is located within the County of Riverside, in a larger geographic area known as the Inland Empire, which includes western Riverside and San Bernardino counties. **Figure 1, Regional Location**, shows the location of the campus in a regional context. The campus is generally bounded by University Avenue and Blaine Street on the north, Watkins Drive and Valencia Hill Drive and its extension south on the east, a line extending east from Le Conte Drive on the south, and Chicago Avenue on the west. The campus is bisected diagonally by the I-215/SR-60 freeway. Campus Drive (North, East, South, and West) creates a perimeter around what is known as the central campus.

The Mobility Hub and CCL Project would be located in the northwestern portion of central campus, approximately 2,250 feet east of the University Avenue exit from the I-215/SR-60 Freeway **(Figure 2, Project Vicinity)**. The proposed Mobility Hub is located south of the UC Riverside Soccer Field and Amy S. Harrison Softball Field, north of the CHASS Interdisciplinary Buildings and a portion of Parking Lot 19 (Lot 19), east of the Arts Building, and west of the Skye Hall (formerly Campus Surge). The proposed Recreation Mall would extend northerly from the northeast corner of the proposed Mobility Hub, border the UC Riverside Student Recreation Center (SRC), and would terminate at Linden Street at the proposed North District Development area.

The proposed conversion of North Campus Drive to a pedestrian mall (North Campus Mall) from the Mobility Hub to the intersection of North Campus Drive and Aberdeen Drive would improve east-west bicycle and pedestrian safety and circulation on the central campus. The new malls would continue to provide emergency vehicular access.



SOURCE: UCR Campus Planning, August 2018

FIGURE 5

Overall Site Plan

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Mobility Hub and Central Campus Linkages Project

The Mobility Hub and CCL Project is comprised of two key parts: the Mobility Hub and the Central Campus Linkages (Recreation and North Campus Malls). The Mobility Hub and CCL Project will enhance public transportation access to campus, and create safe pedestrian and bicycle-friendly circulation along key east-west and north-south alignments. The estimated allocation of space within the approximately 7-acre (total) project site is detailed below in **Table 1, Mobility Hub and CCL Project Space Summary**.

Table 1
Mobility Hub and CCL Project Space Summary

Program Element	Acres (approx.)	Existing Land Use	Proposed Land Use	LRDP Amendment Required
Mobility Hub				
Mobility Hub	2.5	Open Space	Campus Support	Yes
Canyon Crest/University Drive Intersection and Associated Improvements	.9	City of Riverside Right of Way	N/A	N/A
Parking Lot 19 Reconfiguration	0.4	Academic (Existing non-conforming land use)	No change in land use being proposed	No
Parking Lot 19 Landscaping Buffer	0.4	Academic (Existing non-conforming land use)	No change in land use being proposed	No
Central Campus Linkages				
North Campus Drive Mall	0.6	Open Space	No change in land use being proposed	No
Recreation Mall	1.8	Open Space	No change in land use being proposed	No
TOTAL (approx.)	**6.6**			

Source: University of California, Riverside, July 2018

Mobility Hub

The proposed Mobility Hub would be established and operated through a planned partnership between UC Riverside and RTA at the east terminus of University Avenue at Canyon Crest Drive to create a six-bus bay transit center. As the campus grows and its population increases, so does the need to travel to and from campus, adding to the demand for public transit. Currently, RTA is limited by existing on-street bus transit facilities, which limits the possibility of introducing new routes and increasing bus frequency. The Mobility Hub would integrate transit services at a centralized location on campus and provide enhanced transit service to the campus with increased frequency and strategic routes that would connect UC Riverside to Downtown Riverside and the region. Additionally, the proposed Mobility Hub would provide an easily accessible campus location, allowing for the consolidation of bus routes and the full implementation of RTA's new limited-stop bus routes, RapidLink. RapidLink would provide more frequent service to the surrounding communities and linkages to Orange and San Bernardino counties.

The proposed Mobility Hub would be accessible via an entrance located east of Canyon Crest Drive at the current terminus and in alignment with University Avenue. The entrance would necessitate a signalized intersection with pedestrian crossings where University Avenue meets Canyon Crest Drive. Located near a central campus access point, the proposed Mobility Hub would simplify public transit, private vehicle drop-off and pick-up, emergency and service access, and bicycle and pedestrian connections. Lastly, the proposed Mobility Hub would serve as a key gateway arrival point, offering those visiting the campus a sense of arrival and orientation.

The proposed Mobility Hub would consist of drive aisles with a center median organizing the flow of vehicular traffic in one direction. An information and parking kiosk would be located on the landscaped median. On the south side of the inbound drive aisles, closest to the academic and support buildings, passenger pick-up and drop-off for both private and ridesharing vehicles and charter buses is proposed. The north outbound side would feature six bus bays (four regular bus bays and two articulated bus bays) and associated bus canopies, which would provide shade and transit information to passengers. Riders would be able to board in an organized manner before the buses exit, traveling either north up Canyon Crest Drive or west down University Avenue. The southeast end of the drive aisles would provide limited access to the remainder of Lot 19 (approximately one acre), where approximately 25 parking spaces would be available for accessible parking and Service/Department vehicles. The parking lot would be visually shielded from the passenger pick-up and drop-off area by an approximately 16,000 square foot landscaped buffer running along the southern edge of the Mobility Hub.

Central Campus Linkages

Currently, the existing and proposed programs north of the central campus lack direct, right-sized, and continuous pedestrian pathways. The Central Campus Linkages would extend and enhance pedestrian connections from the Mobility Hub to the Student Recreation Center and the proposed North District

Development by creating the Recreation Mall and connections to the east of the Mobility Hub by converting a portion of North Campus Drive into the North Campus Mall (refer to **Figure 5**).

The northern portion of the Recreation Mall would extend from Linden Street to the south end of Lot 25 and would be converted into a multi-modal pedestrian and bicycle corridor with service and emergency vehicle access, bicycle sharrows, separated pedestrian pathway, and parallel parking. Permit parking in Lot 25 would be removed upon project implementation while retaining some service and accessible parking. The southern portion of the Recreation Mall would extend from the south end of Lot 25 to the Mobility Hub. The proposed Recreation Mall would create a new pedestrian and bicycle corridor, and provide a service and emergency vehicle connection to the Materials Science and Engineering Building (MS&E) that does not currently exist.

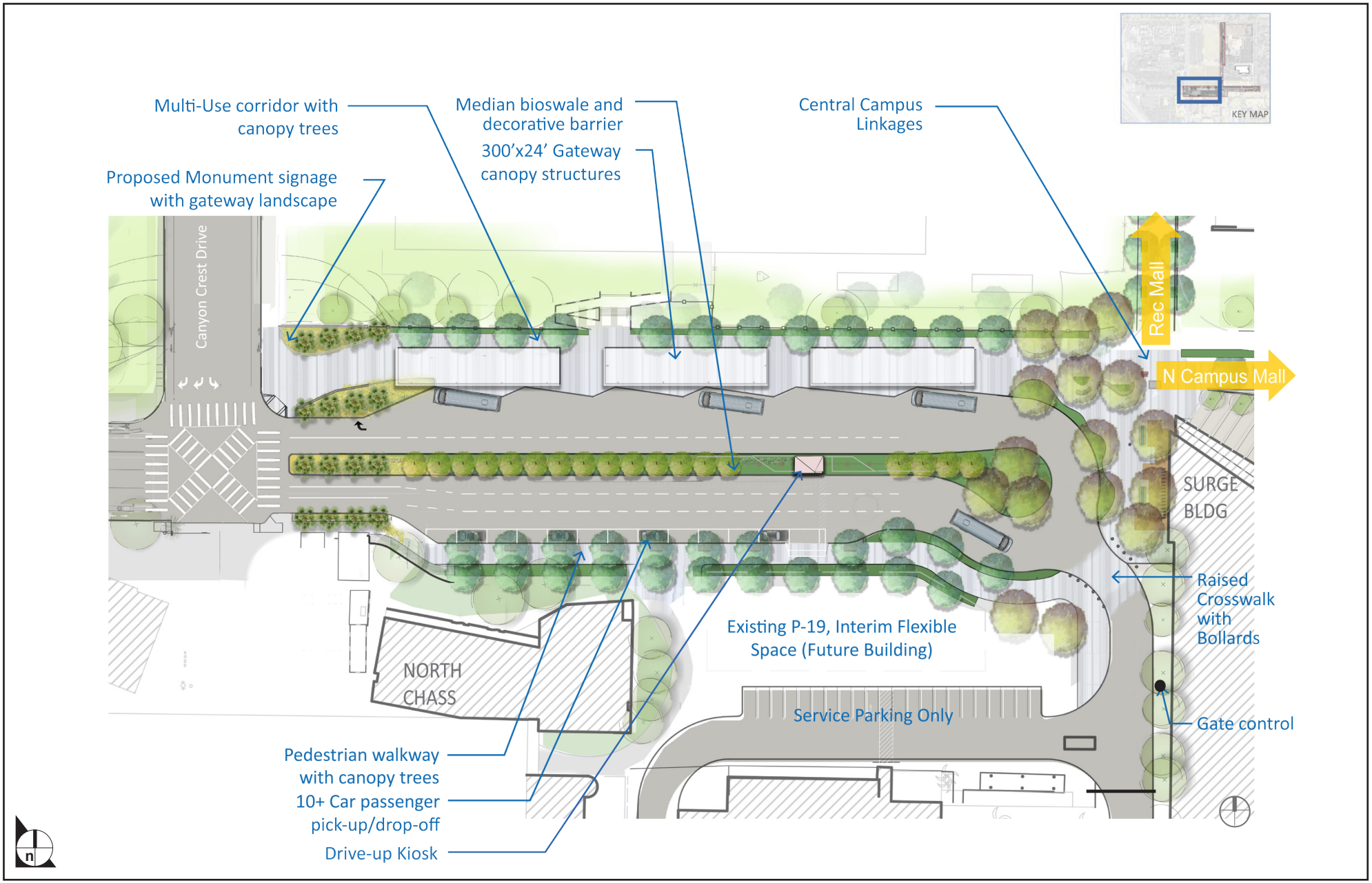
The proposed North Campus Mall would begin at the eastern end of the Mobility Hub and terminate at the intersection of North Campus Drive and Aberdeen Drive. The conversion of North Campus Drive from a shared local access road to a pedestrian mall would eliminate conflicts between pedestrians and vehicles and improve east-west bicycle and pedestrian circulation on the central campus. Vehicular use would be emergency access only. Existing service and delivery vehicles would be re-routed to enter the campus from University Avenue and Canyon Crest Drive through the proposed Mobility Hub.

Safety and Security Measures

The Mobility Hub and CCL Project was designed using best practices in Crime Prevention through Environmental Design (CPTED). Such features include, but are not limited to, enhanced lighting, security cameras at the bus waiting area, "Blue Light" emergency stations, and sight lines free from obstructions. Pedestrian protection measures include a pedestrian "scramble" crosswalk at Canyon Crest Drive and University Avenue, bollards, and pedestrian/bicycle-only malls that limit vehicular conflicts. All Riverside Transit Agency buses are equipped with multiple cameras. The UC Riverside Police Department plans on assigning Community Service Officers to night patrols of the area, 7-days a week, to report suspicious or criminal activity.

Population

The Mobility Hub and CCL Project would service existing and projected campus populations. The Mobility Hub and CCL Project would not result in an increase in campus population.



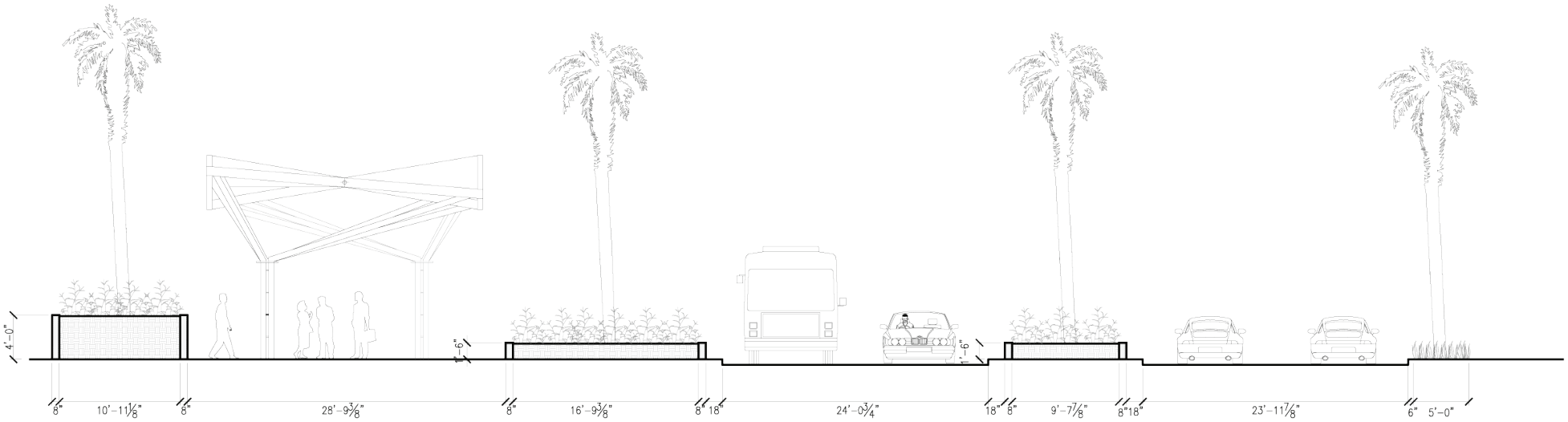
SOURCE: UCR Campus Planning, August 2018

FIGURE 6

Mobility Hub Detail

IMPACT SCIENCES

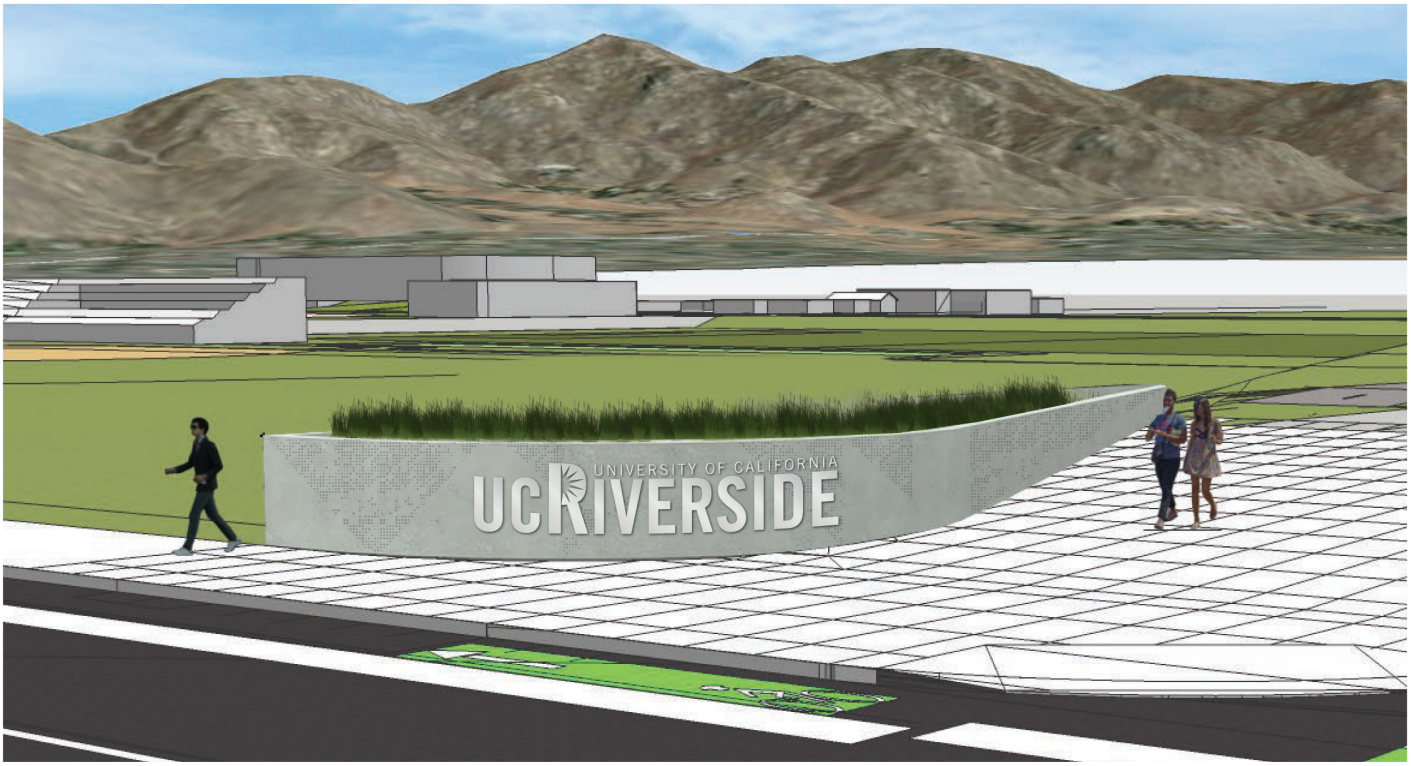
1031.006•10/18



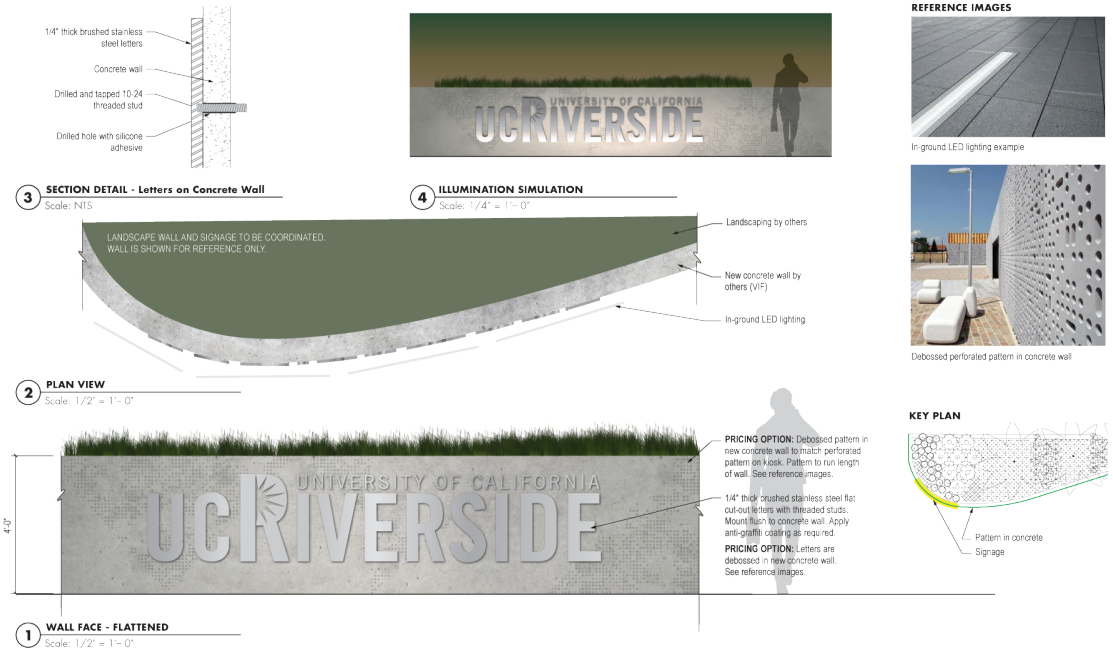
SOURCE: Gruen Associates, 2018

FIGURE 7

Mobility Hub Section



5 **A01 – IDENTITY MONUMENT OPTION 1**
NTS

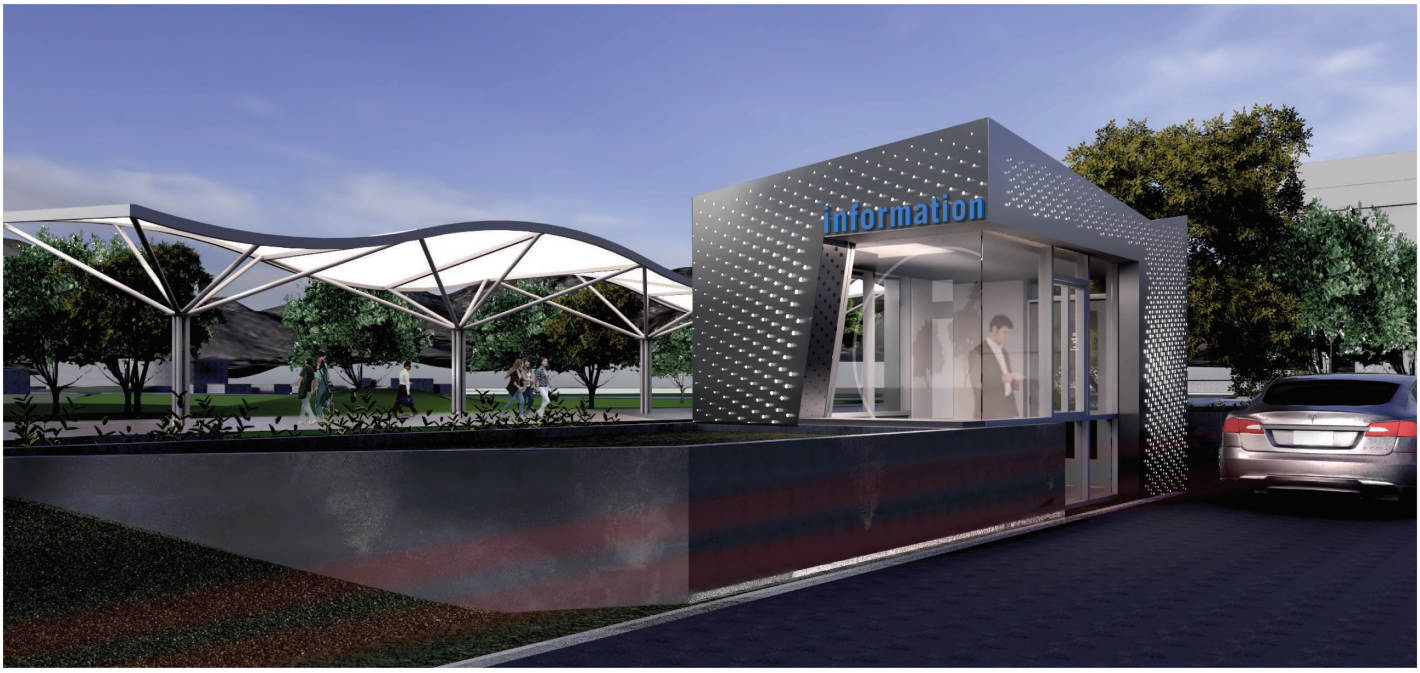


SOURCE: Gruen Associates, 2018

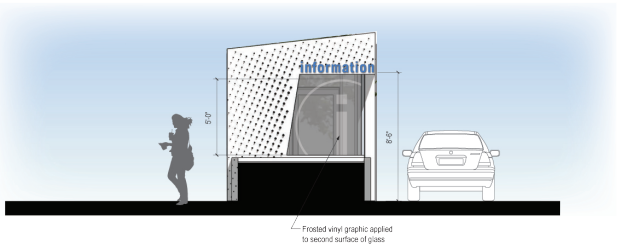
FIGURE **8**

IMPACT SCIENCES

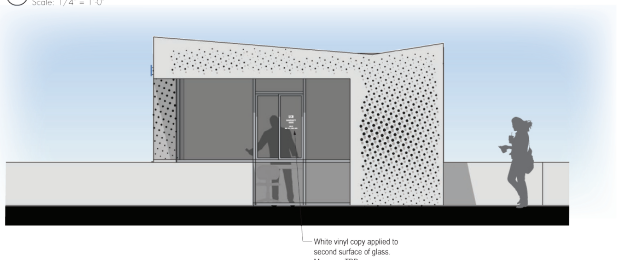
Project Rendering - Monument Entry Sign



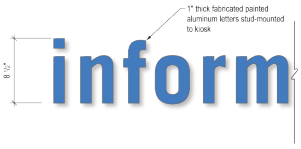
5 C03 – KIOSK INFORMATION
NTS



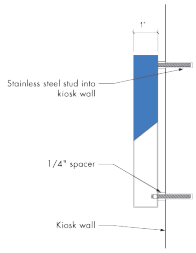
1 WEST ELEVATION
Scale: 1/4" = 1'-0"



2 SOUTH ELEVATION
Scale: 1/4" = 1'-0"



4 LETTER DETAIL
Scale: 1 1/2" = 1'-0"



3 RENDERING
Scale: NTS

SOURCE: Gruen Associates, 2018

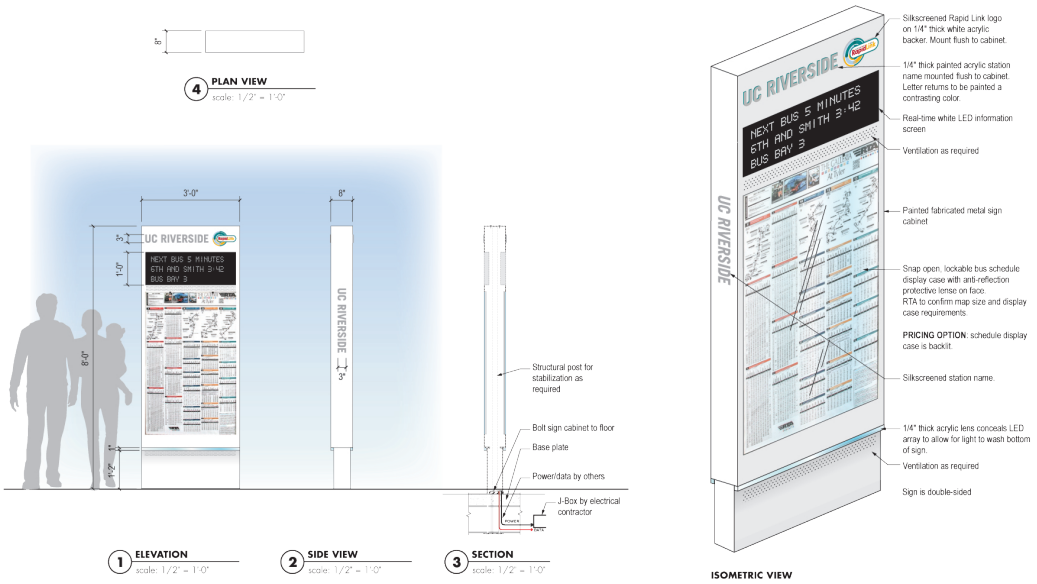
FIGURE 9

IMPACT SCIENCES

Project Rendering - Kiosk Details

1031.006•08/18

5 **C01 – DYNAMIC TRANSIT KIOSK**
NTS



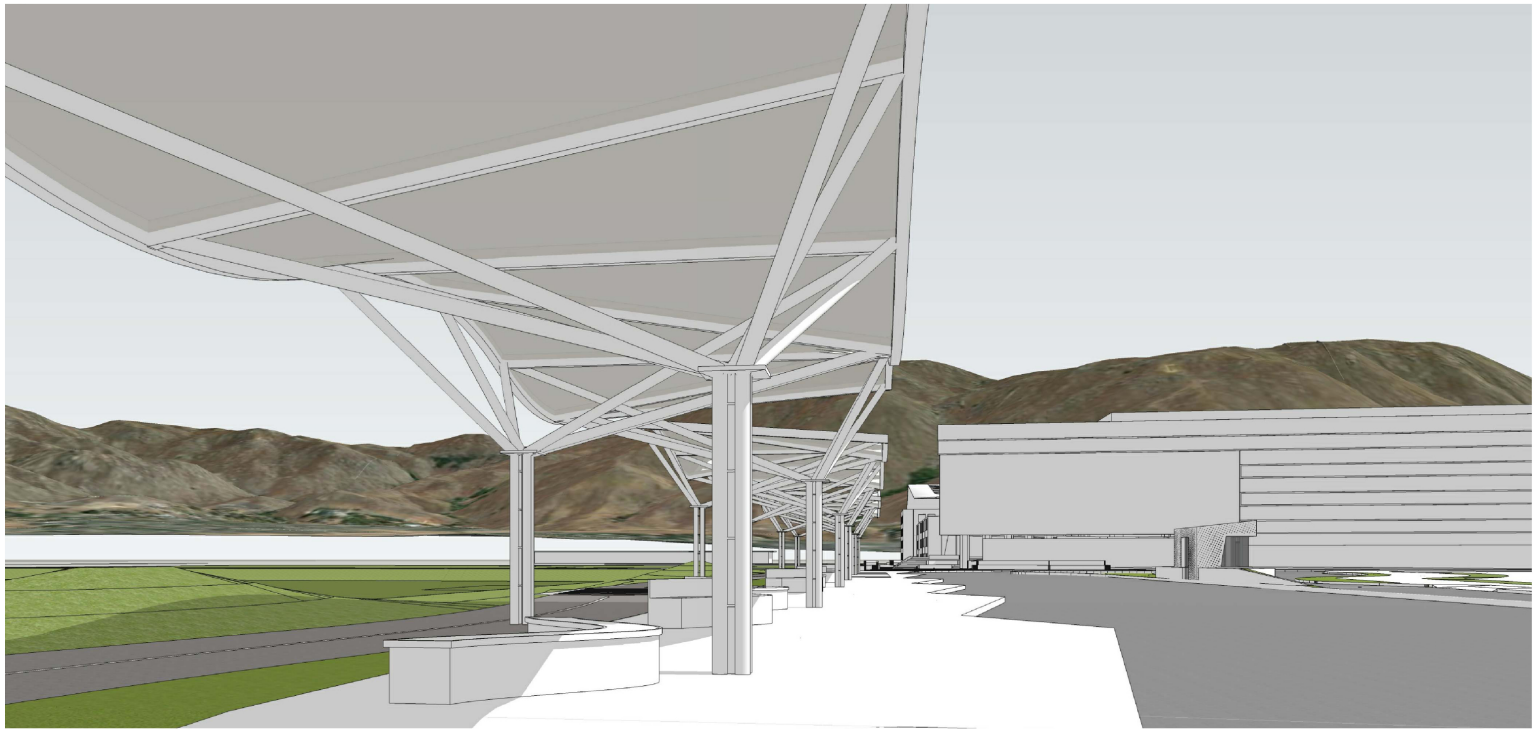
ISOMETRIC VIEW

SOURCE: Gruen Associates, 2018

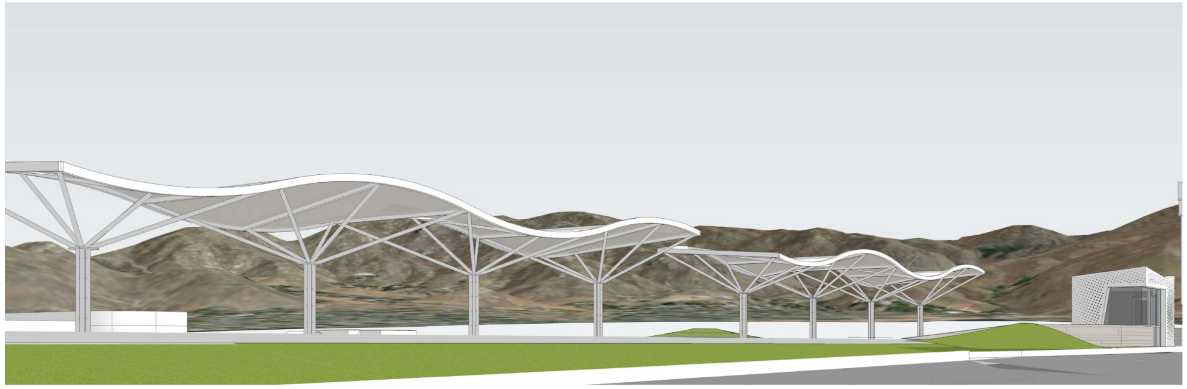
FIGURE **10**

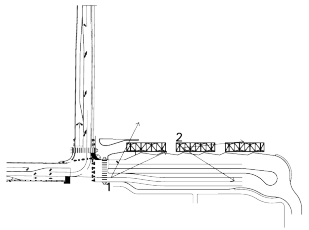
IMPACT SCIENCES

Project Rendering - Canopy and Signage



CANOPY VIEW EAST NORTH MALL BEYOND | 2
NOT TO SCALE





CANOPY VIEW NORTHEAST FROM MOBILITY HUB | 1
NOT TO SCALE

SOURCE: Gruen Associates, 2018

FIGURE **11**

IMPACT SCIENCES

Project Rendering - Canopy Detail

Utilities

Water and Sewer

The project site would be served by the UC Riverside campus sanitary sewer and water systems. There is an existing 15-inch campus sanitary sewer main located under the north walkway that conducts effluent from east to west and discharges to the City sewer main in University Avenue. This sewer main would serve the Mobility Hub and CCL Project site. A point of connection is proposed north of the new kiosk to convey discharge from the kiosk water station.

An existing 12-inch campus water main in the north edge of the project site would serve the water demand from the proposed kiosk and new irrigation throughout the project site. A point of connection is planned north of the new kiosk. The 12-inch water main would also serve a new fire hydrant to be located in the north-west corner of the Mobility Hub.

Stormwater

There is an existing large double box storm drain culvert within the pedestrian path north of the Mobility Hub and CCL Project site which would be protected in place during and after construction.

The Mobility Hub and CCL Project would keep the same drainage pattern, naturally draining from north to south and east to west. The site would generally be graded in a way that stormwater would be collected through a series of area drains connected by underground storm drain pipes, which after filtration to remove trash, sediment, oil and other pollutants, would ultimately discharge stormwater to the existing stormwater system located in University Avenue.

Storm drain points of connections would be provided at the following locations:

- West edge of Mobility Hub (within campus property) - connect to existing 12-inch storm drain line. This connection would discharge runoff from the Mobility Hub.
- Connect new storm drains from the south Recreation Mall planter drains to existing 12-inch storm drain in Mobility Hub site.
- North end of north Recreation Mall - connect to existing storm drain line located adjacent to Linden Street – size of existing storm drain lateral is currently unknown.
- Middle portion of north Recreation Mall – connect to existing storm drain adjacent to new MRB 1 project site - size of existing storm drain lateral is currently unknown.

- Southern portion of Recreation Mall – connect to existing storm drain located at the north-west edge of the Material Science and Engineering Building (MS&E) - size of existing storm drain lateral is currently unknown.

The Mobility Hub and CCL Project would provide an onsite treatment of storm water through vegetated swales that slow the flow and promote recharging of ground water. The proposed site allows for the use of bioswales and vegetated biofilters. The bioswales would be incorporated into the landscape design to collect sheet flow, slow down runoff, and treat water for pollutants. Bioswales and vegetated swales would be designed and constructed to comply with current and applicable water quality guidelines for Low Impact Development (LID). The treatment areas would treat water for pollutants and the treated water shall be released in a controlled manner.

Sustainable Design Features

This project will comply with the *University of California Policy on Sustainable Practices.* Viable alternative transportation options can reduce single occupant vehicle (SOV) trips, vehicle miles traveled (VMT), greenhouse gas emissions, pollution, and traffic congestion, and parking demand, providing a sustainable and healthy future for UCR's transportation strategy. The project is not eligible for LEED certification, although it will be designed to comply with sustainability policies and best practices such as (LID), increased on-site stormwater treatment (including the implementation of a biofiltering system), LED lighting, and the California Green Building Standards Code. The Mobility Hub and CCL Project's stormwater treatment design would be in compliance with the local LID ordinance and in compliance with UC Riverside's MS4 permit program (per the Phase II Small MS4 Post-Construction Stormwater Management Checklist).

Construction

Construction of the Mobility Hub and CCL Project would begin in early 2019 and is anticipated to be completed by the spring of 2020. Construction access to the site is anticipated to be from University Avenue, with Lot 19 used as a laydown area for the project. Secondary access for some construction activities for the north portion of the Recreation Mall may occur from Linden Street.

LRDP Amendment 4

The proposed use for the Mobility Hub project site is not consistent with (1) the *Open Space* land use designation adopted in the 2005 LRDP, as amended. Accordingly, a minor amendment (Amendment 4) to the 2005 LRDP, as amended, proposes to change the land use designation for 2.5 acres of the approximately 7-acre site from *Open Space* to *Campus Support*. This LRDP amendment to allow the Mobility Hub and CCL Project to be constructed on the proposed site providing a public-oriented use in support of the objectives of the 2005 LRDP, as amended. The integration of essential open space and landscape strategies and multi-modal transportation improvements will create a seamless connection to the campus's Open Space Framework.

Land Use Designation Change

The proposed Mobility Hub site (approximately 2.5 acres of the entire 7-acre site) is currently designated as *Open Space* in the 2005 LRDP, as amended (refer to **Figure 3**). The *Open Space* land use designation is typically utilized for campus malls, quads, plazas, courtyards, and formal and informal gathering spaces. Examples of acceptable land uses include naturalistic open spaces, Botanic Gardens, malls, and important campus buffer areas which provide setbacks for adjacent uses, as well as walkways and connections throughout campus. Closely associated with campus open space are the streets that provide circulation to vehicles, bikes, and pedestrians. The proposed use of the Mobility Hub on the 2.5-acres is not consistent with the *Open Space* designation. The University proposes to amend the 2005 LRDP, as amended, to revise the designation of 2.5 acres of the Mobility Hub and CCL Project site from *Open Space* to *Campus Support* (refer to **Figure 4**). The remaining 4.5-acre portion of the project site currently designated as *Open Space*, *Academic*, or is in the City of Riverside right-of-way and would be unchanged, as the Mobility Hub and CCL Project use is consistent with this land use designation (see **Table 2**).

Table 2
Existing and Proposed LRDP Land Use Designations

Existing Land Use Designations	Proposed Land Use Designations	Project Scope	Approximate Area (acres)
Open Space	*Campus Support*	Mobility Hub	2.5
Open Space	*Open Space* (No Change)	Central Campus Linkages	2.4
Academic	*Academic* (No Change)	Parking Lot 19 (Existing)	.8
	Total		5.7

Source: University of California, Riverside, July 2018

The *Campus Support* land use designation allows uses such as Transportation and Parking Services (TAPS), Fleet Services, Environmental Health and Safety, and similar or associated uses which support the campus enterprise and campus community. The proposed *Campus Support* designation at the project site is compatible with the surrounding uses and planned future uses.

Additionally, with the proposed change in land use designation, adequate *Open Space* would remain in the immediate areas surrounding the *Campus Support* land use. The Mobility Hub and CCL Project supports Open Space Framework of the 2005 LRDP, as amended, by integrating park-like spaces and walkways that create connections to campus. The Mobility Hub and CCL Project also supports the 2005 LRDP, as amended, by creating an improved gateway arrival point to provide visitors with a sense of arrival and orientation.

Project Objectives

The objectives of the Mobility Hub and CCL Project are to:

- Create a single, central off-street location for RTA bus routes servicing UC Riverside to converge;
- Improve connectivity from UC Riverside to downtown Riverside, other areas of the city, and the region;
- Offer a viable and attractive alternative to personal vehicles;
- Improve pedestrian and bicycle connectivity and address circulation along key east-west and north-south alignments;

- Enable safe access to and from the campus further into the evening hours, thereby extending the period of time the campus and its surroundings remain active;
- Strengthen UC Riverside's identity at the terminus of University Avenue by creating a new gateway experience;
- Transform an existing parking lot and backdoor setting into a vibrant front door;
- Simplify service and delivery access to Highlander Union Building (HUB) complex, Bookstore Building and Pierce Hall loading area;
- Limit the need to add parking capacity even as the campus population increases; and
- Reinforce UC Riverside's commitment to access and environmental stewardship.

Discretionary approval authority and other public agencies whose approval is required

As the public entity principally responsible for approving or carrying out the proposed project, The Regents of the University of California (The Regents) is the Lead Agency under CEQA. The Regents is responsible for complying with the California Environmental Quality Act and determining whether to approve the Mobility Hub and CCL Project.

There are no natural resources on or near the project site that could trigger the involvement of any trustee agencies.

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would potentially be 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	☐ Agricultural and Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology and Soils
☐ Greenhouse Gas Emissions	☐ Hazards/Hazardous Materials	☐ Hydrology and Water Quality
☐ Land Use and Planning	☐ Mineral Resources	☐ Noise
☐ Population and Housing	☐ Public Services	☐ Recreation
☐ Transportation/Traffic	☐ Tribal Cultural Resources	☐ Utilities and Service Systems
☐ Mandatory Findings of Significance		

IV. DETERMINATION

On the basis of the initial evaluation that follows:

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

X I find that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made that would avoid or reduce any potential significant effects to a less than significant level. *A* MITIGATED NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment. An ENVIRONMENTAL IMPACT REPORT will be prepared.

Jaime Engbrecht 11/1/2018

Signature Date

Jaime Engbrecht,
Planner

V. EVALUATION OF ENVIRONMENTAL IMPACTS

As previously noted, the campus has determined that the proposed Mobility Hub and CCL Project (approximately 2.5 acres of the entire 7-acre site) would require a minor amendment to the Land Use Designation of the 2005 LRDP, as amended. However, as no other conditions under the LRDP would change, the analysis in this Initial Study is tiered from the 2005 LRDP EIR and the 2005 LRDP Amendment 2 EIR. The analysis in this Initial Study references applicable LRDP Planning Strategies (PS), Planning Principles (PP), and Mitigation Measures (MM). A listing of the PSs, PPs, and MMs is provided in Appendix A of this Initial Study.

Appendix G of the *State CEQA Guidelines* provides a suggested format to use when preparing an Initial Study. The Environmental Checklist used in this document adopts a slightly different format with respect to response column headings, while still addressing the Appendix G checklist questions for each environmental issue area.

Impact Questions and Responses

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	■	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	■
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	■	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	■	☐

DISCUSSION:

a. A scenic vista is generally defined as an expansive view of highly valued landscape as observable from a publicly accessible vantage point. In the vicinity of the UC Riverside campus, the Box Spring Mountains are the most prominent visual feature from many locations, and sweeping panoramic views of the Box Springs Mountains are considered a scenic vista. Although panoramic views of the Box Springs Mountains are available in the vicinity of the campus, no specific focal views of the Box Springs Mountains were identified by the Campus in the 2005 LRDP EIR, and scenic vistas were considered to be limited to panoramic views of the Box Springs Mountains from publicly accessible viewpoints. Views of the Box Springs Mountains are currently largely obstructed by existing campus developments and landscaping. The project area would mostly consist of paved space for vehicles, bicycles, and pedestrians, which would not inhibit views. Bus canopies built at the Mobility Hub would primarily be designed to create shade and would be not structurally substantial enough to significantly affect views of the mountains. Additionally, the design of the Mobility Hub and CCL Project would be guided by campus Programs & Practices adopted as part of the UCR 2005 LRDP EIR as supplemented and updated by the UCR 2005 LRDP Amendment 2 EIR (included as Appendix A to this Draft Initial Study), in particular PP 4.1-1 and PP 4.1-2(a), to ensure compatibility with existing campus architecture, and 2007 Campus Design Guidelines; as well as intentionally emphasize the viewshed of the Box Springs Mountains. This would be accomplished by matching the repetition of trees along University Avenue and creating an entranceway that points visitors directly eastward. In this way, the viewshed would actually be improved by the development of the Mobility Hub and CCL Project and would have a less than significant impact with regard to scenic vista.

LRDP Programs and Practices

PP 4.1-1 The Campus shall provide design professionals with the 2007 Campus Design Guidelines and instructions to implement the guidelines, including those sections related to use of consistent scale and massing, compatible architectural style, complementary color palette, preservation of existing site features, and appropriate site and exterior lighting design.

PP 4.1-2(a) The Campus shall continue to provide design professionals with the 2007 Campus Design Guidelines and instructions to develop project-specific landscape plans that are consistent with the Guidelines with respect to the selection of plants, retention of existing trees, and use of water conserving plants, where feasible.

b. None of the roadways on, or in the vicinity of, campus is officially designated or identified as eligible for designation as a state scenic highway. Therefore, implementation of the Mobility Hub and CCL Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway, and no impact would occur.

c. The project site currently of a parking lot and access-controlled local campus circulation routes. The project site does not contain any structures. The surrounding developments consist of academic and support buildings, an athletics buildings and fields, landscaping, roadways, and parking areas. As mentioned above, future development on the campus, including the Mobility Hub and CCL Project, would be guided by PP 4.1-1 and PP 4.1-2(a) to preserve and enhance the visual character and quality of the campus. As development of the Mobility Hub and CCL Project would not substantially alter current development of the site and the new design would be guided by PP 4.1-1 and PP 4.1-2(a), the Mobility Hub and CCL Project would not substantially degrade the existing visual character or quality of the site and its surroundings. The impact would be less than significant.

d. Current sources of light and glare at the project site mainly consist of security lighting. There are also minimal amounts of glare produced by the reflective materials of cars parked in Lot 19 and surrounding buildings, and light generated by nearby buildings, fields, and roadways, though not generated on the site itself. The Mobility Hub and CCL Project would increase sources of light and glare through the implementation of more security lighting, vehicular traffic, and reflective signs and structures associated with bus stops, passenger drop-off, and active transportation. However, as the Mobility Hub and CCL Project would not necessitate nearly as much lighting as the buildings and fields around it, the impact on the surrounding area would be unsubstantial. Additionally, per LRDP mitigation measure MM-4.1-3(b), all lighting would be consistent with other lighting in the area and utilize design elements, such as downward-facing fixtures, to reduce spillover and minimize adverse impacts. The resulting impact on light and glare at the project site would be less than significant.

LRDP Mitigation Measure

MM 4.1-3(b) All outdoor lighting on campus resulting from new development shall be directed to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) to prevent stray light spillover onto adjacent residential areas. In addition, all fixtures on elevated light standards in parking lots, parking structures, and athletic fields shall be shielded to reduce glare. Lighting plans shall be reviewed and approved prior to project-specific design and construction document approval.

CUMULATIVE IMPACTS:

As discussed above, development of the Mobility Hub and CCL Project would not substantially damage scenic resources, vistas, or the visual quality of the area, nor would it significantly impact light and glare at the site. Therefore, development of the Mobility Hub and CCL Project would not contribute to cumulative effects with regard to this topic.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2. AGRICULTURAL AND FORESTRY RESOURCES – Would the project:				
a) 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?	☐	☐	☐	■
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	■
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)) or timberland (as defined in Public Resources Code section 4526)?	☐	☐	☐	■
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	■
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use?	☐	☐	☐	■

DISCUSSION:

a. Development of the Mobility Hub and CCL Project would take place on previously developed land, most of which is paved as vehicular roadways or a parking. As shown in Figure 4.2-1 of the 2005 LRDP Amendment 2 EIR (Important Farmland on the UCR Campus), development would not be within an area designated as Farmland. Implementation of the proposed project would not result in the loss of Farmland, and there would be no impact.

b. As previously discussed, the project site is located centrally on campus and is currently developed and largely paved. As such, it is not zoned for agricultural use or under a Williamson contract. Therefore, no impacts would occur.

c. The project site is not zoned as forestland or timberland. No impact would occur.

d. No part of the project area contains forest lands. Furthermore, the surrounding area does not include any forest land or timber land. No impact would occur.

e. Most of the campus lands zoned for agricultural use by the 2005 LRDP, as amended are located on West Campus, across the I-215/SR-60 Freeway. As the proposed project and agricultural uses are located at a sufficient distance from one another, the Mobility Hub and CCL Project would not create land use conflicts with adjacent agricultural lands that could result in the

abandonment of agricultural uses or cause the lands to convert to non-agricultural uses. Development of the proposed project would neither construct any uses sensitive to agricultural noise or activities, nor construct any uses that would conflict with agricultural practices. Therefore, no impact would occur.

CUMULATIVE IMPACTS:

The Mobility Hub and CCL Project would not convert Prime Farmland to non-agricultural uses or result in the conversion of farmland to non-agricultural uses. Additionally, it would not result in an impact on forest land, timberland, or lands under Williamson Act contract. The impact of cumulative development on agricultural and forest resources would be less than significant.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	■
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation (e.g., induce mobile source carbon monoxide (CO) emissions that would cause a violation of the CO ambient air quality standard)?	☐	☐	■	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	■	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	■	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	■	☐

DISCUSSION:

a. The proposed institutional use will neither conflict with the SCAQMD's 2016 Air Quality Management Plan (AQMP) nor jeopardize the region's attainment of air quality standards. The AQMP focuses on achieving clean air standards while accommodating population growth forecasts by the Southern California Association of Governments (SCAG). Specifically, SCAG's growth forecasts from the 2016 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) are largely built off local growth forecasts from local governments. The Mobility Hub and CCL Project is not anticipated to increase student population, or increase traffic in the project vicinity. Therefore, no impact would occur.

b. A project may have a significant impact if project-related emissions would exceed SCAQMD thresholds of significance, or if project-related emissions would substantially contribute to an existing or projected air quality violation.

Construction Phase Air Quality Impacts

Construction-related emissions were estimated using the SCAQMD's CalEEMod 2016.3.2 land use emissions model (included as Appendix B of this Initial Study) using the following assumptions from the applicant:

- Construction is anticipated to begin in early 2019 and conclude by Spring 2020.
- 2,030 net cubic yards of soil would be imported during construction of the Mobility Hub and CCL Project.
- Construction would occur over approximately 7 acres.

The parking lot land use type was used to represent the paving work included in the Mobility Hub and CCL Project. The general office building land use type was used to represent the information kiosk, which was assumed to be approximately 200 square feet. Estimated emissions associated with construction of the Mobility Hub and CCL Project are shown in **Table 3, Estimated Daily Construction Emissions – Unmitigated.**

Table 3
Estimated Daily Construction Emissions - Unmitigated

Construction Year	Pounds Per Day					
	VOC	NOx	CO	SOx	PM10	PM2.5
2019	4	46	24	<1	10	6
2020	5	14	15	<1	1	1
Maximum Regional Total	5	46	24	<1	10	6
Regional Significance Threshold	75	100	550	150	150	55
Exceed Threshold?	No	No	No	No	No	No
Maximum Localized Total	5	46	22	<1	9	6
Localized Significance Threshold	--	488	6,860	--	96	31
Exceed Threshold?	N/A	No	No	N/A	No	No

Source: Impact Sciences, 2018. Based on CalEEMod 2016.3.2 model runs, included as Appendix B. LST analyses based on 2.98 acre site with 100 meter distances to receptors in Metropolitan Riverside County source receptor area.

As shown in **Table 3**, regional and localized construction emissions of VOC, NOx, CO, SOx, PM10, and PM2.5 would not exceed SCAQMD thresholds of significance. This impact is considered less than significant.

LRDP Programs and Practices

During construction, the campus will continue to implement the following existing campus 2005 LRDP, as amended, Programs and Practices relevant to air quality during construction:

PP 4.3-2(a) Construction contract specifications shall include the following:

- Compliance with all SCAQMD rules and regulations
- Maintenance programs to assure vehicles remain in good operating condition
- Avoid unnecessary idling of construction vehicles and equipment
- Use of alternative fuel construction vehicles
- Provision of electrical power to the site, to eliminate the need for on-site generators

PP 4.3-2(b) The campus shall continue to implement dust control measures consistent with SCAQMD Rule 403 – Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The campus shall implement these measures as necessary to reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor:

- Apply water and/or approved non-toxic chemical soil stabilizers according to manufacturer's specifications to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)
- Replace ground cover in disturbed areas as quickly as possible
- Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content
- Water active grading sites at least twice daily
- Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period
- All trucks hauling dirt, sand, soil, or other loose materials shall be covered or maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer) in accordance with Section 23114 of the California Vehicle Code
- Sweep streets at the end of the day if visible soil material is carried over to adjacent roads

- Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip

- Apply water three times daily or chemical soil stabilizers according to manufacturer's specifications to all unpaved parking or staging areas or unpaved road surfaces

- Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads

PP 4.3-2(c) The campus shall continue to implement SCAQMD Rule 1403 – Asbestos when demolishing existing buildings on the campus.

Operational Phase Air Quality Impacts

As described above, the Mobility Hub and CCL Project is not anticipated to increase traffic or to increase the student population at the campus. Further, the fleet of buses utilizing the Mobility Hub would be fueled by compressed natural gas (CNG). However, there would be a small increase in emissions due to the area source emissions associated with the operation of the information kiosk as part of the Mobility Hub and CCL Project. Emissions of ROG, NO_x and CO associated with processes such as maintenance and cleaning of the kiosk would be generated during operation. However, all emissions would be less than one pound per day, and would not exceed any SCAQMD regional or localized significance thresholds. This impact is considered less than significant.

c. A significant impact may occur if a project would add a considerable cumulative contribution to federal or State non-attainment pollutant.

For regional ozone precursors, the project would not exceed SCAQMD mass emission thresholds for ozone precursors during construction. As such, the project's impact on cumulative ozone precursor emissions would be considered less than significant.

Similarly, regional emissions of PM10 and PM2.5 would not exceed mass thresholds established by the SCAQMD; therefore, construction emissions impacts would be considered less than significant.

When considering local impacts, cumulative construction emissions are considered when projects are within close proximity of each other that could result in larger impacts on local sensitive receptors. If any other proposed projects were to undertake construction concurrently with the proposed project, localized CO, PM2.5, PM10, and NO_2 concentrations may exceed ambient air quality standards at nearby receptors. The application of localized significance thresholds to each cumulative project in the local area would help ensure that each project does not produce localized hotspots of CO, PM2.5, PM10, and NO_2. Any projects that would exceed these thresholds would perform dispersion modeling to confirm whether health-based air quality standards would be violated and mitigate any significant localized emissions accordingly. Receptors that are located further away would not be threatened with exceedances of health-based standards, and emissions significantly disperse as a function of atmospheric stability, mixing heights, and other variables, with distance a critical factor. As such, the cumulative

impact of construction projects on local sensitive receptors would be considered less than significant.

As discussed above, operational emissions associated with the proposed project are less than one pound per day for each criteria pollutant and considered minimal. These emissions would not exceed any SCAQMD threshold of significance. As a result, the project's impact on cumulative emissions of non-attainment pollutants is considered less than significant.

Long-term operation of the project would not result in a cumulatively considerable net increase of any non-attainment criteria pollutant. Project impacts would be less than significant and no further analysis is required.

d. A significant impact may occur if the construction or operation of a project exceeds an Ambient Air Quality Standard at a sensitive receptor location. SCAQMD protocol utilizes localized CO concentrations from motor vehicles and localized concentrations of NOx, CO, PM10, and PM2.5 from construction and operation to determine localized pollutant concentration potential. Sensitive receptors are populations that are more susceptible to the effects of air pollution than are the population at large. The SCAQMD identifies the following as sensitive receptors: long-term health care facilities, rehabilitation centers, convalescent centers, retirement homes, residences, schools, playgrounds, child care centers, and athletic facilities.[1]

Construction Phase Air Quality Impacts

As illustrated in **Table 3**, nearby receptors would not be exposed to substantial concentrations of localized pollutants PM10 and PM2.5 from construction of the proposed project. Specifically, construction activities would not exceed SCAQMD localized significance thresholds for PM10 and PM2.5 and represent a less than significant impact. Localized significance thresholds represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable ambient air quality standard.

Construction of the proposed project would not have any significant impacts on pollutant concentrations at nearby receptors. Project impacts would be less than significant and no further analysis is required.

Operational Phase Air Quality Impacts

The proposed project would generate long-term emissions from mobile sources that would generate relatively small pollutant concentrations at sensitive receptors and would be considered less than significant.

Long-term operations of the project would not result in exceedances of CO air quality standards at roadways in the area. This is due to three key factors. First, CO hotspots are extremely rare and only occur in the presence of unusual atmospheric conditions and extremely cold conditions, neither of which applies to this project area. Second, auto-related emissions of CO continue to decline because of advances in fuel combustion technology in the vehicle fleet. Finally, the project

1 *SCAQMD CEQA Air Quality Handbook, 1993, page 5-1.*

would not contribute to the levels of congestion that would be needed to produce the amount of emissions needed to trigger a potential CO hotspot.

Screening analysis guidelines for localized CO hotspot analyses from Caltrans recommend that projects in CO attainment areas focus on emissions from traffic intersections where air quality may get worse.[2] Specifically, projects that significantly increase the percentage of vehicles operating in cold start mode, significantly increase traffic volumes, or worsen traffic flow should be considered for more rigorous CO modeling. According to the traffic study for the proposed project, level of service impacts would be considered less than significant and not worsen traffic flow.

The project would not result in any substantial emissions of TACs during the construction or operations phase. During the construction phase, the primary air quality impacts would be associated with the combustion of diesel fuels, which produce exhaust-related particulate matter that is considered a toxic air contaminant by ARB based on chronic exposure to these emissions.[3] However, construction activities would not produce chronic, long-term exposure to diesel particulate matter. During long-term project operations, the project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities. As a result, the project would not create substantial concentrations of TACs. In addition, the SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[4] The project would not generate a substantial number of truck trips. Based on the limited activity of TAC sources, the project would not warrant the need for a health risk assessment associated with on-site activities. Therefore, project impacts related to TACs would be less than significant.

e. Potential sources that may emit odors during the construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the project site. Development of the proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites. Additionally, the odors would be temporary, and construction activity would be required to comply with SCAQMD Rule 402.[5] A less than significant impact relative to an odor nuisance would occur during construction associated with the proposed project.

According to the SCAQMD *California Environmental Quality Act (CEQA) Air Quality Handbook*, land uses that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills,

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2 *Caltrans, Transportation Project-Level Carbon Monoxide Protocol, updated October 13, 2010.*

3 *California Office of Environmental Health Hazard Assessment. Health Effects of Diesel Exhaust, website: www. http://oehha.ca.gov/public_info/facts/dieselfacts.html, accessed July 20, 2017.*

4 *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.*

5 *SCAQMD Rule 402 states the following "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."*

dairies, and fiberglass molding. The proposed project would not include any of these odor-producing uses; odors associated with project operation would be limited to on-site waste generation and disposal at the information kiosk and bus canopies. Therefore, the implementations of the proposed project would not generate objectionable odors affecting a substantial number of people. Impacts related to odors would be less than significant, and no further analysis is required.

CUMULATIVE IMPACTS:

Cumulative air quality impacts of campus development under the 2005 LRDP, as amended, including the project site, are addressed in the 2005 LRDP Amendment 2 EIR, and include LRDP mitigation measure MM 4.3-3. The analysis concluded that with the implementation of the mitigation program adopted by the University, the cumulative impacts of campus development on air quality would not be cumulatively considerable. The proposed project's contribution to cumulative impacts would not be considerable.

LRDP Mitigation Measure

MM 4.3-3 To reduce energy consumption and area-wide emission of criteria pollutants, the campus shall annually inspect and enforce an emissions reduction control strategy, which may include, where feasible, the following:

Design

- Use light-colored roof materials to reduce heat gain
- Orient buildings to the north and include passive solar design features
- Increase building and attic insulation beyond Title 24 requirements
- Provide electric vehicle charging systems at convenient location in campus parking facilities
- Provide prominent website and/or kiosks displaying information about alternative transportation
- Install electrical outlets outside buildings for the use of electric landscape maintenance equipment

Operation

- Implement a subsidized vanpool program
- Implement staggered or compressed work schedules to reduce vehicular traffic
- Use alternative fuel shuttle buses to reduce intra-campus vehicle trips

- Provide shuttle service to major off-campus activity centers and Metrolink station(s)
- Aggressive expansion of the campus TDM program to achieve an AVR of 1.5
- Expand transit subsidies to encourage use of public transit
- Implement incentives for telecommuting
- Convert campus fleet to low emission, alternative fuel, and electric vehicles over time
- Implement solar or low-emission water heaters
- Implement an educational program for faculty and staff and distribute information to students and visitors about air pollution problems and solutions

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES – Would the project:				
a) 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 Wildlife or US Fish and Wildlife Service?	☐	■	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	☐	☐	☐	■
c) 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?	☐	☐	☐	■
d) 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?	☐	■	☐	☐
e) Conflict with any applicable policies protecting biological resources?	☐	☐	■	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan?	☐	☐	☐	■

DISCUSSION:

a. The project site is located centrally on campus and has been previously developed as Parking Lot 19 and neighboring roadways. Birds and animals common to developed areas are present on the site, including nesting sites in the large sycamores. According to Figure 4.4-1, Existing Campus Biological Resources, from the 2005 LRDP EIR, the project site is not identified as within an area containing sensitive biological resources. The grassy open spaces north of Lot 19, across the proposed extension of University Avenue, are identified as Naturalistic Open Space in Figure 4.4-

1. The area is already largely disturbed (i.e., by construction north of the Materials Science & Engineering Building), and is located in a highly populated portion of campus. The Mobility Hub would increase traffic in the vicinity of the project site. However, due to North Campus Drive and Lot 19, vehicular disturbances are already commonplace in the area and at the project site. Additionally, all development at the site would be subject to 2005 LRDP EIR Mitigation Measures 4.4-1(a) and (b) which would require a survey, as needed, to fully evaluate the presence, or lack thereof, of special-status avian species, prior to disturbance. Should such species be discovered, the campus shall consult with the appropriate agencies, obtain any necessary permits, and prepare a mitigation plan to minimize impacts. For these reasons, development of the proposed project would not substantially alter activity along the border of the designated open space. The impact would be less than significant after implementation of the mitigation measures.

LRDP Mitigation Measures

MM 4.4-4(a) Prior to the onset of construction activities that would result in the removal of mature trees that would occur between March and mid-August, surveys for nesting special status avian species and raptors shall be conducted on the affected portion of the campus following USFWS and/or CDFG guidelines. If no active avian nests are identified on or within 250 feet of the construction site, no further mitigation is necessary.

MM 4.4-4(b) If active nests for avian species of concern or raptor nests are found within the construction footprint or a 250-foot buffer zone, exterior construction activities shall be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation have been developed and implemented in consultation with USFWS and CDFG

b. Riparian habitat, including designated California gnatcatcher critical habitat, exists on the campus. However, the project area is not located within a riparian zone or within gnatcatcher critical habitat (refer to Figure 4.4-1, Existing Campus Biological Resources in the UCR 2005 LRDP EIR). Implementation of the proposed project would have no impact on a sensitive natural community.

c. While there are federally protected seasonal wetlands or jurisdictional waters of the United States on the UC Riverside campus, there are none within the project area. Therefore, implementation of the proposed project would not affect any federally protected seasonal wetlands or jurisdictional wetlands and there would be no impact.

d. The project site has been previously disturbed and is surrounded by urban land uses on all sides, with the exception of a few small, scattered landscaped areas. The project site is not within a wildlife corridor as depicted in Figure 4.4-2, UCR Area Wildlife Corridor, in the 2005 UCR LRDP EIR.

A few trees currently exist on the project site, mostly located to the west of Lot 19 and add aesthetic and biological value to the area. Implementation of LRDP Mitigation Measures 4.4-4(a) and 4.4-4(b) would require surveys for nesting special status avian species if any trees are to be removed during the nesting months. If an active nest is discovered, a buffer zone would be

established. Any mature trees removed in relation to the development of the proposed project would be replaced by canopy trees, planned for the pedestrian corridor at the proposed Mobility Hub and along the Recreation and North Campus Drive malls. While the landscaping design of the malls has not been completed, trees would be included to strengthen the design, highlight pedestrian corridors, and provide future shade and comfort throughout the open spaces. As the project site is not a wildlife corridor, and the proposed project would increase habitat for migratory birds by planting new trees and removing vehicular traffic from North Campus Drive, the adverse impacts relating to this criterion would be less than significant and no further mitigation is required.

e. Pursuant to the University of California's constitutional autonomy, development and uses on property owned or controlled by the University that are in furtherance of the University's educational purposes are not subject to local land use regulation, including County and City General Plans or local ordinances for the protection of biological resources. Nevertheless, as with campus development under the 2005 LRDP, as amended, the Mobility Hub and CCL Project would be consistent with local policies or ordinances protecting biological resources. LRDP Planning Strategies *Open Space 1 through 3* and *Conservation 1* would minimize any conflict with local policies or ordinances protecting biological resources. Due to the developed nature of the project site, the proposed project would not change the nature or increase the magnitude of the potential impacts to biological resources or the less than significant conclusions in the 2005 LRDP EIR as analyzed for campus development under the 2005 LRDP, as amended.

f. A Multiple Species Habitat Conservation Plan (MSHCP) was approved and adopted by Riverside County in 2003 (amended 2011) as a comprehensive, multi-jurisdictional Habitat Conservation Plan (HCP) and Natural Communities Conservation Plan (NCCP) focusing on conservation of both species and habitats to address biological ecological diversity conservation needs in western Riverside County. A portion of the campus is included in the MSHCP but is not identified for conservation. The proposed project area is not within the portion of the campus that is included in the MSHCP. There would be no impact with respect to this criterion.

CUMULATIVE IMPACTS:

Cumulative biological impacts of campus development under the 2005 LRDP, as amended, including the project site, are addressed in the 2005 LRDP EIR. The analysis concluded that with the implementation of the mitigation program put forth by the campus, the cumulative impacts of campus development on wildlife corridors would not be cumulatively considerable. Additionally, the proposed project would also not affect wildlife movement and therefore would not contribute to a cumulative impact on wildlife movement. As noted above, sensitive special-status species and critical habitat are not present on the site of the Mobility Hub and CCL Project, and to the extent that there could be any direct or indirect impacts from the development on the project site, they would be mitigated by the mitigation measures in the 2005 LRDP EIR. The proposed project's contribution to cumulative impacts would not be considerable.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. CULTURAL RESOURCES – Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	■	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	■	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	■	☐	☐

DISCUSSION:

a) The 2005 LRDP, as amended, noted eight historic-era buildings on campus would be eligible or potentially eligible for listing on the NRHP and/or CRHR. However, these buildings are not located in the vicinity of the proposed project. However, the Athletic and Dance building, which borders the proposed Mobility Hub to the south was constructed before 1957 and is more than 50 years old. It, therefore, meets the Office of Historic Preservation's (OHP's) age threshold for structures to be considered potentially historic. As the proposed Mobility Hub and CCL Project only includes construction of a small kiosk building, as well as drive aisles, bus parking bays, shade structures, landscaping, and accessible parking, and the project impact limits do not include any of the adjacent buildings or their immediate surroundings, the proposed project would not impact a potentially historic building. As such, the impact would be less than significant.

b-d) As discussed in the 2005 LRDP EIR, the academic core on the East Campus and areas immediately adjacent to the academic core (except for the southeast hills) have been disturbed by previous construction activities and therefore present a low potential for encountering unknown, intact, archaeological resources. Although the project area has been previously developed, there is still a possibility of undiscovered paleontological resources at the site. Similarly, while unlikely, it is possible that human remains exist, undiscovered, at the project site. Implementation of campus Programs and Practices 4.5-4, which requires construction specifications as to what is required should any resources be uncovered during construction, and 4.5-5, which defines the actions required if human remains are discovered during construction, would ensure a less than significant impact on such resources.

LRDP Programs and Practices

PP 4.5-4 Construction specifications shall require that if a paleontological resource is uncovered during construction activities:

(i) A qualified paleontologist shall determine the significance of the find.

(ii) The Campus shall make an effort to preserve the find intact through feasible project design measures.

(iii) If it cannot be preserved intact, then the University shall retain a qualified non-University paleontologist to design and implement a treatment plan to document and evaluate the data and/or preserve appropriate scientific samples.

(iv) The paleontologist shall prepare a report of the results of the study, following accepted professional practice.

(v) Copies of the report shall be submitted to the University and the Riverside County Museum.

PP 4.5-5 In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the University immediately shall notify the Riverside County Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.

CUMULATIVE IMPACTS:

Cumulative cultural resources impacts of campus development under the 2005 LRDP, as amended, are addressed in the 2005 LRDP EIR. The 2005 LRDP EIR concluded that implementation of the 2005 LRDP, as amended, in conjunction with cumulative development, could potentially disturb previously unknown cultural and paleontological resources. As with the other campus development under the 2005 LRDP, as amended, the cumulative impacts of the proposed project to previously unknown cultural and paleontological resources would be reduced to less than significant with the LRDP Programs & Practices listed above. The Mobility Hub and CCL Project's contribution to cumulative impacts would not be considerable.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS – Would the project:				
a) Expose people or structures to 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?	☐	☐	☐	■
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	■	☐
c) 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?	☐	■	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994) (California Building Code), creating substantial risks to life or property?	☐	☐	■	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	■

DISCUSSION:

a.(i, ii). According to the 2005 LRDP EIR, the UCR campus is not located within an Earthquake Fault Zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act of 1994 and no known active or potentially active faults traverse the campus. Because ground rupture occurrences are generally limited to the location of faults, the campus would not be subject to a substantial risk of fault (ground surface) rupture. Nevertheless, the campus lies within a seismically active area that includes faults that are expected to produce maximum credible earthquakes of magnitude 5.0 or greater. However, it is anticipated that continued implementation of PP 4.6-1(a), and PP 4.6-1(c) (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures) which require that the new building and shade structures would be designed to be consistent with current seismic and geotechnical engineering practice to provide adequate safety levels, as defined in the California Code of Regulations and the University Policy on Seismic Safety. With implementation of these 2005 LRDP Programs and Practices, this impact would be less than significant. No further analysis is required.

a.(iii). Based on the discussion in the 2005 LRDP EIR, as amended and updated, related to soils and depth to groundwater, the risk of liquefaction at the campus is low. In addition, the risk of deep-seated landsliding is considered to be very low, even on natural slopes. Furthermore, potential for liquefaction and liquefaction-related secondary effects to develop at the project site following a seismic event is negligible, due to deep groundwater conditions as identified in the 2005 LRDP EIR. No impacts from project implementation would occur. No further analysis is required.

a.(iv). The proposed project site and the surrounding area are characterized by relatively flat topography and therefore would not be subject to landslides. No impact would occur and no further analysis is required.

LRDP Programs and Practices

PP 4.6-1(a) During project-specific building design, a site-specific geotechnical study shall be conducted under the direct supervision of a California Registered Engineering Geologist or licensed geotechnical engineer to assess seismic, geological, soil, and groundwater conditions at each construction site and develop recommendations to prevent or abate any identified hazards. The study shall follow applicable recommendations of CDMG Special Publication 117 and shall include, but not necessarily be limited to:

- Determination of the locations of any suspected fault traces and anticipated ground acceleration at the building site,
- Potential for displacement caused by seismically induced shaking, fault/ground surface rupture, liquefaction, differential soil settlement, expansive and compressible soils, landsliding, or other earth movements or soil constraints, and
- Evaluation of depth to groundwater.

The structural engineer shall incorporate the recommendations made by the geotechnical report when designing building foundations.

PP 4.6-1(c) The Campus will continue to fully comply with the University of California's Policy for Seismic Safety, as amended. The intent of this policy is to ensure that the design and construction of new buildings and other facilities shall, as a minimum, comply with seismic provisions of California Code of Regulations, Title 24, California Administrative Code, the California State Building Code, or local seismic requirements, whichever requirements are most stringent.

b. Development under the proposed project would be constructed on an area of campus where erosion hazard ranges from slight to moderate. Implementation of the 2005 EIR LRDP PP 4.6-2(a) would reduce the potential impact from substantial soil erosion or the loss of topsoil to a less than significant level. Further analysis is not required.

LRDP Programs and Practices

PP 4.6-2(a) The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The Campus shall implement these measures as necessary to reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor:

(i) Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)

(ii) Replace ground cover in disturbed areas as quickly as possible

(iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content

(iv) Water active grading sites at least twice daily

(v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period

(vi) All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code

(vii) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads

(viii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip
(ix) Apply water three times daily or chemical soil stabilizers according to

manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces

(x) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads

c. Issues related to seismically induced and non-seismic landslide hazards are discussed in the response to Item (a)(iv), above. Issues related to liquefaction and related hazards are discussed in the response to Item (a)(iii), above. Issues related to soil properties are discussed in the response to Item (d), below. No further analysis is required.

d. As discussed in the 2005 LRDP EIR, 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. Soils on this area on campus generally have low shrink-swell potential. Development under the proposed project would include the implementation of existing campus programs and practices, including PP 4.6-1(a). In addition, all development would be required to comply with all applicable provisions of the California Building Code (CBC). Thus, development under the proposed project would not result in structures being located on expansive soil, creating substantial risks to life or property, and this impact would be less than significant. No further analysis of this issue is required.

e. No septic tanks or alternative wastewater disposal systems are included in the proposed project, therefore no impact would occur. No further analysis is required.

CUMULATIVE IMPACTS:

The impacts of the proposed project associated with exposing people and property to ground shaking effects, as well as the effects of soil characteristics associated with differential settlement, liquefaction, and unstable soils would not be significant. Therefore, the Mobility Hub and CCL Project would not contribute to any significant cumulative impacts related to geology and soils. No further analysis is required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
7. GREENHOUSE GAS EMISSIONS – Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	■	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	■	☐

DISCUSSION:

a. Construction and operation of the proposed Mobility Hub and CCL Project would generate greenhouse gas emissions. Generally, the evaluation of an impact under CEQA requires measuring data from a proposed project against a "threshold of significance."[6] Furthermore, "when adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence."[7] For greenhouse gas emissions and global warming, there is not, at this time, one established, universally agreed-upon "threshold of significance" by which to measure an impact.

The SCAQMD is currently developing significance thresholds for greenhouse gas (GHG) emissions, but has published draft thresholds using a tiered approach. The draft approach as most recently updated in September 2010 is as follows:[8]

- Tier 1: Is the project exempt from further analysis under existing statutory or categorical exemptions? If yes, there is a presumption of less than significant impacts with respect to climate change.
- Tier 2: Is the project's GHG emissions within the GHG budgets in an approved regional plan? (The plan must be consistent with *State CEQA Guidelines* §§15064(h)(3), 15125(d), or 15152(s).) If yes, there is a presumption of less than significant impacts with respect to climate change.
- Tier 3: Is the project's incremental increase in GHG emissions below or mitigated to less than the significance screening level (10,000 metric tons of carbon dioxide equivalent

6 *CEQA Guidelines Section 15064.7.*

7 *CEQA Guidelines Section 15064.7(c).*

8 *South Coast Air Quality Management District, "Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting #6," http://www.aqmd.gov/ceqa/handbook/GHG/2008/oct22mtg/oct22.html. 2008.*

[$MTCO_2e$] per year for industrial projects; 3,500 $MTCO_2e$ for residential projects; 1,400 $MTCO_2e$ for commercial projects; 3,000 $MTCO_2e$ for mixed-use or all land use projects)? If yes, there is a presumption of less than significant impacts with respect to climate change.

- Tier 4: Does the project meet one of the following performance standards? If yes, there is a presumption of less than significant impacts with respect to climate change.
    - Option #1: Achieve some percentage reduction in GHG emissions from a base case scenario, including land use sector reductions from AB 32 (e.g., 29 percent reduction as recommended by the San Joaquin Valley Air Pollution Control District).
    - Option #2: For individual projects, achieve a project-level efficiency target of 4.8 $MTCO_2e$ per service population by 2020 or a target of 3.0 $MTCO_2e$ per service population by 2035. For plans, achieve a plan-level efficiency target of 6.6 $MTCO_2e$ per service population by 2020 or a target of 4.1 $MTCO_2e$ per service population by 2035.
- Tier 5: Does the project obtain offsets alone or in combination with the above to achieve the target significance screening level (offsets provided for 30-year project life, unless project life limited by permit, lease, or other legally binding conditions)? If yes, there is a presumption of less than significant impacts with respect to climate change. Otherwise, the project is significant.

As of July 2011, the SCAQMD has not announced when staff is expecting to present a finalized version of these thresholds to the Governing Board for consideration. The SCAQMD has adopted Rules 2700, 2701, and 2702 that address GHG reductions; however, these rules are currently applicable to boilers and process heaters, forestry, and manure management projects.

The Tier 3 thresholds are the most applicable to this project. Tier 3 requires that a project's incremental increase in GHG emissions should be below or mitigated to less than the significance screening level. Proposed projects that do not exceed the thresholds would not be considered to have a significant impact on the attainment of air quality goals and would, therefore, be considered to be consistent with the current air quality plan.

The SCAQMD draft thresholds do not provide separate significance thresholds for GHG emissions from construction activities, but recommend including them with operational emissions as amortized emissions over a 30-year project life. Therefore, the amortized construction GHG emissions are included in the project's overall operational emissions and compared to the commercial threshold of 1,400 $MTCO_2e$ per year.

Per CEQA Guidelines Section 15064(h)(3), a project's incremental contribution to a cumulative impact can be found not cumulatively considerable if the project will comply with an approved

plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of the project.[9]

GHG emissions were quantified from construction and operation of the proposed Mobility Hub and CCL Project using SCAQMD's California Emissions Estimator Model (CalEEMod). Operational emissions include both direct and indirect sources including mobile sources, water use, solid waste, area sources, natural gas, and electricity use emissions. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.[10]

The proposed Mobility Hub and CCL is estimated to generate a total of approximately 444 $MTCO_2e$ during construction, and approximately 35 $MTCO_2e$ per year during operation. The majority of operational emissions would result from the lighting and climate control of the information kiosk included in the proposed project. Construction emissions, when amortized over a 30 year period, result in approximately 15 $MTCO_2e$ per year. This results in a total yearly emission total of approximately 50 $MTCO_2e$ per year. These emissions would not exceed SCAQMD draft thresholds of significance. This impact is considered less than significant.

b. According to *California's 2017 Climate Change Scoping Plan*,[11] California's future climate strategy will be focused on vehicle miles traveled (VMT) reduction. The proposed Mobility Hub and CCL Project enables easier access to the public transportation network in and around the campus, and by its nature reduces VMT from private automobiles. Additionally, the proposed project is not anticipated to increase traffic volumes, and would therefore be consistent with the most recent greenhouse gas reduction strategy. This impact is considered less than significant.

CUMULATIVE IMPACTS:

As discussed above, the proposed Mobility Hub and CCL Project is consistent with the applicable GHG reduction plans and policies. Moreover, while the project is not directly subject to the Cap-and-Trade Program, the program will indirectly reduce the project's GHG emissions by regulating "covered entities" that affect the project's GHG emissions, including energy, mobile, and construction emissions. The Cap-and-Trade Program will backstop the GHG reduction plans and policies applicable to the project in that the Cap-and-Trade Program will be responsible for relatively more emissions reductions should California's direct regulatory measures reduce GHG emissions less than expected. This will help to ensure that the statewide GHG reduction targets are met.

Given the proposed project's consistency with State, GHG emission reduction goals and objectives, the project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of GHGs. As discussed above, the project is also consistent with the draft GHG thresholds of significance proposed by the

9 *14 CCR § 15064(h)(3).*

10 *See www.caleemod.com.*

11 *California Air Resources Board, California's 2017 Climate Change Scoping Plan. November 2017. Page 102.*

SCAQMD. In the absence of adopted standards and adopted significance thresholds, and given this consistency, it is concluded that the project's impacts are not cumulatively considerable.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
8. HAZARDS AND HAZARDOUS MATERIALS – Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	■	☐
b) 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?	☐	☐	■	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	■
d) 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?	☐	☐	☐	■
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	■

DISCUSSION:

a., b. Due to the size and nature of the Mobility Hub and CCL Project, construction activities would involve minimal use of various products that could contain hazardous materials (such as solvents, adhesives, cements, paints, cleaning agents, degreasers, and fuels used in construction vehicles). Planned development under the proposed project would consist of construction of the Mobility Hub (signage, kiosk, bus canopy, paving, and landscaping) and the Central Campus Linkages (paving and landscaping). Operation of these facilities would also involve minimal hazardous materials for general maintenance and landscaping. Therefore, the Mobility Hub and CCL Project would not create a significant hazard to the public and the impact would be less than significant.

c. There are no existing or proposed public schools within one-quarter mile of the Mobility Hub and CCL Project site. Therefore, implementation of the Mobility Hub and CCL Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school, and no impact would occur.

d. The Mobility Hub and CCL Project is not located on properties associated with a hazardous site listed under Government Code Section 65962.5, also known as the Cortese List (Envirostor 2018). As a result, implementation of the proposed project would not create a significant hazard to the public or the environment and no impact would occur.

e., f. As discussed in the 2005 LRDP EIR, the UC Riverside campus is not located within two miles of a public airport or public use airport, and is not included in an airport land use plan. The closest airports to the UC Riverside campus are Flabob Airport, which is located approximately four miles to the west, and March Air Reserve Base, which is located approximately six miles to the southeast. Therefore, the proposed project would not be located within two miles of a public airport or public use airport and is not included in an airport land use plan. No impact would occur.

g. The proposed Mobility Hub and CCL would not be located within areas that are currently identified as emergency assembly areas.[12] However, the proposed project could result in lane or roadway closures which may impact adequate access for emergency vehicles. Therefore, the proposed project may have the potential to physically interfere with the campus Emergency Action Plan (EAP). However, continued implementation of PP 4.7-7(a) and PP 4.7-7(b), which

12 UCR Emergency Action Plan (EAP), as revised February 9, 2016.

requires provisions be made, including signage and flagmen as needed, to allow travel in both directions on campus roadways whenever feasible and to consult with emergency service providers regarding roadway closures when required, would assure that impacts to emergency access associated with construction of the proposed project would be less than significant.

LRDP Programs and Practices

PP 4.7-7(a) 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 appropriate signage indicating alternative routes.

PP 4.7-7(b) 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 UCPD, EH&S, and the RFD to disclose roadway closures and identify alternative travel routes.

h. The Mobility Hub and CCL site is not located adjacent to the southeast hills that pose a potential high risk for wildland fires. Therefore, the proposed Mobility Hub and CCL would not place people or structures at risk from wildland fires and there would be no impact.

CUMULATIVE IMPACTS:

All impacts of the proposed Mobility Hub and CCL Project associated with hazards and hazardous materials would not be significant. Therefore, the proposed project would not contribute to any significant cumulative impacts related to hazards and hazardous materials. No further analysis is required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
9. HYDROLOGY AND WATER QUALITY – Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☐	■	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	■	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?	☐	☐	■	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?	☐	☐	■	☐
e) 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?	☐	☐	■	☐
f) Otherwise substantially degrade water quality?	☐	☐	■	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	■
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	■

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	■
j) Inundate by seiche, tsunami, or mudflow?	☐	☐	☐	■

DISCUSSION:

a., f. The proposed Mobility Hub and CCL Project would include bioswales that would be incorporated into the landscape design to collect sheet flow, slow down runoff, and treat water for pollutants. Additionally, the proposed project would comply with the National Pollution Discharge Elimination System (NPDES) Phase II requirements which would ensure that campus stormwater quality is not substantially degraded. Lastly, 2005 LRDP PP 4.8-1 would be implemented to reduce impacts to water quality. Therefore implementation of the proposed project would have a less than significant impact on water quality.

LRDP Programs and Practices

PP 4.8-1 The Campus will continue to comply with all applicable water quality requirements established by the SARWQCB.

b. Implementation of the proposed Mobility Hub and CCL Project would increase the amount of impervious areas by a modest amount, likely less than 21,780 square feet (0.5 acres), as the project would include additional planting areas, bioswales, and permeable paving (i.e. decomposed granite). Further, due to the nature of the proposed project, there would be no increased demand for potable water that could indirectly increase demand for groundwater. As the Mobility Hub and CCL Project would incorporate vegetated swales and similar treatments throughout the project site, stormwater flow would be slowed, promoting the recharge of groundwater. Consequently, implementation of the proposed project would not substantially deplete groundwater supplies, and project would have a less than significant impact to groundwater supplies and groundwater recharge.

c. The proposed Mobility Hub and CCL Project would maintain substantially the same drainage pattern, naturally draining from north to south and east to west. The project site would generally be graded in a way that stormwater would be collected through a series of area drains connected by underground storm drain pipes, which after filtration to remove trash, sediment, oil and other pollutants, would ultimately discharge stormwater to the existing stormwater system located in University Ave. Within the majority of the East Campus, where the academic core is located, soil erosion hazards range from slight to moderate. Construction activities of the proposed project could result in erosion but the impact would be temporary. The NPDES permits require that the proposed project shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP), including control measures (or Best Management Practices) to control erosion and release of sediment and other pollutants from the project site. Furthermore, 2005 LRDP PP 4.8-3(c), PP 4.8-3(d), and PP 4.8-3(e) would be implemented as part of the Mobility Hub and CCL Project. Therefore, the proposed project would have a less than significant impact related to soil erosion.

LRDP Programs and Practices

PP 4.8-3(c) The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The Campus shall implement these measures as necessary to reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor:

(i) Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)

(ii) Replace ground cover in disturbed areas as quickly as possible

(iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content

(iv) Water active grading sites at least twice daily

(v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period (vi) All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code

(vii) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads

(viii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip

(ix) Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces

(x) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads

PP 4.8-3(d): In compliance with NPDES, the Campus would continue to implement Best Management Practices, as identified in the UCR Stormwater Management Plan (UCR 2003):

(i) Public education and outreach on stormwater impacts

(ii) Public involvement/participation

(iii) Illicit discharge detection and elimination

(iv) Pollution prevention/good housekeeping for facilities

(v) Construction site stormwater runoff control

(vi) Post-construction stormwater management in new development and redevelopment

PP 4.8-3(e) Prior to the time of design approval, the Campus will evaluate each specific project to determine if the project runoff would exceed the capacity of the existing storm drain system. If it is found that the capacity would be exceeded, one or more of the following components of the storm drain system would be implemented to minimize the occurrence of local flooding:

(i) Multi-project stormwater detention basins

(ii) Single-project detention basins

(iii) Surface detention design

(iv) Expansion or modification of the existing storm drain system

(v) Installation of necessary outlet control facilities

d., e. As described above, the proposed Mobility Hub and CCL Project would increase the amount of impervious areas by a modest amount, likely less than 21,780 square feet (0.5 acres). However, the project would include stormwater landscaped detention features throughout the site which would increase percolation and reduce runoff. Therefore, runoff from the site would not increase compared to existing conditions and the proposed project would have a less than significant impact to surface runoff and flooding.

g. The proposed Mobility Hub and CCL Project site is not located in a 100-year flood hazard area and does not construct any housing. Therefore, there would be no impact with regard to this criteria.

h., i., j. The Prado Dam, the nearest dam to the campus, is located on the Santa Ana River approximately 19 miles downstream of the campus. The nearest upstream dam is Seven Oaks Dam, approximately 20 miles from the campus. As discussed in the 2005 LRDP EIR, the potential for catastrophic failure of the Seven Oaks Dam is considered remote. Therefore implementation of the proposed Mobility Hub and CCL Project is unlikely to experience inundation from dam failure, mudflow, seiche, or tsunami. There would be no impact with regard to these criteria.

CUMULATIVE IMPACTS:

All impacts of the proposed Mobility Hub and CCL Project associated with hydrology and water quality would not be significant. Therefore, the proposed project would not contribute to any significant cumulative impacts related to hydrology and water quality. No further analysis is required.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
10. LAND USE AND PLANNING – Would the project:				
a) Physically divide an established community?	☐	☐	☐	■
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	■	☐
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	■

DISCUSSION:

a. Development under the proposed project would be located in an area surrounded by existing campus buildings, athletic facilities, and parking lots. Implementation of the proposed project would not physically divide an established community. Further analysis is not required.

b. As a state entity, UC Riverside is not subject to regional or local land use controls. The 2005 LRDP, as amended, is the land use plan that is applicable for the UC Riverside campus. The development of the proposed project would require a minor amendment to the 2005 LRDP, as amended, related to the Land Use designation on a small 2.5 acre portion of the project site. The remainder of the proposed Mobility Hub and CCL Project is generally consistent with the 2005 LRDP, as amended.

The Mobility Hub and CCL Project includes an amendment to the LRDP to redesignate approximately 2.5 acres of land currently designated as Open Space to Campus Support Space. The redesignation would permit slightly more intense land uses than previously planned and analyzed for the project site. However, the development of the Mobility Hub and CCL Project would not substantially change the nature or increase the magnitude of the potential impacts to conflict with applicable regional plans or the conclusions in the 2005 LRDP EIR as amended and updated, but would allow for slightly more intensive development than permissible under the 2005 LRDP, as amended underlying land use designations for the project site. However, as the campus has designed the Mobility Hub and CCL Project to be generally consistent with the 2005 LRDP, as amended, impacts would be less than significant. Further analysis is not required.

c. As discussed above under Biological Resources, the proposed project area is not within the portion of the campus that is included in the MSHCP. There would be no impact with respect to this criterion. Further analysis is not required.

CUMULATIVE IMPACTS:

As discussed above, campus development under the proposed project would not physically divide an established community, conflict with any applicable habitat conservation plan or natural community conservation plan, or, following the adoption of the proposed minor LRDP amendment, conflict with any applicable land use plan, policy, or regulation. Therefore, campus development under the proposed project would not contribute to cumulative effects with regard to these two topics and further analysis is not required.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
11. MINERAL RESOURCES – Would the project:				
a) 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?	☐	☐	☐	■
b) 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?	☐	☐	☐	■

DISCUSSION:

a., b. **There are** no known or potential mineral resources are located on the campus. As such, the Mobility Hub and CCL Project area is not designated as a mineral resource zone. No impacts would occur.

CUMULATIVE IMPACTS:

No mineral resource zones or mineral resource recovery sites exist on the campus or its environs. Development under the proposed project would not contribute to a cumulative impact on mineral resources.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. NOISE – Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in any applicable plan or noise ordinance, or applicable standards of other agencies?	☐	☐	■	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	■	☐
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	■	☐
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (including construction)?	☐	☐	■	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 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?	☐	☐	☐	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	■

DISCUSSION:

a. According to the 2005 LRDP EIR, as amended and updated, a significant impact would occur if interior noise levels would exceed the State's 45 dBA CNEL interior noise standard.

Nearby campus buildings include the Athletics and Dance building, Skye Hall (formerly known as Surge Building), the Materials Science and Engineering (MS&E) building, the University Lecture Hall, Bourns Hall, Student Recreation Center (SRC) North and South, and the College of Humanities, Arts, and Social Sciences Interdisciplinary (CHASS Int) building (North and South). The nearest off-site sensitive receptors to the proposed project are students at the Islamic Academy of Riverside located approximately 1,250 feet to the northwest of the project site.

Construction Phase Noise Impacts

Construction of the Mobility Hub and CCL Project would generate noise from a variety of on- and off-site activities, and would include the use of on-site heavy equipment such as bulldozers, as well as smaller equipment such as saws, hammers, and pneumatic tools. Secondary noise could also be generated by construction worker vehicles and vendor deliveries. These types of construction activities generally generate peak noise levels of approximately 85 dBA at a reference distance of 50 feet. [13] Noise levels decrease as the distance from noise source to receiver increases. For each doubling of distance, noise from stationary sources ("point sources") can decrease by approximately 6 dBA over hard surfaces (i.e., reflective surfaces such as parking lots) and 7.5 dBA over soft surfaces (i.e., absorptive surfaces such as soft dirt and grass). For example, if a point source produces a noise level of 85 dBA at a reference distance of 50 feet, the noise level would be approximately 79 dBA at a distance of 100 feet, 73 dBA at 200 feet, etc. Noise levels may also be reduced by intervening structures; generally, a single row of buildings between the receptor and the noise source reduces the noise level by about 5 dBA, while a solid wall or berm reduces noise levels by 5 to 10 dBA. The manner in which older homes in California were constructed generally provides a reduction of exterior-to-interior noise levels of about 20 dBA with closed windows. The exterior-to-interior reduction of newer homes is generally 30 dBA or more.

Using this methodology, the maximum exterior noise level at the Islamic Academy of Riverside would be approximately 57 dBA during peak construction. Given that noise levels would decrease approximately 20 to 30 dBA with windows closed, interior noise levels would result in a maximum noise level of approximately 37 dBA, which is below the threshold of 45 dBA interior noise standard. Additionally, there are several intervening campus structures between the Islamic Academy of Riverside and the proposed project which would further reduce potential noise increases. Because noise levels would be below the threshold of significance identified in the 2005 LRDP EIR, as amended and updated, at nearby off-site sensitive receptors, a less than significant impact would occur.

Construction associated with the proposed the Mobility Hub and CCL Project, could also result in substantial temporary or periodic increases in ambient noise levels at locations on campus above. However, implementation of 2005 LRDP PP 4.10-2, PP 4.10-7(a) through (d), PP 4.10-8, and 2005 LRDP mitigation measure MM-10-2 would be implemented as part of the Mobility Hub and CCL Project, which would mitigate construction noise impacts to the extent feasible.

LRDP Programs and Practices

PP 4.10-2 The UCR campus shall limit the hours of exterior construction activities from 7:00 A.M. to 9:00 P.M. Monday through Friday and 8:00 A.M. to 6:00 P.M. on Saturday when necessary. Construction traffic shall follow transportation routes prescribed for all construction traffic to minimize the impact of this traffic (including noise impacts) on the surrounding community.

13 *Federal Highway Administration, Highway Construction Noise Handbook, 2006.*

PP 4.10-7(a) To the extent feasible, construction activities shall be limited to 7:00 A.M. to 9:00 P.M. Monday through Friday, 8:00 A.M. to 6:00 P.M. on Saturday, and no construction on Sunday and national holidays, as appropriate, in order to minimize disruption to area residences surrounding the campus and to on-campus uses that are sensitive to noise.

PP 4.10-7(b) The Campus shall continue to require by contract specifications that construction equipment be required to be muffled or otherwise shielded. Contracts shall specify that engine-driven equipment be fitted with appropriate noise mufflers.

PP 4.10-7(c) The Campus shall continue to require that stationary construction equipment material and vehicle staging be placed to direct noise away from sensitive receptors.

PP 4.10-7(d) The Campus shall continue to conduct regular meetings, as needed, with on campus constituents to provide advance notice of construction activities in order to coordinate these activities with the academic calendar, scheduled events, and other situations, as needed.

PP 4.10-8 The campus shall continue to conduct meetings, as needed, with off-campus constituents that are affected by campus construction to provide advance notice of construction activities and ensure that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.

LRDP Mitigation Measure

MM 4.10-2 The campus shall notify all academic and residential facilities within 300 feet of approved construction sites of the planned schedule of vibration causing activities so that the occupants and/or researchers can take necessary precautionary measures to avoid negative effects to their activities and/or research.

Operational Phase Noise Impacts

As discussed previously, the traffic study prepared for the Mobility Hub and CCL Project estimated that there would be no traffic increases as a result of the Mobility Hub and CCL Project. As a result, there are no anticipated noise level increases associated with traffic volume increases.

Operational noise sources associated with the Mobility Hub and CCL Project primarily include bus idling and air brake use, and noise emanating from heating, ventilation, and air conditioning (HVAC) at the information kiosk. As discussed under construction noise impacts, above, nearby campus buildings include the Athletics and Dance building, Skye Hall, the MS&E building, the University Lecture Hall, Bourns Hall, SRC North and South, and the CHASS Int building North and South. The nearest off-site sensitive receptors to the Mobility Hub and CCL Project are

students at the Islamic Academy of Riverside located approximately 1,250 feet to the northwest of the project site. Bus starts and stops generate a noise level of approximately 84 dBA.[14] Large HVAC systems can generate noise levels between 50 and 65 dBA.[15] Using the methodology above in the construction noise analysis, this activity would result in a maximum noise level of approximately 43 dBA at the closest on-site sensitive receptors, approximately 36 dBA at nearby off-site sensitive receptors, which is below the state 45 dBA interior noise standard. Because noise levels would be below the threshold of significance identified in the 2005 LRDP EIR, as amended at nearby on-site and off-site sensitive receptors, a less than significant impact would occur.

b. Construction and operational activities that would occur under the Mobility Hub and CCL Project have the potential to generate low levels of groundborne vibration. During construction, earthmoving activities and construction equipment would potentially cause localized vibration adjacent to construction activities. During operation, bus operation, especially starts and stops at the canopies included on the project site, would also generate localized vibration. However, groundborne vibration tends to dissipate quickly with increase in distance. As previously discussed, on-site sensitive receptors are at least 200 feet, and off-site sensitive receptors are at least 1,250 feet from the Mobility Hub and CCL Project site. As a result, neither on- nor off-site sensitive receptors would experience any perceptible increases in groundborne vibration as a result of project construction or operation. As a result, impacts related to groundborne vibration during construction and operation of the Mobility Hub and CCL Project are considered less than significant.

c. According to the 2005 LRDP EIR, as amended and updated, a significant impact would occur during long-term operation if noise levels increase by 3 dBA CNEL over ambient noise levels at nearby sensitive receptors. As discussed above, long-term operation of the Mobility Hub and CCL Project would generate noise from kiosk and bus operation. However, as described above, it is not anticipated to result in an audible noise level increase of 3 dBA CNEL. Therefore, a substantial permanent increase in noise levels as a result of operation of the Mobility Hub and CCL Project is not anticipated to occur. Therefore, impacts related to permanent increase in noise due to operation of the Mobility Hub and CCL Project are considered less than significant impact.

d. According to the 2005 LRDP EIR, as amended and updated, a significant impact would occur during long-term operation if noise levels increase by 10 dBA L_{eq} over ambient noise levels at nearby on- and off-campus sensitive receptors. As discussed above, construction of the Mobility Hub and CCL Project would generate a temporary increase in noise from a variety of on- and off-site activities, and would include the use of on-site heavy equipment such as bulldozers, as well as smaller equipment such as saws, hammers, and pneumatic tools. The maximum exterior noise level at the nearest campus buildings (the Athletics and Dance building, Skye Hall, the MS&E building, the University Lecture Hall, Bourns Hall, SRC North and South, and the CHASS Int buildings) would be approximately 79 dBA during peak construction. The maximum exterior noise level at the nearest off-site sensitive receptor, the Islamic Academy of Riverside, would be approximately 57 dBA during peak construction. According to the existing noise levels disclosed

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14 *Gershon, R., Neitzel, R., Barrera, M., and Akram, M. Pilot Survey of Subway and Bus Stop Noise Levels. Journal of Urban Health. September 2006.*

15 *City of Los Angeles, Exposition Corridor Transit Neighborhood Plan Draft EIR. April 2017.*

in the 2005 LRDP EIR, as amended and updated, ambient noise levels in the project vicinity range from approximately 55.9 to 71.5 dBA L_{eq}. The peak noise generated during construction would not be capable of increasing ambient sound levels by 10 dBA or greater. Because noise levels would be below the threshold of significance identified in the 2005 LRDP EIR, as amended and updated, at nearby on- and off-site sensitive receptors, a less than significant impact would occur. Further, because the campus would implement 2005 LRDP PP 4.10-2, PP 4.10-7(a) through (d), pp 4.10-8, and 2005 LRDP mitigation measure MM-10-2, as outlined above, these less than significant impacts would be further reduced.

e., f. The UCR campus is not located within an airport land use plan study area, within two miles of a public airport or public use airport, or within the vicinity of a private airstrip. Therefore, no impacts associated with the Mobility Hub and CCL Project would occur with respect to any public airport or public use airstrip or any private airstrip. No additional analysis is required.

CUMULATIVE IMPACTS:

A cumulative noise impact would occur if the Mobility Hub and CCL Project, when combined with nearby related projects, would cause a temporary or permanent increase in ambient noise levels or groundborne vibration. As detailed above, the Mobility Hub and CCL Project would not contribute to a cumulative noise or groundborne vibration level increase due to the distance of nearby on- and off-site sensitive receptors to the project site. As the Mobility Hub and CCL Project would not contribute to off-site traffic volume increases, impacts related to cumulative noise and groundborne vibration due to construction or operation of the Mobility Hub and CCL Project are considered less than significant impact.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING – Would the Project:				
a) Induce substantial 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)?	☐	☐	■	☐
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

DISCUSSION:

a. Campus growth has increased demands on roads, parking lots, and pedestrian and bicyclist circulation. Additionally, the ability for RTA to fully implement planned bus service improvements is compromised by existing facilities, and reduces the possibility of introducing new routes and increasing bus frequency. The Mobility Hub and CCL Project would service existing and projected campus populations. There would be no direct increase in campus population upon project implementation and a less than significant impact would occur.

b., c. The Mobility Hub and CCL Project site is currently a parking lot, a landscaped area, pedestrian and bicycle pathways, and campus roadways. There is no housing on the project site and therefore no housing or people would be displaced. No impact would occur.

CUMULATIVE IMPACTS:

As discussed above, the Mobility Hub and CCL Project would not induce substantial population growth, nor displace housing or people. Therefore implementation of the Mobility Hub and CCL Project would not contribute to cumulative effects with regard to these topics and no cumulatively considerable impact would occur.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
14 PUBLIC SERVICES –				
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, 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?	☐	☐	■	☐
b) Police protection?	☐	☐	■	☐
c) Schools?	☐	☐	☐	■
d) Parks?	☐	☐	☐	■
e) Other public facilities?	☐	☐	■	☐

DISCUSSION:

a.(i). Development under the proposed Mobility Hub and CCL Project would not add any new buildings to the campus or increase the number of students living on campus. The project area is already developed and, while pedestrian malls would be created under the proposed project, the proposed project would improve access on campus, especially for emergency vehicles, which would be given better access to campus via the proposed Mobility Hub. Vehicles would be largely prohibited within the malls, however emergency vehicles could utilize the malls as necessary. As the campus population would not increase, no new buildings would be developed and emergency access to the area and campus would improve under the proposed project, the impact relating to an increased demand for fire protection services would be less than significant.

a.(ii). For the reasons listed above, the proposed Mobility Hub and CCL Project would not increase demand for police services. Additionally, the proposed project would be designed using best practices in Crime Prevention through Environmental Design (CPTED), such as security cameras and "Blue Light" emergency stations. As the campus would be more accessible upon completion of the Mobility Hub and CCL Project, and safety measures would be implemented at the site, impacts relating to police services would be less than significant and no mitigation is necessary.

a.(iii). The proposed project would not add any population to the campus and would result in no impact on schools. The development of the Mobility Hub and CCL Project would not substantially change the nature or increase the magnitude of the potential impacts on public schools or the conclusions in the 2005 LRDP EIR, as amended. There would be no impact on local schools.

a.(iv). As mentioned previously, the proposed Mobility Hub and CCL Project would not directly add any new population to the campus or the nearby communities and thusly would not contribute to any increase in demand for recreational facilities. The outdoor malls and pedestrian corridors proposed under the project would be designated as Open Space and would create connections across campus by integrating park-like spaces and walkways. The Recreation and North Campus Malls would serve a similar function as parks, acting as gathering spaces with wide pedestrian promenades and would include landscaping, stormwater treatment areas, decorative hardscaping, and other amenities. The Malls would envelope approximately three acres, improving campus outdoor spaces for students, employees, and visitors by providing an enjoyable place to spend time outdoors and an efficient route for accessing campus. As the proposed project would not increase demand on parks and would instead develop more outdoor open space areas, development under the Mobility Hub and CCL Project would have no adverse impacts on recreation facilities.

a.(v). The proposed Mobility Hub and CCL Project would not affect the number of students or employees on campus and would therefore have no impact relating to an increased demand for libraries or other public services.

CUMULATIVE IMPACTS:

As discussed above, campus development under the Mobility Hub and CCL Project would not impact fire or police services, local schools, parks, or libraries; therefore, campus development under the proposed project would not contribute to cumulative effects with regard to public services.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
15. RECREATION –				
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?	☐	☐	■	☐
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?	☐	☐	☐	■

DISCUSSION:

a. According to the 2005 LRDP EIR, recreational facilities developed on the campus under the 2005 LRDP, as amended, would meet the recreational needs of the UCR campus population. In addition, future development on the campus would be guided by a range of LRDP planning strategies, , including Open Space 7, which requires UCR to provide neighborhood parks and tot lots in the family housing areas as neighborhood open space (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP, as amended, would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis.

Development of the proposed Mobility Hub and CCL Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. The on-campus population would not increase as result of the development of the proposed project compared to overall population on campus considered in the 2005 LRDP EIR. Therefore, the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated, and this impact would be less than significant.

b. The 2005 LRDP EIR indicated that the construction of new recreational facilities has the potential to result in disturbance to the on-site environment. The potential environmental effects associated with these new recreational facilities were evaluated in the 2005 LRDP EIR at a program level. The 2005 LRDP EIR indicated that LRDP planning strategies, existing programs and practices, and mitigation measures provided in the EIR would address impacts to the extent feasible. Therefore, the 2005 LRDP EIR concluded that the impacts associated with the construction of new recreational facilities or the expansion of existing recreational facilities on the campus would not have an adverse physical effect on the environment, beyond those identified elsewhere in the 2005 LRDP EIR. Impacts of construction or expansion of recreational facilities would be less than

significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis.

The proposed Mobility Hub and CCL Project does not include new recreational facilities (i.e., parks). Therefore, no impact with regard to the construction of new recreational facilities or the expansion of existing facilities would occur.

CUMULATIVE IMPACTS:

The 2005 LRDP, as amended, found that implementation of the 2005 LRDP, as amended, would not increase demand for parkland and recreational facilities in the City or County of Riverside, and thus the contribution of the 2005 LRDP, as amended, to cumulative impacts on parkland would not be cumulatively considerable. For the same reasons that are presented in the 2005 LRDP EIR, the proposed Mobility Hub and CCL Project would not make a cumulatively considerable contribution to the impact. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
16. TRANSPORTATION/TRAFFIC – Would the project:				
a) Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	■	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	■	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	■
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	■
e) Result in inadequate emergency access?	☐	☐	☐	■
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	■

The information in this section is based on analysis in the 2005 LRDP EIR, as amended, the Transportation Assessment prepared for Mobility Hub and Central Campus Linkages Project by Fehr & Peers in July 2018, traffic count data collected by Counts Unlimited in April 2018, and the Canyon Crest Drive & University Avenue Alternative Analysis, prepared by Psomas, in May 2018. These documents are provided in Appendix C of this Initial Study.

Relevant Elements of Project

The proposed project is comprised of two parts, the Mobility Hub and Central Campus Linkages, and the following section summarizes both of these project features as they related to the traffic analysis.

Mobility Hub

The proposed Mobility Hub will create an easily accessible transit stop that will allow for the consolidation of transit routes currently serving campus and the new limited-stop bus routes, known as Rapid Link. Ingress and egress at the Mobility Hub will be provided from University Avenue just east of the existing Canyon Crest Drive intersection. Circulation through the proposed site will be one-direction, controlled by a center median. On the inbound side of the, closest to the academic buildings on the south side of the facility, passenger pick-up and drop-off is proposed. The out-bound, north side will feature six bus bays (four for regular buses and two for articulated bus). The Mobility Hub will also simplify emergency and service access, and bicycle and pedestrian connectivity by creating a central access point to campus.

Central Campus Linkages

While the central campus has an existing network of pedestrian pathways, there are some areas where the network is discontinuous, particularly between North Campus Drive and the areas set aside on campus for student recreation. The proposed project will extend and enhance connections from the Mobility Hub to the Student Recreation Center and proposed North District Development Plan area by creating the Recreation Mall, and from the Mobility Hub to the Aberdeen Drive intersection with North Campus Drive through the conversion of a section of North Campus Drive to North Campus Mall.

The Recreation Mall will extend from the Mobility Hub to the north end of Lot 25 at Linden Street and will provide a multi-modal pedestrian and bicycle corridor that will also serve emergency and service vehicle access to the MS&E Building and future MRB1. The Recreation Mall will have a pedestrian pathway, a drive aisle with bicycle sharrows, and parallel parking near the SRC.

The North Campus Mall will extend from the east end of the Mobility Hub to the Aberdeen Drive intersection with North Campus Drive, near the middle of Bourns Hall. It will feature a new pedestrian and bicycle corridor. The North Campus Mall will be access controlled providing emergency vehicle access to the south side of MS&E and the North side of Bourns Hall.

Traffic Analysis

A Level of Service (LOS) analysis was completed by Psomas as part of the design effort to determine how the preferred Mobility Hub alternative would affect traffic operations at the University Avenue/Canyon Crest Drive intersection. University Avenue serves as the western campus gateway and currently terminates at Canyon Crest Drive. With the implementation of the Mobility Hub a new formal campus gateway will be created at the eastern terminus of University Avenue, to provide access to/from the

Mobility Hub. A traffic signal will be constructed at the intersection of University Avenue/Canyon Crest Drive and the approaches to the intersection will be widened to accommodate the following lane configurations:

- Canyon Crest Drive: Two southbound right turn lanes and one southbound left turn lane on Canyon Crest Drive
- University Avenue: Two eastbound left turn lanes and one through lane
- Class II on-street bicycle lanes will be provided on both roadways
- An exclusive signal phase will be assigned to bicyclists and pedestrians (commonly referred to as a scramble phase)

The Mobility Hub is not anticipated to increase the number trips traveling to or from the campus. Rather than an increase in traffic volumes, the main change in traffic patterns near the project area would be a result of the centrally located transit connections and pick-up/drop-off. As current transit routes will be rerouted through the Mobility Hub, the number of buses using the University Avenue/Canyon Crest Drive intersection will increase slightly. No other major changes to traffic volumes or traffic patterns are expected as a result of the Mobility Hub.

Traffic counts used in the operations assessment were collected by Counts Unlimited on Wednesday April 18, 2018. These traffic counts were then used to develop future traffic forecasts with the Mobility Hub in operation. Future year traffic volumes representing 2025 were used in the analysis to evaluate LOS and the 95th percentile queue lengths with the proposed project in place. **Table 4** shows the LOS and queue lengths results calculated using the Highway Capacity Manual (HCM) methodologies for the University Avenue/Canyon Crest Drive intersection with the proposed improvements and Mobility Hub in place.

Table 4
University Avenue/Canyon Crest Drive Intersection Operations

			95th Percentile Queue (feet)	
Scenario	**LOS**	**Delay (seconds)**	**Eastbound Left**	**Southbound Right**
With Project	D	38.7	179	324

Source: Canyon Crest Drive & University Avenue Alternative Analysis, Psomas, May 2018.

Notes:

1. Distance between Canyon Crest and W. Campus Drive is 200 feet between limit lines.

As shown in **Table 4**, the With Project scenario was found to achieve acceptable operations and accommodate the 95th percentile queue for both the eastbound left turn and the southbound right turn at the University Avenue/Canyon Crest Drive intersection. This alternative will also accommodate bicycles and pedestrians with the scramble phase and will cause no right-of-way impact.

Pick Up/Drop Offs

The Mobility Hub will feature a designated area for passenger pick-up/drop-off on the south side of the facility. In recent years, ridesharing companies like Uber, Lyft, etc., have become a popular alternative to driving and parking on campus. This trend has been reflected in travel to and from college campuses as faculty, staff and students are using ride-hailing services as an alternative choice for commuting to campus. Without designated areas for pick-up/drop-off, these vehicles can create traffic circulation issues and safety concerns for riders being dropped off in areas without proper pedestrian facilities.

The proposed Mobility Hub will provide a designated area for drop-offs and pick-ups to occur as opposed to unregulated curb-side locations. The Mobility Hub project will not generate more pick-ups or drop-offs at UCR, but will provide designated facilities allowing the campus to control where they occur. By providing a designated space for pick-ups and drop-offs, the Mobility Hub will minimize the number of pick-ups and drop-offs at other locations across campus and alleviate the circulation and pedestrian safety concerns.

Active Transportation

Bicyclists traveling to campus can utilize the Class II on-street bicycle lanes on Canyon Crest Drive and University Avenue. These Class II facilities provide a striped lane for one-way bike travel on University Avenue and Canyon Crest Drive.

There are currently two pedestrian walkways providing access to the center of campus in the vicinity of the University Avenue/Canyon Crest Drive intersection. The north-south walkway extends directly south from Canyon Crest Drive, and the east-west walkway is located just north of University Avenue. However, the intersection is currently uncontrolled and no crosswalks are provided for pedestrians. Therefore, pedestrians either use the signalized intersection at University Avenue/West Campus Drive to cross University Avenue, or a midblock signalized crossing at Bannockburn Village to cross Canyon Crest Drive.

The Mobility Hub and CCL Project would improve bicycle and pedestrian facilities through the construction of the Recreation Mall and North Campus Mall on campus, along with the installation of a traffic signal with an exclusive bicycle/pedestrian scramble phase at the University Avenue/Canyon Crest Drive intersection. For bicyclists, the Mobility Hub project will add buffered bicycle lanes on University Avenue and Canyon Crest Drive. These buffered bicycle lanes will feature a buffer from traffic and one-way travel for bicycles. The buffered lanes will extend from the Mobility Hub to West Campus Drive on University Avenue on both sides of University Avenue. Buffered bicycle lanes with one-way travel will also be provided on Canyon Crest Drive from the Mobility Hub to Bannockburn Village on Canyon Crest Drive. In addition to the exclusive scramble phase that bicyclists could use to cross University Avenue/Canyon Crest Drive, the intersection will feature striping and holding areas for a two-step left turn for cyclists, which will allow cyclists to make left-turns within the bicycle infrastructure, rather than merging with vehicles utilizing the left-turn lane. The Mobility Hub will also provide bicycle parking and a bicycle repair station.

For pedestrians, the Mobility Hub and CCL Project will improve pedestrian access to the campus at University Avenue/Canyon Crest Drive by eliminating the need for pedestrians to travel to adjacent intersections to cross University Avenue or Canyon Crest Drive. In addition, enhanced pedestrian access to the planned Recreation Mall and the North Campus Mall will be provided. The Recreation Mall will

provide a ten-foot tree-lined pedestrian path from the Mobility Hub to Linden Street, while the North Campus Mall will provide access to Bourns and Chung Halls and other campus facilities to the east.

The bicycle and pedestrian facilities proposed as part of the Mobility Hub and CCL Project will help promote active transportation as a mode choice when traveling to campus and will improve access to the central campus. The separated bicycle lanes and two-step left-turn lane at the University Avenue/Canyon Crest intersection will also improve rider experience. As rider experience improves, average commuters are more likely to choose to commute using a bicycle rather than driving.

The improved pedestrian facilities, most notably the direct connection to campus at the University Avenue/Canyon Crest Drive intersection, will also promote walking to campus as an alternative mode choice. Improvements to pedestrian facilities are also expected to support an increase in transit ridership, as discussed in the transit assessment below.

Transit Assessment

UCR partners with RTA to provide students, faculty, and staff with an option to utilize free public transit to travel to and from campus. Currently, six transit routes serve UCR with stops near the campus at Bannockburn Village, University Village, West Campus Drive, and the Iowa Avenue/University Avenue intersection; following the build-out of the Mobility Hub, RTA will roll-out new a RapidLink Route, Blue Line. Seven routes will then operate at the Mobility Hub. The Mobility Hub will feature six full-length bus bays that will serve as the main bus stop for transit routes traveling to and from UCR.

Once the Mobility Hub project is complete, RTA routes serving UCR at existing on-street bus stops on Canyon Crest Drive near Bannockburn Village will be rerouted to the Mobility Hub. The centralized stop for routes serving UCR is expected to promote transit ridership through the increased access to transit from the central campus. The pedestrian facilities that will provide access to the Mobility Hub will allow users direct access to transit using the North Campus Mall or Recreation Mall, providing access to the main campus and northern part of campus, respectively. Improved access to transit with the Mobility Hub will support an increase in ridership for users that might otherwise drive to campus.

DISCUSSION:

a, b As discussed above, the Transportation Assessment by Fehr & Peers has found that the Mobility Hub project is within the scope of development covered in the 2005 LRDP, as amended, traffic assessment and no further traffic analysis is required to determine potential traffic impacts associated with the proposed project. As the Mobility Hub will not contribute to additional population growth on campus, there is not expected to be an increase in traffic because of the proposed project. The proposed facilities will support alternative mode choice on campus, creating a reduction in commuter vehicle trips. The designated pick-up and drop-off location will allow UCR to regulate where people traveling to and from campus are picked-up/dropped-off eliminating traffic circulation issues often caused by pick-ups and drop-offs. The improved bicycle and pedestrian facilities will provide more direct access to campus with improved user experience. These facilities will promote active transportation and help eliminate vehicle trips to campus by encouraging walking and biking. The improved access to transit routes and transit facilities will also promote increases in transit ridership. As the proposed facilities will contribute to converting vehicle trips to alternative transportation trips, and the improvements were found

to operate acceptably under 2025 conditions, these findings indicate that the Mobility Hub project is within the 2005 LRDP EIR, as amended and updated, transportation impact analysis.

c. The closest airports to the campus are Flabob Airport, which is located approximately four miles to the west, and March Air Reserve Base, which is located approximately six miles to the southeast. Development of the proposed project would not result in a change in air traffic patterns or an increase in air traffic levels, as the project site is not located within two miles of the nearest airport, or within the airport land use plan study area for either the Flabob Airport or the March Air Reserve Base, and no impact would occur.

d. While the proposed project would include alterations to roadways, these alterations have been carefully designed and engineered to avoid hazardous design features or incompatible roadway uses, and no impact would occur.

e. While the proposed project would include alterations to roadways, these alterations have been carefully designed and engineered to avoid hindering emergency access, and no impact would occur.

f. As discussed above, the centralized stop for routes serving UCR is expected to promote transit ridership through increased access to transit from the central campus. Further, the bicycle and pedestrian facilities proposed as part of the Mobility Hub project will help promote active transportation as a mode choice when traveling to campus and will improve access to the central campus. The buffered bicycle lanes and two-step left-turn lane at the University Avenue/Canyon Crest intersection will also improve rider experience. As rider experience improves, average commuters are more likely to choose to commute using a bicycle rather than driving.

The improved pedestrian facilities, most notably the direct connection to campus at the University Avenue/Canyon Crest Drive intersection, will also promote walking to campus as an alternative mode choice. Improvements to pedestrian facilities are also expected to support an increase in transit ridership, as such the proposed project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities, and there would be no impact.

CUMULATIVE IMPACTS:

The analysis in the 2005 LRDP EIR, as amended and updated, concluded that cumulative traffic growth, including campus growth under the 2005 LRDP, as amended, would result in significant cumulative impacts at a total of 12 intersections under the two-lane Iowa Avenue scenario, and at a total of 10 intersections under the four-lane Iowa Avenue scenario. The contribution of campus growth under the 2005 LRDP, as amended, to the cumulative traffic impacts would be cumulatively considerable. The proposed project would not increase the number of daily and peak hour vehicle trips associated with the campus beyond that anticipated in the 2005 LRDP EIR, as amended. Therefore, the proposed project would not increase the severity of the previously analyzed cumulative traffic impacts. No further analysis of this issue is required.

The 2005 LRDP EIR, as amended and updated, concluded that the impact of the 2005 LRDP, as amended, on the Riverside County Congestion Management Program (CMP) roadways would be cumulatively considerable. The proposed project would not increase the number of daily and

peak hour vehicle trips associated with the campus beyond that anticipated in the 2005 LRDP Amendment 2 EIR. Therefore, the proposed project would not increase the severity of the previously analyzed cumulative traffic impacts on CMP facilities. No further analysis of this issue is required.

The 2005 LRDP EIR, as amended and updated, identified significant cumulative impacts related to periods of heavy truck traffic off-campus as a result of the delivery of construction materials and equipment and the hauling of demolition waste and earth materials. The 2005 LRDP EIR, as amended and updated, found that the contribution of campus growth under the 2005 LRDP, as amended, to the cumulative impacts would be cumulatively considerable. The Mobility Hub and CCL Project would not increase the number of daily and peak hour construction truck trips associated with the campus beyond that anticipated in the 2005 LRDP EIR, as amended.

As analyzed in the 2005 LRDP EIR, as amended and updated, campus development under the 2005 LRDP, as amended, would increase vehicle traffic during construction and renovation of facilities on the campus. The continued implementation of LRDP PP 4.14-2, which requires that the Campus 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 as part of the 2005 LRDP, as amended, would help minimize the impact to intersection LOS from construction traffic. Coordination of construction activities would limit the potential impacts to traffic. However, construction vehicle traffic may still result in localized impacts. The impact to traffic conditions from the construction and renovation on the campus under the amended 2005 LRDP, as amended, would be significant and unavoidable.

The proposed project would authorize the temporary construction of facilities and associated construction vehicle trips. However, the proposed project would continue to implement LRDP PP 4.14-2 to minimize construction traffic. The development of the proposed project would not change the nature or increase the magnitude of the potential impacts from construction traffic on roadway segments or intersections or the conclusions in the 2005 LRDP Amendment 2 EIR.

The 2005 LRDP EIR, as amended and updated, determined that the 2005 LRDP, as amended, would not result in hazards due to design features or land use incompatibilities and the contribution of campus growth under the 2005 LRDP, as amended, to any cumulative impacts from traffic hazards would not be cumulatively considerable. As discussed under Item 16 d) above, for the same reasons that were presented in the 2005 LRDP EIR, as amended and updated, the proposed project would not result in hazards due to design features. The proposed projects would therefore not alter the conclusion of the previously analyzed cumulative impact.

The 2005 LRDP EIR, as amended and updated, found that the contribution of campus growth under the 2005 LRDP, as amended, to the cumulative construction impacts related to localized pedestrian hazards would not be considerable and that the contribution of the 2005 LRDP, as amended, to cumulative impacts on emergency access would not be cumulatively considerable. As discussed under Items 16 d) and e) above, for the same reasons that were presented in the 2005 LRDP EIR, as amended and updated, the proposed projects would not result in significant cumulative impacts related to pedestrian hazards and emergency access. The Mobility Hub and CCL Project would therefore not alter the conclusions of the previously analyzed cumulative

impacts. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR, as amended and updated, that would alter the conclusions of the previous analysis. Further evaluation is not required.

The 2005 LRDP EIR, as amended concluded that the contribution of campus growth under the 2005 LRDP, as amended, to cumulative impacts on alternative transportation (public transit, bicycle, and pedestrian facilities) would not be considerable. As discussed under Item 16 (g) above, for the same reasons that were presented in the 2005 LRDP EIR, as amended and updated, the proposed project would not result in impacts related to public transit, bicycle, and pedestrian facilities. The proposed project would therefore not alter the conclusions of the previously analyzed cumulative impacts. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR, as amended and updated, that would alter the conclusions of the previous analysis. Further evaluation is not required.

LRDP Programs and Practices

PP 4.14-2 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.

Issues	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
17. TRIBAL CULTURAL RESOURCES – 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)	☐	☐	☐	■
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	☐	☐	■	☐

DISCUSSION:

a. 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. Section 5020.1 of the PRC defines a historical resource as including, but is not limited to, any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California. The project site is currently developed as Lot 19 and neighboring roadways and throughways. The only building eligible for listing in the California Register of Historical Resources in the vicinity of the project site would be the Dance and Athletic Building, which is over 45 years old but not otherwise culturally significant. It would not be affected by the implementation of the Mobility Hub and CCL Project. The Mobility Hub and CCL Project would have no impact with regards to this criterion.

b. As previously discussed, the Mobility Hub and CCL Project site has been previously disturbed and is highly unlikely to contain a resource significant to a California Native American tribe. However, Public Resources Code Section 21080.3.1 establishes a formal process for Lead Agencies to consult with California Native American Tribes to identify potential significant impacts to TCRs, as defined in PRC Section 21074. The Campus has contacted Native American

tribes requesting notification pursuant to the PRC and completed any requested consultation to ensure that no resources are affected by development of the proposed project. As there are no archaeological sites or archaeological survey areas in the project area, and no significant resources were discovered during the previous development of the site, it is highly unlikely that Tribal Cultural Resources would be affect by the Mobility Hub and CCL Project. Should a significant resource be discovered, the Campus would implement campus Programs and Practices 4.5-4, which requires construction specifications as to what is required should any resources be uncovered during construction, and 4.5-5, which defines the actions required if human remains are discovered during construction to ensure the mitigation of impacts to the tribal cultural resource. With the inclusion and implementation of PP 4.5-4 and PP 4.5-5, potential impacts would be less than significant.

CUMULATIVE IMPACTS:

As the Mobility Hub and CCL Project site has been previously disturbed, it is anticipated that the site does not contain any tribal cultural resources. The Mobility Hub and CCL Project would not contribute to cumulative effects with regards to this topic.

LRDP Programs and Practices

PP 4.5-4 Construction specifications shall require that if a paleontological resource is uncovered during construction activities:

(i) A qualified paleontologist shall determine the significance of the find.

(ii) The Campus shall make an effort to preserve the find intact through feasible project design measures.

(iii) If it cannot be preserved intact, then the University shall retain a qualified non-University paleontologist to design and implement a treatment plan to document and evaluate the data and/or preserve appropriate scientific samples.

(iv) The paleontologist shall prepare a report of the results of the study, following accepted professional practice.

(v) Copies of the report shall be submitted to the University and the Riverside County Museum.

PP 4.5-5 In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the University immediately shall notify the Riverside County Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
18. UTILITIES AND SERVICE SYSTEMS – Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	■	☐
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	■	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	■	☐
e) 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?	☐	☐	■	☐
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	■	☐
g) Comply with applicable federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	■
h) Comply with applicable federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐
i) Comply with applicable federal, state, and local statutes and regulations related to solid waste?	☐	☐	■	☐

DISCUSSION:

a. Wastewater generated from the Mobility Hub and CCL would be served by the UC Riverside campus sanitary sewer and water systems, discharged to the City sewer main in University Avenue, and conveyed to and treated at Riverside Regional Water Quality Control Plant

(RRWQCP). Thus, implementation of the proposed project is not expected to cause the RRWQCP to exceed wastewater treatment requirements, and this impact is less than significant.

b. The proposed Mobility Hub and CCL Project could increase demand for water supplies to irrigate the new landscaping, and serve a new fire hydrant and the proposed kiosk; no new restroom facilities are proposed and there would be no additional wastewater produced. The additional demand would be minimal and would not require new or expanded facilities. This impact would be less than significant.

c. The proposed Mobility Hub and CCL Project would moderately increase the amount of impervious areas but runoff from the site would not increase compared to existing conditions and improvements to off-campus storm drain systems would not be required. The proposed project would require the installation of additional storm drains and points of connections. The new infrastructure would be installed in portions of the project site that are already disturbed and connections would be to existing stormwater lines located on campus. The potential environmental effects associated with the construction of the new storm drain systems would be less than significant.

d. The proposed Mobility Hub and CCL Project could increase demand for water supplies to irrigate the new landscaping, and serve a new fire hydrant and the proposed kiosk. However, the additional demand would be minimal and would not require new or expanded entitlements. This impact would be less than significant.

e. The proposed Mobility Hub and CCL Project would generate a negligible increase in demand on wastewater treatment and conveyance facilities associated. This impact would be less than significant.

f., g. Nonhazardous municipal waste from the campus is handled by Burrtec Waste Industries. The waste is sent to the Badlands Landfill. Due to the nature proposed project, solid waste generation would be minimal and existing landfill capacity would be sufficient to accommodate the proposed project. This impact would be less than significant. Solid wastes disposed under the proposed project would be in compliance with federal, state, and local statutes and regulations related to solid waste and there would be no impact.

h. The proposed Mobility Hub and CCL Project would not increase the demand on natural gas and the increased demand for electricity would be minimal for lighting and signage. Therefore, the proposed project would not require construction or expansion of electrical and natural gas facilities and the impact would be less than significant impact.

i. The proposed Mobility Hub and CCL Project will comply with the *University of California Policy on Sustainable Practices.* Viable alternative transportation options can reduce single occupant vehicle (SOV) trips, vehicle miles traveled (VMT), greenhouse gas emissions, pollution, and traffic congestion, and parking demand, providing a sustainable and healthy future for UCR's transportation strategy. The project is not eligible for LEED certification, although it will be designed to comply with sustainability policies and best practices such as Low-Impact Development, increased on-site stormwater treatment, LED lighting, and the California Green Building Standards Code. Therefore, implementation of the proposed project would not encourage the wasteful or inefficient use of energy and the impact would be less than significant.

CUMULATIVE IMPACTS:

All impacts of the proposed Mobility Hub and CCL Project associated with utilities and service systems would not be significant. Therefore, the proposed project would not contribute to any significant cumulative impacts related to utilities and service systems. No further analysis is required.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
19. MANDATORY FINDINGS OF SIGNIFICANCE – 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?	☐	☐	■	☐
b) 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)?	☐	☐	■	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

DISCUSSION:

a. Development under the proposed Mobility Hub and CCL Project, would not affect fish or wildlife habitat, populations, communities, or ranges (see Biological Resources responses [a] through [f]). Implementation of the proposed project would not eliminate important examples of the major periods of California history or prehistory (see Cultural Resources responses [a] through [d]).

b. Cumulative impacts for each environmental factor are addressed in the preceding sections. As that discussion shows, development under the proposed project would not result in significant cumulative impacts with regard to Aesthetics, Agricultural Resources, Air Quality, Biological Resources, Cultural Resources, 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/Traffic, Tribal Cultural Resources, and Utilities and Services Systems.

c. As indicated in the discussions above, implementation of the proposed Mobility Hub and CCL Project would not result in any significant impacts. As such, implementation of the proposed project would not have the potential to result in substantial adverse effects on human beings either directly or indirectly.

VI. SUPPORTING INFORMATION SOURCES

California Department of Toxic Substances Control, Envirostor database https://www.envirostor.dtsc.ca.gov/public/. 2018.

University of California, Riverside (UCR). 2005. *2005 Long Range Development Plan*, Environmental Impact Report. Prepared by EIP Associates. November.

UCR. 2005. *Long Range Development Plan*. Prepared by the University of California, Riverside.

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UCR. 2012, revised 2016. *Emergency Action Plan*. Prepared by the University of California, Riverside. February.

VII. INITIAL STUDY PREPARERS

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APPENDIX A

2005 LRDP EIR PSs, PPs, and MMs

2005 LRDP PLANNING STRATEGIES, PROGRAMS AND PRACTICES, AND MITIGATION MEASURES

Planning Strategies

Land Use

1. Achieve academic core densities of 1.0 FAR or higher on the East Campus and 1.6 to 1.9 FAR on the West Campus in order to achieve a balance of academic land area versus other required uses.

2. In order to achieve these development densities, infill sites in the partially developed East Campus academic core and expand to the West Campus academic zone immediately adjacent to the I-215/SR-60 freeway, maintaining a compact and contiguous academic core.

3. Maintain the teaching and research fields on the West Campus south of Martin Luther King Jr. Boulevard.

4. Pursue a goal of housing 50 percent of student enrollment in on campus or campus controlled housing.

5. Remove existing family housing units on the East Campus, and provide replacement and additional units of family housing on the West Campus.

6. Provide expanded athletics and recreational facilities and fields on the East and West Campuses, adjacent to concentrations of student housing.

7. Over time, relocate parking from central campus locations to the periphery of the academic core and replace surface parking with structures, where appropriate.

Open Space

1. Protect the steep and natural southeast hillsides designated as a Natural Open Space Reserve, to protect wildlife habitat, to provide a visual backdrop to the campus, and protect against erosion.

2. Within the Natural Open Space Reserve, no major facilities will be allowed (except for sensitively sited utility projects), vehicular and pedestrian access will be limited, and native plant materials will be used, where needed, for erosion, screening, and restoration.

3. In Naturalistic Open Space areas, where arroyos and other natural features exist, preserve wherever possible, existing landforms, native plant materials, and trees. Where appropriate, restore habitat value.

4. Provide landscaped buffers and setbacks along campus edges, such as Valencia Hill Drive and its extension south of Big Springs Road, Martin Luther King Jr. Boulevard, and the I-215/SR-60 freeway.

5. Retain the Carillon Mall as a major Campus Landmark Open Space, respecting its existing dominant width of approximately 200 feet throughout its length. Other “named” malls and walks will be 100 feet wide.

6. Provide a new Campus Landmark Open Space on the West Campus, the Gage Canal Mall, to reflect the natural dry arroyos that are part of the Riverside landscape, and provide gathering/activity space within and adjacent to the Mall.

7. Provide neighborhood parks and tot lots in the family housing areas as neighborhood open space.

Campus and Community

1. Provide sensitive land use transitions and landscaped buffers where residential neighborhoods might experience noise or light from UCR activities.

2. Encourage a "permeable" edge with the community where interaction is desirable, especially along University Avenue and in areas where a high proportion of students live in close proximity to the campus.

3. Discourage vehicular traffic originating off campus from moving through campus as a short cut.

4. Provide strong connections within the campus and its edges to promote walking, bicycling and transit use, rather than vehicular traffic.

5. Continue to improve campus signage and wayfinding to provide easy access for visitors and to discourage impacts in neighboring residential areas.

6. Locate public-oriented uses, such as performance facilities, galleries and major sports venues, where they can be easily accessed and where they can contribute to the vitality and economic health of businesses along University Avenue.

7. Work cooperatively with the City of Riverside to effect the redevelopment of University Avenue between the campus and Chicago Avenue as a high intensity mixed use district, with an abundance of campus/community serving businesses and uses.

8. Encourage the City to explore the opportunity for student housing in a mixed use configuration along University Avenue.

9. Strongly encourage private developers to provide a variety of housing types that target both current and future needs of the overall community and the campus.

10. Use City/UCR/RCC enhancement of Downtown cultural, arts and entertainment resources and the campus need for off-campus housing as the foundation of a revitalization program.

11. Support the City in their coordination of Block Grant, Redevelopment set-aside, and other funds for the upgrading of Neighborhood Reinvestment Areas adjacent to University Avenue.

12. Support the City in creating design guidelines for community, student, faculty, staff and visitor housing along University Avenue that has a friendly street presence.

13. Support the City in amending the Eastside Community Plan to update housing strategies and action plans for rehabilitation of existing housing stock and new construction. This should be done in conjunction with modifications to the University Avenue Specific Plan.

14. Support the City in creating a "town/gown square" at the southwest corner of the intersection of University and Chicago Avenues to provide retail and services for the community and campus.

15. Support the City in developing design guidelines for mixed use housing and retail along University Avenue.

16. Partner with the City to create a Riverside/UCR Entrepreneurial Program at the "town/gown square" related to minority business Opportunities in the University Avenue and Hunter Business Park areas.

17. Work with the City to link the open spaces of UCR, University Avenue, the Marketplace and the Downtown with enhanced streetscape treatments for University to Market and from Market to Santa Fe Street along Mission Inn Avenue/7th Street.

18. Work with the City to link the open spaces of UCR with the Citywide Trail Network.

19. Work with the City to develop streetscape concepts with banners, lighting, street furniture and public art that celebrate the linkages between the University and Downtown. Banners should highlight cultural and artistic events in Downtown and at UCR when appropriate.

20. Work with the City to evaluate the conversion of University Avenue from Iowa Avenue to the I-215/SR 60 freeway from an auto emphasis street to a biking, pedestrian, transit street with localized auto access. Consider Martin Luther King Jr. Boulevard/14th Street and Blaine/3rd Street as primary freeway connecting streets.

21. Work with the City to emphasize University Avenue as the link between the UCR campus and Downtown rather than as the link to the freeways.

22. Work with the City to encourage bicycle and pedestrian use and safety, including minimizing the number of curb cuts for residential and retail development along University Avenue to Chicago Avenue and then to the Downtown.

Transportation

1. Develop an integrated multi-modal transportation plan to encourage walking, biking, and transit use.

2. Expand shuttle or tram service connecting major parking lots and campus destinations, and linking the East and West Campuses. Coordinate this system with RTA routes and schedules.

3. Provide a continuous network of bicycle lanes and paths throughout the campus, connecting to off-campus bicycle routes.

4. Over time, limit general vehicular circulation in the central campus, but allow transit, service, and emergency vehicle access, and provide access for persons with mobility impairments.

5. Provide bicycle parking at convenient locations.

6. Implement parking management measures that may include

   - Restricted permit availability

- Restricted permit mobility

- Differential permit parking (price determined by proximity to facilities/buildings).

Development Strategies

1. Establish a design review process to provide regular review of building and landscape development on campus.

2. Review and update, as needed, the Campus Design Guidelines and the Campus Landscape Guidelines (now the 2007 Campus Design Guidelines) to ensure conformity with LRDP planning strategies.

3. Review other plans that may be prepared, such as district, sub-area or transportation plans, for conformity with the goals and design intent of the 2005 LRDP.

Programs and Practices

Aesthetics

PP 4.1-1 The Campus shall provide design professionals with the 2007 Campus Design Guidelines and instructions to implement the guidelines, including those sections related to use of consistent scale and massing, compatible architectural style, complementary color palette, preservation of existing site features, and appropriate site and exterior lighting design.

(This is identical to Land Use PP 4.9-1(a))

PP 4.1-2(a) The Campus shall continue to provide design professionals with the 2007 Campus Design Guidelines and instructions to develop project-specific landscape plans that are consistent with the Guidelines with respect to the selection of plants, retention of existing trees, and use of water conserving plants, where feasible.

(This is identical to Land Use PP 4.9-1(b))

PP 4.1-2(b) The Campus shall continue to relocate, where feasible, mature "specimen" trees that would be removed as a result of construction activities on the campus.

(This is identical to Land Use PP 4.9-1(c).)

PP 4.1-2(c) To reduce impacts to the Natural Open Space Reserve area:

(i) If any construction is proposed within the Open Space Reserve, conduct surveys for threatened and endangered species at an appropriate time of year. If these species are located in this area, the site or sites shall be protected from damage by either protective fencing or some other means of restricting access.

(ii) Landscaping around development areas adjacent to the Open Space Reserve shall emphasize native or historically significant plant material that provide wildlife value and a sensitive transition from developed areas to natural open spaces. A qualified native landscape specialist shall be retained to develop an appropriate native landscape plan for the development areas.

(This is identical to Biological Resources PP 4.4-1(a) and Hydrology PP 4.8-3(a).)

PP 4.1-2(d) To reduce disturbance of Natural and Naturalistic Open Space areas:

(i) Unnecessary driving in sensitive or otherwise undisturbed areas shall be avoided. New roads or construction access roads would not be created where adequate access already exists.

(ii) Removal of native shrub or brush shall be avoided, except where necessary.

(iii) Drainages shall be avoided, except where required for construction. Limit activity to crossing drainages rather than using the lengths of drainage courses for access.

(iv) Excess fill or construction waste shall not be dumped in washes.

(v) Vehicles or other equipment shall not be parked in washes or other drainages.

(vi) Overwatering shall be avoided in washes and other drainages.

(vii) Wildlife including species such as fox, coyote, snakes, etc. shall not be harassed. Harassment includes shooting, throwing rocks, etc.

(This is identical to Biological Resources PP 4.4-1(b) and Hydrology PP 4.8-3(b).)

Air Quality

PP 4.3-1 The Campus shall continue to implement a Transportation Demand Management program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective.

(This is identical to Transportation and Traffic PP 4.14-1)

PP 4.3-2(a) Construction contract specifications shall include the following:

(i) Compliance with all SCAQMD rules and regulations

(ii) Maintenance programs to assure vehicles remain in good operating condition

(iii) Avoid unnecessary idling of construction vehicles and equipment

(iv) Use of alternative fuel construction vehicles

(v) Provision of electrical power to the site, to eliminate the need for on-site generators

PP 4.3-2(b) The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The Campus shall implement these measures as necessary to reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor:

(i) Apply water and/or approved non-toxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)

(ii) Replace ground cover in disturbed areas as quickly as possible

(iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content

(iv) Water active grading sites at least twice daily

(v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period

(vi) All trucks hauling dirt, sand, soil, or other loose materials shall be covered or maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code

(vii) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads

(viii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip

(ix) Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces

(x) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads

(This is identical to Geology PP 4.6-2(a) and Hydrology PP 4.8-3(c).)

PP 4.3-2(c) The Campus shall continue to implement SCAQMD Rule 1403—Asbestos when demolishing existing buildings on the campus.

Biological Resources

PP 4.4-1(a) To reduce impacts to the Natural Open Space Reserve area:

(i) If any construction is proposed within the Open Space Reserve, conduct surveys for threatened and endangered species at an appropriate time of year. If these species are located in this area, the site or sites shall be protected from damage by either protective fencing or some other means of restricting access.

(ii) Landscaping around development areas adjacent to the Open Space Reserve shall emphasize native or historically significant plant material that provides wildlife value and a sensitive transition from developed areas to natural open spaces. A qualified native landscape specialist shall be retained to develop an appropriate native landscape plan for the development areas.

(This is identical to Aesthetics PP 4.1-2(c) and Hydrology PP 4.8-3(a).)

PP 4.4-1(b) To reduce disturbance of Natural and Naturalistic Open Space areas:

(i) Unnecessary driving in sensitive or otherwise undisturbed areas shall be avoided. New roads or construction access roads would not be created where adequate access already exists.

(ii) Removal of native shrub or brush shall be avoided, except where necessary.

(iii) Drainages shall be avoided, except where required for construction. Limit activity to crossing drainages rather than using the lengths of drainage courses for access.

(iv) Excess fill or construction waste shall not be dumped in washes.

(v) Vehicles or other equipment shall not be parked in washes or other drainages.

(vi) Overwatering shall be avoided in washes and other drainages.

(vii) Wildlife including species such as fox, coyote, snakes, etc. shall not be harassed. Harassment includes shooting, throwing rocks, etc.

(This is identical to Aesthetics PP 4.1-2(d) and Hydrology 4.8-3(b).)

PP 4.4-2(a) Impacts to riparian and wetland habitats shall be avoided, wherever feasible. If avoidance is not feasible, then the impacts will be evaluated as part of the Clean Water Act section 404 and California Fish and Game Code section 1602 permit application process. If mitigation is required, the University of California will develop and implement a resource mitigation program to be reviewed and

approved by the USACE and CDFG through the state and federal permit process. The permit shall mitigate the habitats such that they are consistent with the Clean Water Act and CDFG policy of "no net loss" of wetland. Furthermore, impacted wetlands and/or riparian vegetation that cannot be avoided would be replaced at a ratio approved by the USACE and CDFG. If replacement within the area is not feasible, then an approved mitigation bank or other off-site area will be used. The revegetation of impacted areas or mitigation parcels will be performed by a qualified restoration specialist and shall be conducted only on sites where soils, hydrology, and microclimate conditions are suitable for riparian habitat. First priority will be given to areas that are adjacent to existing patches of native habitat.

PP 4.4-2(b) In compliance with NPDES, the Campus would continue to implement Best Management Practices, as identified in the UCR Stormwater Management Plan (UCR 2003):

(i) Public education and outreach on stormwater impacts

(ii) Public involvement/participation

(iii) Illicit discharge detection and elimination

(iv) Pollution prevention/good housekeeping for facilities

(v) Construction site stormwater runoff control

(vi) Post-construction stormwater management in new development and redevelopment

(This is identical to Geology and Soils PP 4.6-2(b) and Hydrology PP 4.8-3(d).)

Cultural Resources

PP 4.5-2 If any project is proposed that would require or result in the relocation or demolition of a historic structure, the Campus shall prepare a project-specific CEQA analysis, pursuant to Section 15064.5 et seq. of the CEQA Guidelines.

PP 4.5-3 If construction would occur within the southeast hills or within the portion of the West Campus north of Martin Luther King Boulevard, a surface field survey shall be conducted in conjunction with a project specific environmental analysis in accordance with CEQA. Depending on the results of the survey, the following measures shall be implemented:

(i) If no evidence of surface archaeological resources is discovered, or if development would occur in areas not designated as sensitive for archaeological resources:

- Prior to site preparation or grading activities, construction personnel shall be informed of the potential for encountering unique archaeological

resources and taught how to identify these resources if encountered. This shall include the provision of written materials to familiarize personnel with the range of resources that might be expected, the type of activities that may result in impacts, and the legal framework of cultural resources protection. Construction specifications shall require that all construction personnel shall be instructed to stop work in the vicinity of a potential discovery until a qualified, non-University archaeologist assesses the significance of the find and implements appropriate measures to protect or scientifically remove the find. Construction personnel shall also be informed that unauthorized collection of archaeological resources is prohibited.

- The Campus shall require the site project contractor to report any evidence of archaeological resources unearthed during development excavation to the campus.

- The archaeologist shall then be present during the grading and shall have the authority to halt disturbance of any archaeological resources long enough to assess the situation, conduct testing, and implement mitigation measures that would reduce impacts in accordance with Section 21083.2 of CEQA.

(ii) If any evidence of archaeological materials is discovered on the surface during field survey, then:

- A qualified archaeologist shall prepare a recovery plan for the resources.

- An archaeologist shall also be present during grading and shall have the authority to halt disturbance of any archaeological resources long enough to assess the situation, conduct testing, and implement mitigation measures that would reduce impacts in accordance with Section 21083.2 of CEQA.

PP 4.5-4 Construction specifications shall require that if a paleontological resource is uncovered during construction activities:

(i) A qualified paleontologist shall determine the significance of the find.

(ii) The Campus shall make an effort to preserve the find intact through feasible project design measures.

(iii) If it cannot be preserved intact, then the University shall retain a qualified non-University paleontologist to design and implement a treatment plan to document and evaluate the data and/or preserve appropriate scientific samples.

(iv) The paleontologist shall prepare a report of the results of the study, following accepted professional practice.

(v) Copies of the report shall be submitted to the University and the Riverside County Museum.

PP 4.5-5 In the event of the discovery of a burial, human bone, or suspected human bone, all excavation or grading in the vicinity of the find shall halt immediately and the area of the find shall be protected and the University immediately shall notify the Riverside County Coroner of the find and comply with the provisions of P.R.C. Section 5097 with respect to Native American involvement, burial treatment, and re-burial, if necessary.

Geology and Soils

PP 4.6-1(a) During project-specific building design, a site-specific geotechnical study shall be conducted under the direct supervision of a California Registered Engineering Geologist or licensed geotechnical engineer to assess seismic, geological, soil, and groundwater conditions at each construction site and develop recommendations to prevent or abate any identified hazards. The study shall follow applicable recommendations of CDMG Special Publication 117 and shall include, but not necessarily be limited to:

- Determination of the locations of any suspected fault traces and anticipated ground acceleration at the building site,
- Potential for displacement caused by seismically induced shaking, fault/ground surface rupture, liquefaction, differential soil settlement, expansive and compressible soils, landsliding, or other earth movements or soil constraints, and
- Evaluation of depth to groundwater.

The structural engineer shall incorporate the recommendations made by the geotechnical report when designing building foundations.

PP 4.6-1(b) The Campus shall continue to implement its current seismic upgrade program.

PP 4.6-1(c) The Campus will continue to fully comply with the University of California's Policy for Seismic Safety, as amended. The intent of this policy is to ensure that the design and construction of new buildings and other facilities shall, as a minimum, comply with seismic provisions of California Code of Regulations, Title 24, California Administrative Code, the California State Building Code, or local seismic requirements, whichever requirements are most stringent.

PP 4.6-2(a) The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The Campus shall implement these measures as necessary to

reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor:

(i) Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)

(ii) Replace ground cover in disturbed areas as quickly as possible

(iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content

(iv) Water active grading sites at least twice daily

(v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period

(vi) All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code

(vii) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads

(viii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip
(ix) Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces

(x) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads

(This is identical to Air Quality PP 4.3-2(b) and Hydrology PP 4.8-3(c).)

PP 4.6-2(b) In compliance with National Pollution Discharge Elimination System (NPDES), the Campus would continue to implement Best Management Practices, as identified in the UCR Stormwater Management Plan (UCR 2003):

(i) Public education and outreach on stormwater impacts

(ii) Public involvement/participation

(iii) Illicit discharge detection and elimination

(iv) Pollution prevention/good housekeeping for facilities

(v) Construction site stormwater runoff control

(vi) Post-construction stormwater management in new development and redevelopment

(This is identical to Biological Resources PP 4.4-2(b) and Hydrology PP 4.8-3(d).)

Hazards and Hazardous Materials

PP 4.7-1 The Campus shall continue to implement the current (or equivalent) health and safety plans, programs, and practices related to the use, storage, disposal, or transportation of hazardous materials, including, but not necessarily limited to, the Business Plan, the Broadscope Radioactive Materials License, and the following programs: Biosafety, Emergency Management, Environmental Health, Hazardous Materials, Industrial Hygiene and Safety, Laboratory/Research Safety, Radiation Safety, and Integrated Waste Management. These programs may be subject to modification as more stringent standards are developed or if the programs are replaced by other programs that incorporate similar health and safety protection measures.

PP 4.7-2 The Campus shall perform hazardous materials surveys on buildings and soils, if applicable, prior to demolition. When remediation is deemed necessary, surveys shall identify all potential hazardous materials within the structure to be demolished, and identify handling and disposal practices. The Campus shall follow the practices during building demolition to ensure construction worker and public safety.

PP 4.7-3 The Campus will inform employees and students of hazardous materials minimization strategies applicable to research, maintenance, and instructional activities, and require the implementation of these strategies where feasible. Strategies include but are not limited to the following:

(i) Maintenance of online database by EH&S of available surplus chemicals retrieved from laboratories to minimize ordering or new chemicals.

(ii) Shifting from chemical usage to micro techniques as standard practice for instruction and research, as better technology becomes available.

PP 4.7-4 Prior to demolition of structures on the campus or new construction on former agricultural teaching and research fields, the Campus shall complete a Phase I environmental site assessment to determine the potential for soil or groundwater contamination on a project site. If the assessment determines that a substantial potential exists on the site, the Campus shall develop and implement an appropriate testing and, if needed, develop a remediation strategy prior to demolition or construction activities.

If contaminated soil and/or groundwater is encountered during the removal of onsite debris or during excavation and/or grading activities

(i) The construction contractor(s) shall stop work and immediately inform EH&S.

(ii) An on-site assessment shall be conducted to determine if the discovered materials pose a significant risk to the public or construction workers.

(iii) If the materials are determined to pose such a risk, a remediation plan shall be prepared and submitted to EH&S to comply with all federal and State regulations necessary to clean and/or remove the contaminated soil and/or groundwater.

(iv) Soil remediation methods could include, but are not necessarily limited to, excavation and on-site treatment, excavation and off-site treatment or disposal, and/or treatment without excavation.

(v) Remediation alternatives for cleanup of contaminated groundwater could include, but are not necessarily limited to, on-site treatment, extraction and off-site treatment, and/or disposal.

(vi) The construction schedule shall be modified or delayed to ensure that construction will not inhibit remediation activities and will not expose the public or construction workers to significant risks associated with hazardous conditions.

PP 4.7-7(a) 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 appropriate signage indicating alternative routes.

(This is identical to Transportation and Traffic PP 4.14-5.)

PP 4.7-7(b) 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 UCPD, EH&S, and the RFD to disclose roadway closures and identify alternative travel routes.

(This is identical to Transportation and Traffic PP 4.14-8.)

Hydrology and Water Quality

PP 4.8-1 The Campus will continue to comply with all applicable water quality requirements established by the SARWQCB.

(This is identical to Utilities PP 4.15-5.)

PP 4.8-2(a) To further reduce the campus' impact on domestic water resources, to the extent feasible, UCR will

(i) Install hot water recirculation devices (to reduce water waste)

(ii) Continue to require all new construction to comply with applicable State laws requiring water-efficient plumbing fixtures, including but not limited to the Health and Safety Code and Title 24, California Code of Regulations, Part 5 (California Plumbing Code)

(iii) Retrofit existing plumbing fixtures that do not meet current standards on a phased basis over time

(iv) Install recovery systems for losses attributable to existing and proposed steam and chilled-water systems

(v) Prohibit using water as a means of cleaning impervious surfaces

(vi) Install water-efficient irrigation equipment to maximize water savings for landscaping and retrofit existing systems over time

(This is identical to Utilities PP 4.15-1(b))

PP 4.8-2(b) The Campus shall promptly detect and repair leaks in water and irrigation pipes.

(This is identical to Utilities PP 4.15-1(c))

PP 4.8-2(c) The Campus shall avoid serving water at food service facilities except upon request.

(This is identical to Utilities PP 4.15-1(d))

PP 4.8-3(a) To reduce impacts to the Natural Open Space Reserve area:

(i) If any construction is proposed within the Open Space Reserve, conduct surveys for threatened and endangered species at an appropriate time of year. If these species are located in this area, the site or sites shall be protected from damage by either protective fencing or some other means of restricting access.

(ii) Landscaping around development areas adjacent to the Open Space Reserve shall emphasize native or historically significant plant material that provides wildlife value and a sensitive transition from developed areas to Natural open spaces. A qualified native landscape specialist shall be retained to develop an appropriate native landscape plan for the development areas.

(This is identical to Biological Resources PP 4.4-1(a) and Aesthetics 4.1-2(c).)

PP 4.8-3(b) To reduce disturbance of Natural and Naturalistic Open Space areas:

(i) Unnecessary driving in sensitive or otherwise undisturbed areas shall be avoided. New roads or construction access roads would not be created where adequate access already exists.

(ii) Removal of native shrub or brush shall be avoided, except where necessary.

(iii) Drainages shall be avoided, except where required for construction. Limit activity to crossing drainages rather than using the lengths of drainage courses for access.

(iv) Excess fill or construction waste shall not be dumped in washes.

(v) Vehicles or other equipment shall not be parked in washes or other drainages.

(vi) Overwatering shall be avoided in washes and other drainages.

(vii) Wildlife including species such as fox, coyote, snakes, etc. shall not be harassed. Harassment includes shooting, throwing rocks, etc.

(This is identical to Aesthetics PP 4.1-2(d) and Biological Resources PP 4.4-1(b).)

PP 4.8-3(c) The Campus shall continue to implement dust control measures consistent with SCAQMD Rule 403—Fugitive Dust during the construction phases of new project development. The following actions are currently recommended to implement Rule 403 and have been quantified by the SCAQMD as being able to reduce dust generation between 30 and 85 percent depending on the source of the dust generation. The Campus shall implement these measures as necessary to reduce fugitive dust. Individual measures shall be specified in construction documents and require implementation by construction contractor:

(i) Apply water and/or approved nontoxic chemical soil stabilizers according to manufacturer's specification to all inactive construction areas (previously graded areas that have been inactive for 10 or more days)

(ii) Replace ground cover in disturbed areas as quickly as possible

(iii) Enclose, cover, water twice daily, or apply approved chemical soil binders to exposed piles with 5 percent or greater silt content

(iv) Water active grading sites at least twice daily

(v) Suspend all excavating and grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour over a 30-minute period (vi) All trucks hauling dirt, sand, soil, or other loose materials are to be covered or should maintain at least two feet of freeboard (i.e., minimum vertical distance between top of the load and the top of the trailer), in accordance with Section 23114 of the California Vehicle Code

(vii) Sweep streets at the end of the day if visible soil material is carried over to adjacent roads

(viii) Install wheel washers where vehicles enter and exit unpaved roads onto paved roads, or wash off trucks and any equipment leaving the site each trip

(ix) Apply water three times daily or chemical soil stabilizers according to manufacturers' specifications to all unpaved parking or staging areas or unpaved road surfaces

(x) Post and enforce traffic speed limits of 15 miles per hour or less on all unpaved roads

(This is identical to Air Quality PP 4.3-2(b) and Geology PP 4.6-2(a).)

PP 4.8-3(d): In compliance with NPDES, the Campus would continue to implement Best Management Practices, as identified in the UCR Stormwater Management Plan (UCR 2003):

(i) Public education and outreach on stormwater impacts

(ii) Public involvement/participation

(iii) Illicit discharge detection and elimination

(iv) Pollution prevention/good housekeeping for facilities

(v) Construction site stormwater runoff control

(vi) Post-construction stormwater management in new development and redevelopment

(This is identical to Biological Resources PP 4.4-2(b) and Geology and Soils PP 4.6-2(b).)

PP 4.8-3(e) Prior to the time of design approval, the Campus will evaluate each specific project to determine if the project runoff would exceed the capacity of the existing storm drain system. If it is found that the capacity would be exceeded, one or more of the following components of the storm drain system would be implemented to minimize the occurrence of local flooding:

(i) Multi-project stormwater detention basins

(ii) Single-project detention basins

(iii) Surface detention design

(iv) Expansion or modification of the existing storm drain system

(v) Installation of necessary outlet control facilities

PP 4.8-10 In the event of an emergency, including catastrophic failure of the California State Water Project pipeline, the Campus would implement the Emergency Operations Plan.

Land Use

PP 4.9-1(a) The Campus shall provide design professionals with the 2007 Campus Design Guidelines and instructions to implement the guidelines, including those sections related to use of consistent scale and massing, compatible architectural style, complementary color palette, preservation of existing site features, and appropriate site and exterior lighting design.

(This is identical to Aesthetics PP 4.1-1.)

PP 4.9-1(b) The Campus shall continue to provide design professionals with the 2007 Campus Design Guidelines and instructions to develop project-specific landscape plans that are consistent with the Guidelines with respect to the selection of plants, retention of existing trees, and use of water conserving plants, where feasible.

(This is identical to Aesthetics PP 4.1-2(a).)

PP 4.9-1(c) The Campus shall continue to relocate, where feasible, mature "specimen" trees that would be removed as a result of construction activities on the campus.

(This is identical to Aesthetics PP 4.1-2(b).)

Noise

PP 4.10-1(a) UCR will incorporate the following siting design measures to reduce long-term noise impacts:

(i) Truck access, parking area design, and air conditioning/refrigeration units will be designed and evaluated when planning specific individual new facilities to minimize the potential for noise impacts to adjacent developments.

(ii) Building setbacks, building design and orientation will be used to reduce intrusive noise at sensitive student residential and educational building locations near main campus access routes, such as Blaine Street, Canyon Crest Drive, University Avenue, and Martin Luther King Jr. Boulevard. Noise walls may be advisable to screen existing and proposed facilities located near the I-215/SR-60 freeway.

(iii) Adequate acoustic insulation would be added to residence halls to ensure that the interior Ldn would not exceed 45 dBA during the daytime and 40 dBA during the nighttime (10 P.M. to 7 A.M.) in rooms facing major streets.

(iv) Potential noise impacts would be evaluated as part of the design review for all projects. If determined to be significant, mitigation measures would be identified and alternatives suggested. At a minimum, campus residence halls and student housing design would comply with Title 24, Part 2 of the California Administrative Code.

PP 4.10-2 The UCR campus shall limit the hours of exterior construction activities from 7:00 A.M. to 9:00 P.M. Monday through Friday and 8:00 A.M. to 6:00 P.M. on Saturday when necessary. Construction traffic shall follow transportation routes prescribed for all construction traffic to minimize the impact of this traffic (including noise impacts) on the surrounding community.

PP 4.10-5(a) The Campus shall continue to provide on-campus housing to continue the evolution of UCR from a commuter to a residential campus.

PP 4.10-5(b) The Campus shall continue to implement an Alternative Transportation program that facilitates and promotes the use of transit, carpools, vanpools, and bicycling.

PP 4.10-6 The Campus shall continue to shield all new stationary sources of noise that would be located in close proximity to noise-sensitive buildings and uses.

PP 4.10-7(a) To the extent feasible, construction activities shall be limited to 7:00 A.M. to 9:00 P.M. Monday through Friday, 8:00 A.M. to 6:00 P.M. on Saturday, and no construction on Sunday and national holidays, as appropriate, in order to minimize disruption to area residences surrounding the campus and to on-campus uses that are sensitive to noise.

PP 4.10-7(b) The Campus shall continue to require by contract specifications that construction equipment be required to be muffled or otherwise shielded. Contracts shall specify that engine-driven equipment be fitted with appropriate noise mufflers.

PP 4.10-7(c) The Campus shall continue to require that stationary construction equipment material and vehicle staging be placed to direct noise away from sensitive receptors.

PP 4.10-7(d) The Campus shall continue to conduct regular meetings, as needed, with on campus constituents to provide advance notice of construction activities in order to coordinate these activities with the academic calendar, scheduled events, and other situations, as needed.

PP 4.10-8 The Campus shall continue to conduct meetings, as needed, with off-campus constituents that are affected by campus construction to provide advance notice of construction activities and ensure that the mutual needs of the particular construction project and of those impacted by construction noise are met, to the extent feasible.

Public Services

PP 4.12-1(a) As development occurs, the following measures will be incorporated:

(i) New structures would be designed with adequate fire protection features in compliance with State law and the requirements of the State Fire Marshal. Building designs would be reviewed by appropriate campus staff and government agencies.

(ii) Prior to implementation of individual projects, the adequacy of water supply and water pressure will be determined in order to ensure sufficient fire protection services.

(iii) Adequate access will be provided to within 50 feet of the main entrance of occupied buildings to accommodate emergency ambulance service.

(iv) Adequate access for fire apparatus will be provided within 50 feet of stand pipes and sprinkler outlets.

(v) Service roads, plazas, and pedestrian walks that may be used for fire or emergency vehicles will be constructed to withstand loads of up to 45,000 pounds.

(vi) As implementation of the LRDP occurs, campus fire prevention staffing needs would be assessed; increases in staffing would be determined through such needs assessments.

PP 4.12-1(b) (i) Accident prevention features shall be reviewed and incorporated into new structures to minimize the need for emergency response from the City of Riverside.

(ii) Increased staffing levels for local fire agencies shall be encouraged to meet needs generated by LRDP project related on-campus population increases.

PP 4.12-2(a) As development under the LRDP occurs, the Campus will hire additional police officers and support staff as necessary to maintain an adequate level of service, staff, and equipment, and will expand the existing police facility when additional space is required.

PP 4.12-2(b) The Campus will continue to participate in the "UNET" program (for coordinated police response and staffing of a community service center), which provides law enforcement services in the vicinity of the campus, with equal participation of UCR and City police staffs.

Traffic and Transportation

PP 4.14-1 The Campus shall continue to implement a Transportation Demand Management program that meets or exceeds all trip reduction and AVR requirements of the SCAQMD. The TDM program may be subject to modification as new technologies are developed or alternate program elements are found to be more effective.

(This is identical to Air Quality PP 4.3-1.)

PP 4.14-2 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.

PP 4.14-4 The Campus shall provide design professionals for roadway and parking improvements with the Campus Design Guidelines and instructions to implement those elements of the guidelines relevant to parking and roadway design.

PP 4.14-5 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.

(This is identical to Hazards and Hazardous Materials PP 4.7-7(a).)

PP 4.14-6 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.

PP 4.14-8 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 UCPD, EH&S, and the RFD to disclose roadway closures and identify alternative travel routes.

(This is identical to Hazards and Hazardous Materials PP 4.7-7(b).)

Utilities

PP 4.15-1(a) Improvements to the campus water distribution system, including necessary pump capacity, will be made as required to serve new projects. Project-specific CEQA analysis of environmental effects that would occur prior to project-specific approval will consider the continued adequacy of the domestic/fire water systems, and no new development would occur without a demonstration that appropriate domestic/fire water supplies continue to be available.

PP 4.15-1(b) To further reduce the campus' impact on domestic water resources, to the extent feasible, UCR will

(i) Install hot water recirculation devices (to reduce water waste)

(ii) Continue to require all new construction to comply with applicable State laws requiring water-efficient plumbing fixtures, including but not limited to the

Health and Safety Code and Title 24, California Code of Regulations, Part 5 (California Plumbing Code)

(iii) Retrofit existing plumbing fixtures that do not meet current standards on a phased basis over time

(iv) Install recovery systems for losses attributable to existing and proposed steam and chilled-water systems

(v) Prohibit using water as a means of cleaning impervious surfaces

(vi) Install water-efficient irrigation equipment to local evaporation rates to maximize water savings for landscaping and retrofit existing systems over time

(This is identical to Hydrology PP 4.8-2(a).)

PP 4.15-1(c) The Campus shall promptly detect and repair leaks in water and irrigation pipes.

PP 4.15-1(d) The Campus shall avoid serving water at food service facilities except upon request.

PP 4.15-5 The Campus will continue to comply with all applicable water quality requirements established by the SARWQCB.

(This is identical to Hydrology PP 4.8-1.)

2005 LRDP MITIGATION MEASURES

Aesthetics

MM 4.1-3(a) Building materials shall be reviewed and approved as part of project-specific design and through approval of construction documents. Mirrored, reflective glass is prohibited on campus.

MM 4.1-3(b) All outdoor lighting on campus resulting from new development shall be directed to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) to prevent stray light spillover onto adjacent residential areas. In addition, all fixtures on elevated light standards in parking lots, parking structures, and athletic fields shall be shielded to reduce glare. Lighting plans shall be reviewed and approved prior to project-specific design and construction document approval.

MM 4.1-3(c) Ingress and egress from new parking areas shall be designed and situated so as to minimize the impact of vehicular headlights on adjacent uses. Walls, landscaping or other light barriers will be provided. Site plans shall be reviewed and approved as part of project-specific design and construction document approval.

Air Quality

MM 4.3-2 Programs and Practices 4.3-2(a), (b), and (c), or their equivalent, shall be included in construction contract specifications. The contract specifications shall require the use of low NOx diesel fuel and construction equipment to the extent that it is readily available at the time of development.

MM 4.3-3 To reduce energy consumption and area-wide emission of criteria pollutants, the campus shall annually inspect and enforce an emissions reduction control strategy, which may include, where feasible, the following:

Design

- Use light-colored roof materials to reduce heat gain
- Orient buildings to the north and include passive solar design features
- Increase building and attic insulation beyond Title 24 requirements
- Provide electric vehicle charging systems at convenient location in campus parking facilities
- Provide prominent website and/or kiosks displaying information about alternative transportation

- Install electrical outlets outside buildings for the use of electric landscape maintenance equipment

Operation

- Implement a subsidized vanpool program
- Implement staggered or compressed work schedules to reduce vehicular traffic
- Use alternative fuel shuttle buses to reduce intra-campus vehicle trips
- Provide shuttle service to major off-campus activity centers and Metrolink station(s)
- Aggressive expansion of the campus TDM program to achieve an AVR of 1.5
- Expand transit subsidies to encourage use of public transit
- Implement incentives for telecommuting
- Convert campus fleet to low emission, alternative fuel, and electric vehicles over time
- Implement solar or low-emission water heaters
- Implement an educational program for faculty and staff and distribute information to students and visitors about air pollution problems and solutions

Biological Resources

MM 4.4-1(a) To ensure that potential impacts to special status plant and wildlife species that are known to occur within the Natural and Naturalistic areas of the campus or have a moderate or greater potential to occur are reduced to less than significant levels, the campus shall conduct surveys for special-status species prior to disturbance of areas or habitat that are known to support the species. The University shall conduct surveys of the area(s) in accordance with applicable protocols or guidelines developed by the CDFG and/or USFWS, as applicable.

MM 4.4-1(b) If surveys determine that special-status plant or animal species are present, the following measures shall be implemented:

(i) Vegetation: If sensitive plant species or habitats are observed and would be impacted by project-related activities, a qualified botanist shall develop a species or habitats-specific replacement plan. This plan shall include elements to limit project impacts such as the relocation of individual specimens, the collection of seeds and replanting, or the

preservation and movement of topsoil that contains the seed bank. If replacement within the project area is not feasible, then an approved mitigation bank shall be used. For either case, on-site or off-site revegetation, a mitigation monitoring plan shall be prepared and approved by the CDFG prior to start of construction.

(ii) Wildlife: If special status wildlife is found within areas of proposed construction and avoidance is not feasible, the campus will consult with the appropriate agencies, obtain any necessary State or federal permits, and prepare a mitigation plan for those special-status species that would be impacted. The mitigation plan would be subject to the approval of applicable State and/or federal agencies, and may include measures such as the relocation of the affected species, protection of other on-campus habitat where the plant or animal is known to occur, or site preparation and revegetation to create suitable habitat.

MM 4.4-3(a) When habitat that could be regulated by the Clean Water Act (Section 404) would be impacted, either directly or indirectly, the University shall perform a jurisdictional and/or wetland delineation to assess the extent of the jurisdictional area(s).

MM 4.4-3(b) If wetland or riparian habitat would be removed as a result of project development, the University shall restore or enhance wetland or riparian habitat as required by the applicable State and/or federal resource agencies.

MM 4.4-3(c) Any proposal for wetland creation or enhancement (pursuant to MM 4.4-3(b) above) will be based upon the completion of soils, hydrologic and other studies confirming the feasibility of the creation or enhancement proposal and shall include United States Army Corps of Engineers (USACE)–approved measures intended to promote occupancy by special status and other wetland-dependent species (e.g., plantings, collection of topsoil and inoculation of target areas).

MM 4.4-4(a) Prior to the onset of construction activities that would result in the removal of mature trees that would occur between March and mid-August, surveys for nesting special status avian species and raptors shall be conducted on the affected portion of the campus following USFWS and/or CDFG guidelines. If no active avian nests are identified on or within 250 feet of the construction site, no further mitigation is necessary.

MM 4.4-4(b) If active nests for avian species of concern or raptor nests are found within the construction footprint or a 250-foot buffer zone, exterior construction activities shall be delayed within the construction footprint and buffer zone until the young have fledged or appropriate mitigation measures responding to the specific situation have been developed and implemented in consultation with USFWS and CDFG

Cultural Resources

MM 4.5-1(a) Before altering or otherwise affecting a building or structure 50 years old or older, the campus shall retain a qualified architectural historian to evaluate the potential significance of the building, using the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5. The evaluation process shall include the development of appropriate historical background research as context for the assessment of the significance of the structure in the history of the University system, the campus, and the region. For historic buildings, structures, or features that do not meet the CEQA criteria for historical resource, no further mitigation is required and the impact is less than significant.

MM 4.5-1(b) The University shall follow the Secretary of the Interior's Standards for Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings (Weeks and Grimmer 1995) or the State Historical Building Code, as appropriate when making modifications to historic structures eligible for NRHP or CRHR listing.

MM 4.5-2(a) For any proposal to demolish a structure or building that has been determined by a qualified architectural historian to qualify as an historical resource and where it has been determined that avoidance is not feasible, documentation and treatment shall be carried out as described below:

(i) If preservation and reuse at the site are not feasible, the historical building shall be documented as described in item (ii) and, when physically and financially feasible, be moved and preserved or reused.

(ii) If a significant historic building or structure is proposed to be demolished, the campus shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping and setting. Documentation shall include still and video photography and a written documentary record of the building to the standards of the Historic American Building Survey (HABS) or Historic American Engineering Record (HAER), including accurate scaled mapping, architectural descriptions, and scaled architectural plans, if available. A copy of the record shall be deposited with the University archives, Rivera Library Special Collections. The record shall be accompanied by a report containing site-specific history and appropriate contextual information. This information shall be gathered through site specific and comparative archival research, and oral history collection as appropriate.

Hazards and Hazardous Materials

MM 4.7-4 Prior to development on former agricultural lands, appropriate soil testing shall be performed to determine whether chemical residue is present from prior activities in amounts that would pose health hazards to construction workers and/or occupants of new buildings. If contamination is determined to be present, PP 4.7-4 shall be implemented.

MM 4.7-7(a) Evacuation zones designated in the UCR Emergency Operations Plan will be avoided, to the extent feasible, when siting construction staging areas. Where evacuation zones cannot be avoided, alternative evacuation zones shall be identified. UCPD and the Riverside Fire Department shall be notified of alternative evacuation zones so that they can respond accordingly to any emergencies.

MM 4.7-7(b) The campus Emergency Operations Plan shall be reviewed on an annual basis and updated as appropriate to account for new on-campus development, which may require changes to the plan, such as revised locations for Campus Evacuation Zones.

MM 4.7-8(a) Provide landscaping around development areas adjacent to preserved open space that emphasizes native or traditional plant material where appropriate and provides a transition to developed areas in a manner that minimizes dense vegetation immediately adjacent to structural development. Landscaping shall be shown on building plans, and plans shall be reviewed and approved for conformance with this measure prior to project design approval and project-specific construction documents.

MM 4.7-8(b) Implement annual fuel management procedures to maintain a firebreak between the undeveloped areas and structures.

Hydrology and Water Quality

MM 4.8-9(a) Prior to design approval, the campus will review the plans for all structures to be constructed in the 100-year floodplain for compliance with the following FEMA requirements for nonresidential structures:

(i) Elevate the lowest floor (including the basement) to or above the base flood level; or

(ii) Together with attendant utility and sanitary facilities, design so that below the base flood level, the structure is watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy; and

(iii) Require that fully enclosed areas below the lowest floor that are subject to flooding be designed to automatically equalize hydrostatic flood forces on exterior walls by allowing for entry and exit of flood waters.

MM 4.8-9(b) For structures placed within the 100-year floodplain, flood control devices will be designed to direct flows toward areas where flood hazards will be minimal.

Land Use

Implementation of the following Mitigation Measures would assure consistency with applicable land use plans and policies:

- MM 4.4-1(a) and (b)
- MM 4.4-3(a) and (b)
- MM 4.4-4(a) and (b)
- MM 4.5-1
- MM 4.5-2
- MM 4.6-1(a)
- MM 4.7-8(a) and (b)
- MM 4.8-9(a) and (b)

Noise

MM 4.10-2 The campus shall notify all academic and residential facilities within 300 feet of approved construction sites of the planned schedule of vibration causing activities so that the occupants and/or researchers can take necessary precautionary measures to avoid negative effects to their activities and/or research.

Traffic and Transportation

MM 4.14-1(a) The intersection of 3rd Street/Chicago Avenue would require an additional left-turn lane on the westbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(b) In addition to the improvements identified for the 'Without Project' scenario, the intersection of Blaine Street/Iowa Avenue would require an additional left-turn lane on the eastbound approach, and a separate through and right-turn lane on the westbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(c) In addition to the improvements identified for the 'Without Project' scenario, the intersection of University Avenue/Chicago Avenue would require a separate through and a right-turn lane on the southbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(d) The intersection of University Avenue/Iowa Avenue would require an additional left-turn lane on the eastbound approach to operate at LOS D or better. The

approach currently consists of one left-turn lane, two through lanes, and one right-turn lane. The mitigated approach would consist of two left-turn lanes, one through lane, and one shared through/right-turn lane. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(e) In addition to the improvements identified for the 'Without Project' scenario, the intersection of Martin Luther King Boulevard/Chicago Avenue would require an additional through lane on the westbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(f) In addition to the improvements identified for the 'Without Project' scenario, the intersection of Martin Luther King Boulevard/Canyon Crest Drive would require an additional left-turn lane on the westbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(g) The intersection of Linden Street/Aberdeen Drive would require a shared through /left-turn lane and a right-turn lane on the eastbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the University.) Please note that this is a T-intersection.

MM 4.14-1(h) In addition to the improvements identified for the 'Without Project' scenario, the intersection of Blaine Street/Iowa Avenue would require an additional left-turn lane on the southbound approach, an additional left-turn lane on the eastbound approach, an additional left-turn lane on the westbound approach, and a separate through and right-turn lane on the westbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(i) The intersection of University Avenue/Iowa Avenue would require an additional left-turn lane on the eastbound approach, and a separate through and right lane on the southbound approach to operate at LOS D or better. The southbound approach currently consists of one left-turn lane, one through lane, and one shared through/right-turn lane. The mitigated southbound approach would consist of one left-turn lane, two through lanes, and one right-turn lane. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(j) The intersection of Martin Luther King Boulevard/Chicago Avenue would require an additional through and an additional right-turn lane on the eastbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(k) In addition to the improvements identified for the 'Without Project' scenario, the intersection of Martin Luther King Boulevard/Canyon Crest Drive would require an additional left-turn lane on the westbound approach to operate at LOS D or better. (This intersection is under the jurisdiction of the City of Riverside.)

MM 4.14-1(l) The intersection of Linden Street/Aberdeen Drive would require a shared through/left-turn lane and a right-turn lane on the eastbound approach to

operate at LOS D or better. (This intersection is under the jurisdiction of the University.)

MM 4.14-10(a) The campus shall work with the City of Riverside to monitor the demand for off-campus parking in residential neighborhoods or at commercial establishments to determine whether use of off-campus parking by the campus population is substantially restricting availability for neighborhood residents or patrons of commercial establishments.

MM 4.14-10(b) If the campus and the City of Riverside mutually determine that use of off-campus parking by members of the campus population has substantially restricted availability to residents and patrons of commercial establishments, the campus and the City will work cooperatively to implement appropriate measures, which may include, but not be limited to:

(i) Increased enforcement of existing parking regulations,

(ii) Changes in parking regulations (e.g., time restrictions for on-street parking), and

(iii) A permit parking program for affected residential neighborhoods and/or commercial facilities.

MM 4.14-11 If on-campus parking is not available, off-site construction worker parking shall be provided with shuttle service to the remote parking location

MM 4.14-13 As part of the Multi-modal Transportation Program, the UCR 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.

Utilities

MM 4.15-6(a) UCR will work with the City of Riverside to evaluate the capacity of existing sewer trunk lines serving the campus and estimate the future impact of LRDP implementation on available capacity.

MM 4.15-6(b) If the study of sewer trunk line capacity determines that available capacity would be exceeded, UCR and the City will negotiate payment of fair share of improvements to provide sufficient discharge capacity to meet campus needs. UCR shall contribute its fair share payments and additional required trunk line capacity shall be provided by the City prior to exceedance of sewer trunk line capacity.

2005 LRDP AMENDMENT 2 MITIGATION MEASURES

Air Quality

MM 4.3-1a

For each construction project on the campus, the project contractor will implement Programs and Practices 4.3-2(a) and 4.3-2(b).

In addition, the following PM10 and PM2.5 control measure shall be implemented for each construction project:

- Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the District shall also be visible to ensure compliance.

MM 4.3-1b

For each construction project on the campus, the University shall require that the project include a construction emissions control plan that includes a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used for an aggregate of 40 or more hours during any portion of the construction project. During construction activity, the contractor shall utilize CARB certified equipment or better for all on-site construction equipment according to the following schedule:

- January 1, 2011 to December 31, 2011: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier 2 off-road emissions standards. In addition, all construction equipment shall be outfitted with the BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 2 or Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

- January 1, 2012 to December 31, 2014: All off-road diesel-powered construction equipment greater than 50 hp shall meet Tier 3 off-road emissions standards. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

- Post January 1, 2015: All off-road diesel-powered construction equipment greater than 50 hp shall meet the Tier 4 emission standards, where available. In addition, all construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.

- A copy of each unit's certified specification, BACT documentation and CARB or SCAQMD operating permit shall be provided at the time of mobilization of each applicable unit or equipment.

- Encourage construction contractors to apply for AQMD 'SOON" funds. Incentives could be provided for those construction contractors who apply for AQMD "SOON" funds. The "SOON" program provides funds to accelerate clean-up of off-road diesel vehicles, such as heavy duty construction equipment. More information on this program can be found at the following website: http://www.aqmd.gov/tao/implementation/soonprogram.htm

- The contractor shall also implement the following measures during construction:

- Prohibit vehicle and engine idling in excess of 5 minutes and ensure that all off-road equipment is compliant with the California Air Resources Board's (CARB) in-use off-road diesel vehicle regulation and SCAQMD Rule 2449.

- Configure construction parking to minimize traffic interference.

- Provide temporary traffic controls such as a flag person, during all phases of construction to maintain smooth traffic flow.

- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off site.

- Schedule construction activities that affect traffic flow on the arterial system to off-peak hour to the extent practicable.

- Improve traffic flow by signal synchronization, and ensure that all vehicles and equipment will be properly tuned and maintained according to manufacturers' specifications.

- Use diesel-powered construction vehicles and equipment that operate on low-NOx fuel where possible.

- Reroute construction trucks away from congested streets or sensitive receptor areas.

- Maintain and tune all vehicles and equipment according to manufacturers' specifications.

MM 4.3-1c To minimize VOC emissions from the painting/finishing phase, for each construction project on the campus, the project contractor will implement the following VOC control measures:

- Construct or build with materials that do not require painting, or use pre-painted construction materials.
- If appropriate materials are not available or are cost-prohibitive, use low VOC content materials more stringent than required under SCAQMD Rule 113.

MM 4.3-2a The Campus will:

- Implement a subsidized vanpool program.
- Implement staggered or compressed work schedules to reduce vehicular traffic.
- Use alternative fuel Shuttle buses to reduce intra-campus vehicle trips.
- Provide Shuttle service to major off-campus activity centers and Metrolink stations.
- Aggressive expansion of the campus TDM program to achieve an AVR of 1.5.
- Expand transit subsidies to encourage use of public transit.
- Implement incentives for telecommuting.
- Convert campus fleet to low-emission, alternative fuel and electric vehicles over time.
- Implement solar or low-emission water heaters.
- Implement an educational program for faculty and staff and distribute information to students and visitors about air pollution problems and solutions.

MM 4.3-2b UCR shall continue to participate in greenhouse gas (GHG) reduction programs such as the American College and University Presidents' Climate Commitment (ACUPCC) and shall adhere to the UC Policy on Sustainable Practices. The measures adopted by UCR are presented in Tables 4.16-9 and 4.16-10 in Section 4.16 Greenhouse Gas Emissions. While these measures are typically targeted at GHG emissions, many act to reduce energy consumption and vehicle use on campus and would consequently also reduce air pollutant emissions from both area and mobile sources. In accordance with the ACUPCC and the UC Policy on Sustainable Practices and through implementation of its Climate Action Plan, UCR shall commit to reducing GHG emissions to 1990 levels by 2020, which would require significant reductions (on the order of 70 percent) from these sources in terms of GHG and therefore reductions in other air pollutants as well.

MM 4.3-6 The University will implement Mitigation Measure 4.3-1, which is designed to reduce construction emissions. It will also implement Mitigation Measure 4.3-2b which will reduce air pollutant emissions resulting from traffic and energy consumption during campus operations.

MM 4.3-7 The Campus will implement Mitigation Measure 4.3-2b, which will reduce traffic associated with campus operations.

Noise

MM 4.10-2 The Campus shall notify all academic and residential facilities within 300 feet of approved construction sites of the planned schedule of vibration causing activities so that the occupants and/or researchers can take necessary precautionary measures to avoid negative effects to their activities and/or research.

Public Services

MM 4.12-1 Should the City propose the construction of a new fire station to serve the campus and its surrounding areas, and the analysis of the environmental effects of the fire station project indicate that there would be potentially significant impacts requiring mitigation, the University will pay its proportional share of the cost of the environmental mitigation required for the project.

Traffic and Transportation

MM 4.14-1a Reconfigure the intersection of Parking Lot 1/Campus Drive to add a lane to the eastbound approach that would result in a joint left-turn/through lane with a separate right-turn lane and signalize intersection.

MM 4.14-1b Travel Demand Management. To reduce on- and off-campus vehicle trips and resulting impacts, the University will enhance its Transportation Demand Management (TDM) program. TDM strategies will include measures to increase transit and Shuttle use, encourage alternative transportation modes including bicycle transportation, implement parking policies that reduce demand, and other mechanisms that reduce vehicle trips to and from the campus. The University shall monitor the performance of campus TDM strategies through annual surveys.

MM 4.14-1c Transit Enhancement. To enhance transit systems serving the campus, the University will work cooperatively with the RTA, and other local agencies to coordinate service routes with existing and proposed Shuttle and transit programs.

MM 4.14-1d Sustainability and Monitoring. The University shall review individual projects proposed under the amended 2005 LRDP for consistency with UC sustainable transportation policy and UCR TDM strategies to ensure that bicycle and pedestrian improvements, alternative fuel infrastructure, transit stops, and other

project features that promote alternative transportation are incorporated into each project to the extent feasible.

MM 4.14-1e Campus Traffic Impact Monitoring. The University will conduct traffic counts at key gateway locations on the campus every five years to determine the amount of traffic generated by the campus.

MM 4.14-1f Mitigation Payments. The University's proportional share of the cost of the roadway improvements in Table 4.14-18 is determined by dividing projected LRDP-related trips by the increase in background traffic between existing conditions and 2020. The projected proportional share percentage of each improvement is provided in Table 4.14-18, but the University's actual share will be determined based on actual project trips as established by monitoring under Mitigation Measure 4.14-1e. It is anticipated that at the time that the City proposes an improvement at an affected intersection and requests a proportional share payment, the University's proportional share will be calculated using the following formula:

Campus Proportional Share % of mitigation project = (calculated impact contribution from EIR) * (traffic growth in year X/projected LRDP traffic growth in 2020)

Where:

X = the year the mitigation project is constructed

Traffic growth in year X = gateway counts in year X -gateway counts in LRDP baseline year 2010

Projected LRDP traffic growth in 2020 = 2020 LRDP gateway forecasts from EIR - gateway counts in LRDP baseline year (2010)

The University's payment of its proportional share of the cost of the improvements will be made available to the jurisdiction no later than the start of construction of when implementation of the improvement is reasonably certain.

Contributions made by the University that exceed its proportional share of the cost of mitigation or that mitigates more than its impact may be credited towards mitigation by the University of future impacts.

Utilities

MM 4.15-2 Should the City determine that construction of new water treatment facilities or expansion of existing water treatment facilities is required in order to accommodate campus demand, and the analysis of the environmental effects of constructing or expanding these facilities indicate that there would be potentially significant impacts requiring mitigation, the University will pay its proportional share of the cost of the environmental mitigation required for the project.

MM 4.15-3 Should the City determine that construction of new or expanded wastewater treatment facilities is required in order to accommodate campus flows, and the analysis of the environmental effects of constructing or expanding these facilities indicate that there would be potentially significant impacts requiring mitigation, the University will pay its proportional share of the cost of the environmental mitigation required for the project.

MM 4.15-4 Should the City determine that construction of new wastewater conveyance facilities or expansion of existing conveyance facilities on and off campus is required in order to accommodate campus discharges, and the analysis of the environmental effects of constructing or expanding these facilities indicate that there would be potentially significant impacts requiring mitigation, the University will pay its proportional share of the cost of the environmental mitigation required for the project.

MM 4.15-5 Should the City determine that construction of new storm water facilities or expansion of existing storm water facilities on and off campus is required in order to accommodate campus discharges, and the analysis of the environmental effects of constructing or expanding these facilities indicate that there would be potentially significant impacts requiring mitigation, the University will pay its proportional share of the cost of the environmental mitigation required for the project.

Greenhouse Gas Emissions

MM 4.16-1 All projects developed under the amended 2005 LRDP shall be evaluated for consistency with the GHG reduction policies of the UCR CAP and the UC Policy on Sustainable Practices, as may be updated from time to time by the University. GHG reduction measures, including, but not limited to, those found within the UCR CAP and UC Policy identified in Tables 4.16-9 and 4.16-10 shall be incorporated in all campus projects so that at a minimum an 8 percent reduction in emissions from BAU is achieved. It is expected that the GHG reduction measures in the UCR CAP will be refined from time to time, especially in light of the evolving regulations and as more information becomes available regarding the effectiveness of specific GHG reduction measures. As part of the implementation of the UCR CAP, the Campus will also monitor its progress in reducing GHG emissions to ensure it will attain the established targets

APPENDIX B

Air Quality (CalEEMod) worksheets

UCR Mobility Hub Construction

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	7.00	Acre	7.00	304,920.00	0
General Office Building	0.10	1000sqft	0.00	100.00	2

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Parking lot used for paving work, general office building represents kiosk.

Construction Phase - Building construction consists of installation of kiosk and canopies. Construction activities begin in early 2019 and conclude by spring 2020.

Grading - 7 acre project site. Net import 2030 CY.

Demolition - Estimated 195,000 square foot construction area. Majority of demolition is of existing pavement.

Vehicle Trips - According to traffic study, no anticipated change to trips. Will not contribute to population growth on campus or increase in traffic.

Construction Off-road Equipment Mitigation - Fugitive Dust mitigation reflects compliance with SCAQMD Rule 403.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	60.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	3/23/2020	1/30/2020
tblConstructionPhase	PhaseEndDate	1/27/2020	10/10/2019
tblConstructionPhase	PhaseEndDate	1/28/2019	3/28/2019
tblConstructionPhase	PhaseEndDate	3/11/2019	7/18/2019
tblConstructionPhase	PhaseEndDate	2/24/2020	1/2/2020
tblConstructionPhase	PhaseEndDate	2/11/2019	4/25/2019
tblConstructionPhase	PhaseStartDate	2/25/2020	1/3/2020
tblConstructionPhase	PhaseStartDate	3/12/2019	7/19/2019
tblConstructionPhase	PhaseStartDate	1/1/2019	2/1/2019
tblConstructionPhase	PhaseStartDate	2/12/2019	4/26/2019
tblConstructionPhase	PhaseStartDate	1/28/2020	10/11/2019
tblConstructionPhase	PhaseStartDate	1/29/2019	3/29/2019
tblGrading	AcresOfGrading	30.00	7.00
tblGrading	MaterialImported	0.00	2,030.00
tblLandUse	Population	0.00	2.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	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					
2019	0.3471	3.4376	2.3416	4.8800e-003	0.5383	0.1665	0.7048	0.2343	0.1544	0.3887	0.0000	441.6186	441.6186	0.0986	0.0000	444.0831
2020	0.0482	0.0318	0.0424	8.0000e-005	3.0200e-003	1.8800e-003	4.9000e-003	8.0000e-004	1.8200e-003	2.6200e-003	0.0000	7.0850	7.0850	9.1000e-004	0.0000	7.1077
Maximum	**0.3471**	**3.4376**	**2.3416**	**4.8800e-003**	**0.5383**	**0.1665**	**0.7048**	**0.2343**	**0.1544**	**0.3887**	**0.0000**	**441.6186**	**441.6186**	**0.0986**	**0.0000**	**444.0831**

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					
2019	0.3471	3.4376	2.3416	4.8800e-003	0.2531	0.1665	0.4197	0.1024	0.1544	0.2568	0.0000	441.6182	441.6182	0.0986	0.0000	444.0828
2020	0.0482	0.0318	0.0424	8.0000e-005	3.0200e-003	1.8800e-003	4.9000e-003	8.0000e-004	1.8200e-003	2.6200e-003	0.0000	7.0850	7.0850	9.1000e-004	0.0000	7.1077
Maximum	**0.3471**	**3.4376**	**2.3416**	**4.8800e-003**	**0.2531**	**0.1665**	**0.4197**	**0.1024**	**0.1544**	**0.2568**	**0.0000**	**441.6182**	**441.6182**	**0.0986**	**0.0000**	**444.0828**

	ROG	NOx	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**	**52.68**	**0.00**	**40.18**	**56.12**	**0.00**	**33.71**	**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	1-1-2019	3-31-2019	0.9593	0.9593
2	4-1-2019	6-30-2019	1.2053	1.2053
3	7-1-2019	9-30-2019	1.0112	1.0112
4	10-1-2019	12-31-2019	0.6106	0.6106
5	1-1-2020	3-31-2020	0.0755	0.0755
		Highest	1.2053	1.2053

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	0.0244	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Energy	0.0000	2.0000e-005	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	34.3258	34.3258	1.4200e-003	2.9000e-004	34.4486
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0183	0.0000	0.0183	1.0800e-003	0.0000	0.0453
Water						0.0000	0.0000		0.0000	0.0000	5.6400e-003	0.1123	0.1179	5.8000e-004	1.0000e-005	0.1369
Total	**0.0244**	**2.0000e-005**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0239**	**34.4382**	**34.4622**	**3.0800e-003**	**3.0000e-004**	**34.6310**

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	0.0244	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Energy	0.0000	2.0000e-005	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	34.3258	34.3258	1.4200e-003	2.9000e-004	34.4486
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0183	0.0000	0.0183	1.0800e-003	0.0000	0.0453
Water						0.0000	0.0000		0.0000	0.0000	5.6400e-003	0.1123	0.1179	5.8000e-004	1.0000e-005	0.1369
Total	**0.0244**	**2.0000e-005**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0239**	**34.4382**	**34.4622**	**3.0800e-003**	**3.0000e-004**	**34.6310**

	ROG	NOx	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

UCR Mobility Hub Construction - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	2/1/2019	3/28/2019	5	40	
2	Site Preparation	Site Preparation	3/29/2019	4/25/2019	5	20	
3	Grading	Grading	4/26/2019	7/18/2019	5	60	
4	Building Construction	Building Construction	7/19/2019	10/10/2019	5	60	
5	Paving	Paving	10/11/2019	1/2/2020	5	60	
6	Architectural Coating	Architectural Coating	1/3/2020	1/30/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7

Acres of Paving: 7

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150; Non-Residential Outdoor: 50; Striped Parking Area: 18,295 (Architectural Coating – sqft)

OffRoad Equipment

UCR Mobility Hub Construction - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
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
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

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	887.00	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	6	15.00	0.00	254.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	128.00	50.00	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	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

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					0.0966	0.0000	0.0966	0.0146	0.0000	0.0146	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0703	0.7157	0.4412	7.8000e-004		0.0359	0.0359		0.0334	0.0334	0.0000	69.2527	69.2527	0.0193	0.0000	69.7343
Total	**0.0703**	**0.7157**	**0.4412**	**7.8000e-004**	**0.0966**	**0.0359**	**0.1325**	**0.0146**	**0.0334**	**0.0480**	**0.0000**	**69.2527**	**69.2527**	**0.0193**	**0.0000**	**69.7343**

3.2 Demolition - 2019

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	2.5500e-003	0.1162	0.0147	3.4000e-004	7.6500e-003	4.1000e-004	8.0600e-003	2.1000e-003	3.9000e-004	2.4900e-003	0.0000	32.4884	32.4884	2.1200e-003	0.0000	32.5415
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	1.4900e-003	1.0900e-003	0.0114	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.8488	2.8488	8.0000e-005	0.0000	2.8508
Total	**4.0400e-003**	**0.1172**	**0.0260**	**3.7000e-004**	**0.0110**	**4.3000e-004**	**0.0114**	**2.9800e-003**	**4.1000e-004**	**3.3800e-003**	**0.0000**	**35.3372**	**35.3372**	**2.2000e-003**	**0.0000**	**35.3922**

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					0.0369	0.0000	0.0369	5.5900e-003	0.0000	5.5900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0703	0.7157	0.4412	7.8000e-004		0.0359	0.0359		0.0334	0.0334	0.0000	69.2526	69.2526	0.0193	0.0000	69.7342
Total	**0.0703**	**0.7157**	**0.4412**	**7.8000e-004**	**0.0369**	**0.0359**	**0.0728**	**5.5900e-003**	**0.0334**	**0.0390**	**0.0000**	**69.2526**	**69.2526**	**0.0193**	**0.0000**	**69.7342**

3.2 Demolition - 2019

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	2.5500e-003	0.1162	0.0147	3.4000e-004	7.6500e-003	4.1000e-004	8.0600e-003	2.1000e-003	3.9000e-004	2.4900e-003	0.0000	32.4884	32.4884	2.1200e-003	0.0000	32.5415
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	1.4900e-003	1.0900e-003	0.0114	3.0000e-005	3.3000e-003	2.0000e-005	3.3200e-003	8.8000e-004	2.0000e-005	8.9000e-004	0.0000	2.8488	2.8488	8.0000e-005	0.0000	2.8508
Total	**4.0400e-003**	**0.1172**	**0.0260**	**3.7000e-004**	**0.0110**	**4.3000e-004**	**0.0114**	**2.9800e-003**	**4.1000e-004**	**3.3800e-003**	**0.0000**	**35.3372**	**35.3372**	**2.2000e-003**	**0.0000**	**35.3922**

3.3 Site Preparation - 2019

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					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0434	0.4557	0.2206	3.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	34.1687	34.1687	0.0108	0.0000	34.4390
Total	**0.0434**	**0.4557**	**0.2206**	**3.8000e-004**	**0.1807**	**0.0239**	**0.2046**	**0.0993**	**0.0220**	**0.1213**	**0.0000**	**34.1687**	**34.1687**	**0.0108**	**0.0000**	**34.4390**

3.3 Site Preparation - 2019

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	8.9000e-004	6.5000e-004	6.8300e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.7093	1.7093	5.0000e-005	0.0000	1.7105
Total	**8.9000e-004**	**6.5000e-004**	**6.8300e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7093**	**1.7093**	**5.0000e-005**	**0.0000**	**1.7105**

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					0.0691	0.0000	0.0691	0.0380	0.0000	0.0380	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0434	0.4557	0.2206	3.8000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	34.1687	34.1687	0.0108	0.0000	34.4389
Total	**0.0434**	**0.4557**	**0.2206**	**3.8000e-004**	**0.0691**	**0.0239**	**0.0930**	**0.0380**	**0.0220**	**0.0600**	**0.0000**	**34.1687**	**34.1687**	**0.0108**	**0.0000**	**34.4389**

3.3 Site Preparation - 2019

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	8.9000e-004	6.5000e-004	6.8300e-003	2.0000e-005	1.9800e-003	1.0000e-005	1.9900e-003	5.3000e-004	1.0000e-005	5.4000e-004	0.0000	1.7093	1.7093	5.0000e-005	0.0000	1.7105
Total	**8.9000e-004**	**6.5000e-004**	**6.8300e-003**	**2.0000e-005**	**1.9800e-003**	**1.0000e-005**	**1.9900e-003**	**5.3000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7093**	**1.7093**	**5.0000e-005**	**0.0000**	**1.7105**

3.4 Grading - 2019

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					0.1845	0.0000	0.1845	0.0997	0.0000	0.0997	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0774	0.8504	0.4888	8.9000e-004		0.0419	0.0419		0.0386	0.0386	0.0000	79.9268	79.9268	0.0253	0.0000	80.5590
Total	**0.0774**	**0.8504**	**0.4888**	**8.9000e-004**	**0.1845**	**0.0419**	**0.2264**	**0.0997**	**0.0386**	**0.1383**	**0.0000**	**79.9268**	**79.9268**	**0.0253**	**0.0000**	**80.5590**

3.4 Grading - 2019

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	7.3000e-004	0.0333	4.2000e-003	1.0000e-004	2.1900e-003	1.2000e-004	2.3100e-003	6.0000e-004	1.1000e-004	7.1000e-004	0.0000	9.3033	9.3033	6.1000e-004	0.0000	9.3185
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	2.2400e-003	1.6300e-003	0.0171	5.0000e-005	4.9500e-003	3.0000e-005	4.9800e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.2732	4.2732	1.2000e-004	0.0000	4.2762
Total	**2.9700e-003**	**0.0349**	**0.0213**	**1.5000e-004**	**7.1400e-003**	**1.5000e-004**	**7.2900e-003**	**1.9100e-003**	**1.4000e-004**	**2.0500e-003**	**0.0000**	**13.5766**	**13.5766**	**7.3000e-004**	**0.0000**	**13.5947**

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					0.0706	0.0000	0.0706	0.0382	0.0000	0.0382	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0774	0.8504	0.4888	8.9000e-004		0.0419	0.0419		0.0386	0.0386	0.0000	79.9267	79.9267	0.0253	0.0000	80.5589
Total	**0.0774**	**0.8504**	**0.4888**	**8.9000e-004**	**0.0706**	**0.0419**	**0.1125**	**0.0382**	**0.0386**	**0.0767**	**0.0000**	**79.9267**	**79.9267**	**0.0253**	**0.0000**	**80.5589**

3.4 Grading - 2019

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	7.3000e-004	0.0333	4.2000e-003	1.0000e-004	2.1900e-003	1.2000e-004	2.3100e-003	6.0000e-004	1.1000e-004	7.1000e-004	0.0000	9.3033	9.3033	6.1000e-004	0.0000	9.3185
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	2.2400e-003	1.6300e-003	0.0171	5.0000e-005	4.9500e-003	3.0000e-005	4.9800e-003	1.3100e-003	3.0000e-005	1.3400e-003	0.0000	4.2732	4.2732	1.2000e-004	0.0000	4.2762
Total	**2.9700e-003**	**0.0349**	**0.0213**	**1.5000e-004**	**7.1400e-003**	**1.5000e-004**	**7.2900e-003**	**1.9100e-003**	**1.4000e-004**	**2.0500e-003**	**0.0000**	**13.5766**	**13.5766**	**7.3000e-004**	**0.0000**	**13.5947**

3.5 Building Construction - 2019

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	0.0708	0.6324	0.5149	8.1000e-004		0.0387	0.0387		0.0364	0.0364	0.0000	70.5313	70.5313	0.0172	0.0000	70.9608
Total	**0.0708**	**0.6324**	**0.5149**	**8.1000e-004**		**0.0387**	**0.0387**		**0.0364**	**0.0364**	**0.0000**	**70.5313**	**70.5313**	**0.0172**	**0.0000**	**70.9608**

3.5 Building Construction - 2019

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	5.0800e-003	0.1731	0.0345	3.9000e-004	9.4700e-003	1.3000e-003	0.0108	2.7300e-003	1.2500e-003	3.9800e-003	0.0000	37.1424	37.1424	3.1600e-003	0.0000	37.2215
Worker	0.0191	0.0139	0.1457	4.0000e-004	0.0422	2.6000e-004	0.0425	0.0112	2.4000e-004	0.0115	0.0000	36.4650	36.4650	1.0000e-003	0.0000	36.4899
Total	**0.0242**	**0.1870**	**0.1802**	**7.9000e-004**	**0.0517**	**1.5600e-003**	**0.0533**	**0.0139**	**1.4900e-003**	**0.0154**	**0.0000**	**73.6073**	**73.6073**	**4.1600e-003**	**0.0000**	**73.7114**

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	0.0708	0.6324	0.5149	8.1000e-004		0.0387	0.0387		0.0364	0.0364	0.0000	70.5312	70.5312	0.0172	0.0000	70.9607
Total	**0.0708**	**0.6324**	**0.5149**	**8.1000e-004**		**0.0387**	**0.0387**		**0.0364**	**0.0364**	**0.0000**	**70.5312**	**70.5312**	**0.0172**	**0.0000**	**70.9607**

3.5 Building Construction - 2019

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	5.0800e-003	0.1731	0.0345	3.9000e-004	9.4700e-003	1.3000e-003	0.0108	2.7300e-003	1.2500e-003	3.9800e-003	0.0000	37.1424	37.1424	3.1600e-003	0.0000	37.2215
Worker	0.0191	0.0139	0.1457	4.0000e-004	0.0422	2.6000e-004	0.0425	0.0112	2.4000e-004	0.0115	0.0000	36.4650	36.4650	1.0000e-003	0.0000	36.4899
Total	**0.0242**	**0.1870**	**0.1802**	**7.9000e-004**	**0.0517**	**1.5600e-003**	**0.0533**	**0.0139**	**1.4900e-003**	**0.0154**	**0.0000**	**73.6073**	**73.6073**	**4.1600e-003**	**0.0000**	**73.7114**

3.6 Paving - 2019

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	0.0422	0.4421	0.4253	6.6000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	59.3780	59.3780	0.0188	0.0000	59.8477
Paving	8.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0510**	**0.4421**	**0.4253**	**6.6000e-004**		**0.0239**	**0.0239**		**0.0220**	**0.0220**	**0.0000**	**59.3780**	**59.3780**	**0.0188**	**0.0000**	**59.8477**

3.6 Paving - 2019

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	2.1600e-003	1.5700e-003	0.0165	5.0000e-005	4.7800e-003	3.0000e-005	4.8100e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.1308	4.1308	1.1000e-004	0.0000	4.1336
Total	**2.1600e-003**	**1.5700e-003**	**0.0165**	**5.0000e-005**	**4.7800e-003**	**3.0000e-005**	**4.8100e-003**	**1.2700e-003**	**3.0000e-005**	**1.3000e-003**	**0.0000**	**4.1308**	**4.1308**	**1.1000e-004**	**0.0000**	**4.1336**

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	0.0422	0.4421	0.4253	6.6000e-004		0.0239	0.0239		0.0220	0.0220	0.0000	59.3780	59.3780	0.0188	0.0000	59.8476
Paving	8.8600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0510**	**0.4421**	**0.4253**	**6.6000e-004**		**0.0239**	**0.0239**		**0.0220**	**0.0220**	**0.0000**	**59.3780**	**59.3780**	**0.0188**	**0.0000**	**59.8476**

3.6 Paving - 2019

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	2.1600e-003	1.5700e-003	0.0165	5.0000e-005	4.7800e-003	3.0000e-005	4.8100e-003	1.2700e-003	3.0000e-005	1.3000e-003	0.0000	4.1308	4.1308	1.1000e-004	0.0000	4.1336
Total	**2.1600e-003**	**1.5700e-003**	**0.0165**	**5.0000e-005**	**4.7800e-003**	**3.0000e-005**	**4.8100e-003**	**1.2700e-003**	**3.0000e-005**	**1.3000e-003**	**0.0000**	**4.1308**	**4.1308**	**1.1000e-004**	**0.0000**	**4.1336**

3.6 Paving - 2020

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	1.3600e-003	0.0141	0.0147	2.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.0028	2.0028	6.5000e-004	0.0000	2.0190
Paving	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6700e-003**	**0.0141**	**0.0147**	**2.0000e-005**		**7.5000e-004**	**7.5000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.0028**	**2.0028**	**6.5000e-004**	**0.0000**	**2.0190**

3.6 Paving - 2020

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	7.0000e-005	5.0000e-005	5.2000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1379	0.1379	0.0000	0.0000	0.1380
Total	**7.0000e-005**	**5.0000e-005**	**5.2000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1379**	**0.1379**	**0.0000**	**0.0000**	**0.1380**

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	1.3600e-003	0.0141	0.0147	2.0000e-005		7.5000e-004	7.5000e-004		6.9000e-004	6.9000e-004	0.0000	2.0028	2.0028	6.5000e-004	0.0000	2.0190
Paving	3.1000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.6700e-003**	**0.0141**	**0.0147**	**2.0000e-005**		**7.5000e-004**	**7.5000e-004**		**6.9000e-004**	**6.9000e-004**	**0.0000**	**2.0028**	**2.0028**	**6.5000e-004**	**0.0000**	**2.0190**

3.6 Paving - 2020

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	7.0000e-005	5.0000e-005	5.2000e-004	0.0000	1.6000e-004	0.0000	1.7000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1379	0.1379	0.0000	0.0000	0.1380
Total	**7.0000e-005**	**5.0000e-005**	**5.2000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1379**	**0.1379**	**0.0000**	**0.0000**	**0.1380**

3.7 Architectural Coating - 2020

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	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	**0.0453**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**2.5533**	**2.5533**	**2.0000e-004**	**0.0000**	**2.5582**

3.7 Architectural Coating - 2020

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	1.1900e-003	8.4000e-004	8.9400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.3909	2.3909	6.0000e-005	0.0000	2.3924
Total	**1.1900e-003**	**8.4000e-004**	**8.9400e-003**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.3909**	**2.3909**	**6.0000e-005**	**0.0000**	**2.3924**

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	0.0429					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4200e-003	0.0168	0.0183	3.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003	0.0000	2.5533	2.5533	2.0000e-004	0.0000	2.5582
Total	**0.0453**	**0.0168**	**0.0183**	**3.0000e-005**		**1.1100e-003**	**1.1100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**2.5533**	**2.5533**	**2.0000e-004**	**0.0000**	**2.5582**

3.7 Architectural Coating - 2020

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	1.1900e-003	8.4000e-004	8.9400e-003	3.0000e-005	2.8600e-003	2.0000e-005	2.8800e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.3909	2.3909	6.0000e-005	0.0000	2.3924
Total	**1.1900e-003**	**8.4000e-004**	**8.9400e-003**	**3.0000e-005**	**2.8600e-003**	**2.0000e-005**	**2.8800e-003**	**7.6000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.3909**	**2.3909**	**6.0000e-005**	**0.0000**	**2.3924**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
General Office Building	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

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	34.3072	34.3072	1.4200e-003	2.9000e-004	34.4300
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	34.3072	34.3072	1.4200e-003	2.9000e-004	34.4300
NaturalGas Mitigated	0.0000	2.0000e-005	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0185	0.0185	0.0000	0.0000	0.0186
NaturalGas Unmitigated	0.0000	2.0000e-005	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0185	0.0185	0.0000	0.0000	0.0186

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					
General Office Building	347	0.0000	2.0000e-005	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0185	0.0185	0.0000	0.0000	0.0186
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0185**	**0.0185**	**0.0000**	**0.0000**	**0.0186**

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					
General Office Building	347	0.0000	2.0000e-005	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0185	0.0185	0.0000	0.0000	0.0186
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**2.0000e-005**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0185**	**0.0185**	**0.0000**	**0.0000**	**0.0186**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	952	0.3033	1.0000e-005	0.0000	0.3044
Parking Lot	106722	34.0039	1.4000e-003	2.9000e-004	34.1256
Total		**34.3073**	**1.4100e-003**	**2.9000e-004**	**34.4300**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	952	0.3033	1.0000e-005	0.0000	0.3044
Parking Lot	106722	34.0039	1.4000e-003	2.9000e-004	34.1256
Total		**34.3073**	**1.4100e-003**	**2.9000e-004**	**34.4300**

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	0.0244	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Unmitigated	0.0244	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004

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	4.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Total	**0.0244**	**0.0000**	**9.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0000**	**1.9000e-004**

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	4.2900e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	9.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.8000e-004	1.8000e-004	0.0000	0.0000	1.9000e-004
Total	**0.0244**	**0.0000**	**9.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0000**	**1.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.1179	5.8000e-004	1.0000e-005	0.1369
Unmitigated	0.1179	5.8000e-004	1.0000e-005	0.1369

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.0177734 / 0.0108934	0.1179	5.8000e-004	1.0000e-005	0.1369
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.1179**	**5.8000e-004**	**1.0000e-005**	**0.1369**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.0177734 / 0.0108934	0.1179	5.8000e-004	1.0000e-005	0.1369
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.1179**	**5.8000e-004**	**1.0000e-005**	**0.1369**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0183	1.0800e-003	0.0000	0.0453
Unmitigated	0.0183	1.0800e-003	0.0000	0.0453

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.09	0.0183	1.0800e-003	0.0000	0.0453
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0183**	**1.0800e-003**	**0.0000**	**0.0453**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.09	0.0183	1.0800e-003	0.0000	0.0453
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0183**	**1.0800e-003**	**0.0000**	**0.0453**

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

UCR Mobility Hub Construction

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	7.00	Acre	7.00	304,920.00	0
General Office Building	0.10	1000sqft	0.00	100.00	2

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Parking lot used for paving work, general office building represents kiosk.

Construction Phase - Building construction consists of installation of kiosk and canopies. Construction activities begin in early 2019 and conclude by spring 2020.

Grading - 7 acre project site. Net import 2030 CY.

Demolition - Estimated 195,000 square foot construction area. Majority of demolition is of existing pavement.

Vehicle Trips - According to traffic study, no anticipated change to trips. Will not contribute to population growth on campus or increase in traffic.

Construction Off-road Equipment Mitigation - Fugitive Dust mitigation reflects compliance with SCAQMD Rule 403.

UCR Mobility Hub Construction - Riverside-South Coast County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	230.00	60.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	20.00	60.00
tblConstructionPhase	NumDays	10.00	20.00
tblConstructionPhase	PhaseEndDate	3/23/2020	1/30/2020
tblConstructionPhase	PhaseEndDate	1/27/2020	10/10/2019
tblConstructionPhase	PhaseEndDate	1/28/2019	3/28/2019
tblConstructionPhase	PhaseEndDate	3/11/2019	7/18/2019
tblConstructionPhase	PhaseEndDate	2/24/2020	1/2/2020
tblConstructionPhase	PhaseEndDate	2/11/2019	4/25/2019
tblConstructionPhase	PhaseStartDate	2/25/2020	1/3/2020
tblConstructionPhase	PhaseStartDate	3/12/2019	7/19/2019
tblConstructionPhase	PhaseStartDate	1/1/2019	2/1/2019
tblConstructionPhase	PhaseStartDate	2/12/2019	4/26/2019
tblConstructionPhase	PhaseStartDate	1/28/2020	10/11/2019
tblConstructionPhase	PhaseStartDate	1/29/2019	3/29/2019
tblGrading	AcresOfGrading	30.00	7.00
tblGrading	MaterialImported	0.00	2,030.00
tblLandUse	Population	0.00	2.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	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					
2019	4.4341	45.6335	23.9169	0.0576	18.2675	2.3916	20.6591	9.9840	2.2003	12.1843	0.0000	5,796.9894	5,796.9894	1.1974	0.0000	5,826.4651
2020	4.6607	14.1107	15.2569	0.0245	0.2906	0.7538	0.9215	0.0771	0.6935	0.7380	0.0000	2,372.9726	2,372.9726	0.7183	0.0000	2,390.9292
Maximum	**4.6607**	**45.6335**	**23.9169**	**0.0576**	**18.2675**	**2.3916**	**20.6591**	**9.9840**	**2.2003**	**12.1843**	**0.0000**	**5,796.9894**	**5,796.9894**	**1.1974**	**0.0000**	**5,826.4651**

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					
2019	4.4341	45.6335	23.9169	0.0576	7.1115	2.3916	9.5031	3.8519	2.2003	6.0521	0.0000	5,796.9894	5,796.9894	1.1974	0.0000	5,826.4651
2020	4.6607	14.1107	15.2569	0.0245	0.2906	0.7538	0.9215	0.0771	0.6935	0.7380	0.0000	2,372.9726	2,372.9726	0.7183	0.0000	2,390.9292
Maximum	**4.6607**	**45.6335**	**23.9169**	**0.0576**	**7.1115**	**2.3916**	**9.5031**	**3.8519**	**2.2003**	**6.0521**	**0.0000**	**5,796.9894**	**5,796.9894**	**1.1974**	**0.0000**	**5,826.4651**

	ROG	NOx	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**	**60.11**	**0.00**	**51.69**	**60.95**	**0.00**	**47.45**	**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	0.1335	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.5500e-003	1.5500e-003	0.0000		1.6600e-003
Energy	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1119	0.1119	0.0000	0.0000	0.1125
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1336**	**1.0000e-004**	**8.1000e-004**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**0.1134**	**0.1134**	**0.0000**	**0.0000**	**0.1142**

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	0.1335	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.5500e-003	1.5500e-003	0.0000		1.6600e-003
Energy	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1119	0.1119	0.0000	0.0000	0.1125
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.1336**	**1.0000e-004**	**8.1000e-004**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**		**0.1134**	**0.1134**	**0.0000**	**0.0000**	**0.1142**

	ROG	NOx	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	2/1/2019	3/28/2019	5	40	
2	Site Preparation	Site Preparation	3/29/2019	4/25/2019	5	20	
3	Grading	Grading	4/26/2019	7/18/2019	5	60	
4	Building Construction	Building Construction	7/19/2019	10/10/2019	5	60	
5	Paving	Paving	10/11/2019	1/2/2020	5	60	
6	Architectural Coating	Architectural Coating	1/3/2020	1/30/2020	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 7

Acres of Paving: 7

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 150; Non-Residential Outdoor: 50; Striped Parking Area: 18,295 (Architectural Coating – sqft)

OffRoad Equipment

UCR Mobility Hub Construction - Riverside-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Excavators	3	8.00	158	0.38
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
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
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Building Construction	Welders	1	8.00	46	0.45

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	887.00	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	6	15.00	0.00	254.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	128.00	50.00	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	26.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2019

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					4.8283	0.0000	4.8283	0.7311	0.0000	0.7311			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697		3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**4.8283**	**1.7949**	**6.6232**	**0.7311**	**1.6697**	**2.4007**		**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	0.1246	5.6648	0.6812	0.0171	0.3880	0.0205	0.4084	0.1064	0.0196	0.1259		1,809.4617	1,809.4617	0.1124		1,812.2722
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	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.2072**	**5.7155**	**1.3476**	**0.0188**	**0.5556**	**0.0215**	**0.5771**	**0.1508**	**0.0205**	**0.1714**		**1,980.0901**	**1,980.0901**	**0.1172**		**1,983.0200**

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					1.8468	0.0000	1.8468	0.2796	0.0000	0.2796			0.0000			0.0000
Off-Road	3.5134	35.7830	22.0600	0.0388		1.7949	1.7949		1.6697	1.6697	0.0000	3,816.8994	3,816.8994	1.0618		3,843.4451
Total	**3.5134**	**35.7830**	**22.0600**	**0.0388**	**1.8468**	**1.7949**	**3.6417**	**0.2796**	**1.6697**	**1.9493**	**0.0000**	**3,816.8994**	**3,816.8994**	**1.0618**		**3,843.4451**

3.2 Demolition - 2019

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	0.1246	5.6648	0.6812	0.0171	0.3880	0.0205	0.4084	0.1064	0.0196	0.1259		1,809.4617	1,809.4617	0.1124		1,812.2722
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	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.2072**	**5.7155**	**1.3476**	**0.0188**	**0.5556**	**0.0215**	**0.5771**	**0.1508**	**0.0205**	**0.1714**		**1,980.0901**	**1,980.0901**	**0.1172**		**1,983.0200**

3.3 Site Preparation - 2019

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	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991		3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**18.0663**	**2.3904**	**20.4566**	**9.9307**	**2.1991**	**12.1298**		**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

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	0.0991	0.0608	0.7997	2.0600e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		204.7540	204.7540	5.7300e-003		204.8973
Total	**0.0991**	**0.0608**	**0.7997**	**2.0600e-003**	**0.2012**	**1.2400e-003**	**0.2024**	**0.0534**	**1.1400e-003**	**0.0545**		**204.7540**	**204.7540**	**5.7300e-003**		**204.8973**

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					6.9103	0.0000	6.9103	3.7985	0.0000	3.7985			0.0000			0.0000
Off-Road	4.3350	45.5727	22.0630	0.0380		2.3904	2.3904		2.1991	2.1991	0.0000	3,766.4529	3,766.4529	1.1917		3,796.2445
Total	**4.3350**	**45.5727**	**22.0630**	**0.0380**	**6.9103**	**2.3904**	**9.3007**	**3.7985**	**2.1991**	**5.9976**	**0.0000**	**3,766.4529**	**3,766.4529**	**1.1917**		**3,796.2445**

3.3 Site Preparation - 2019

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	0.0991	0.0608	0.7997	2.0600e-003	0.2012	1.2400e-003	0.2024	0.0534	1.1400e-003	0.0545		204.7540	204.7540	5.7300e-003		204.8973
Total	**0.0991**	**0.0608**	**0.7997**	**2.0600e-003**	**0.2012**	**1.2400e-003**	**0.2024**	**0.0534**	**1.1400e-003**	**0.0545**		**204.7540**	**204.7540**	**5.7300e-003**		**204.8973**

3.4 Grading - 2019

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					6.1501	0.0000	6.1501	3.3242	0.0000	3.3242			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856		2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**6.1501**	**1.3974**	**7.5475**	**3.3242**	**1.2856**	**4.6098**		**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

3.4 Grading - 2019

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	0.0238	1.0815	0.1301	3.2600e-003	0.0741	3.9100e-003	0.0780	0.0203	3.7400e-003	0.0240		345.4365	345.4365	0.0215		345.9731
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	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.1064**	**1.1321**	**0.7964**	**4.9700e-003**	**0.2417**	**4.9400e-003**	**0.2467**	**0.0648**	**4.6900e-003**	**0.0695**		**516.0649**	**516.0649**	**0.0262**		**516.7208**

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					2.3524	0.0000	2.3524	1.2715	0.0000	1.2715			0.0000			0.0000
Off-Road	2.5805	28.3480	16.2934	0.0297		1.3974	1.3974		1.2856	1.2856	0.0000	2,936.8068	2,936.8068	0.9292		2,960.0361
Total	**2.5805**	**28.3480**	**16.2934**	**0.0297**	**2.3524**	**1.3974**	**3.7498**	**1.2715**	**1.2856**	**2.5571**	**0.0000**	**2,936.8068**	**2,936.8068**	**0.9292**		**2,960.0361**

3.4 Grading - 2019

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	0.0238	1.0815	0.1301	3.2600e-003	0.0741	3.9100e-003	0.0780	0.0203	3.7400e-003	0.0240		345.4365	345.4365	0.0215		345.9731
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	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.1064**	**1.1321**	**0.7964**	**4.9700e-003**	**0.2417**	**4.9400e-003**	**0.2467**	**0.0648**	**4.6900e-003**	**0.0695**		**516.0649**	**516.0649**	**0.0262**		**516.7208**

3.5 Building Construction - 2019

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	0.1665	5.6917	1.0666	0.0132	0.3202	0.0432	0.3634	0.0922	0.0414	0.1336		1,386.5131	1,386.5131	0.1109		1,389.2866
Worker	0.7048	0.4325	5.6865	0.0146	1.4307	8.8300e-003	1.4396	0.3794	8.1300e-003	0.3876		1,456.0286	1,456.0286	0.0408		1,457.0476
Total	**0.8713**	**6.1242**	**6.7531**	**0.0278**	**1.7509**	**0.0521**	**1.8030**	**0.4716**	**0.0495**	**0.5211**		**2,842.5416**	**2,842.5416**	**0.1517**		**2,846.3342**

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	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.5 Building Construction - 2019

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	0.1665	5.6917	1.0666	0.0132	0.3202	0.0432	0.3634	0.0922	0.0414	0.1336		1,386.5131	1,386.5131	0.1109		1,389.2866
Worker	0.7048	0.4325	5.6865	0.0146	1.4307	8.8300e-003	1.4396	0.3794	8.1300e-003	0.3876		1,456.0286	1,456.0286	0.0408		1,457.0476
Total	**0.8713**	**6.1242**	**6.7531**	**0.0278**	**1.7509**	**0.0521**	**1.8030**	**0.4716**	**0.0495**	**0.5211**		**2,842.5416**	**2,842.5416**	**0.1517**		**2,846.3342**

3.6 Paving - 2019

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.3057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7601**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.6 Paving - 2019

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	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.0826**	**0.0507**	**0.6664**	**1.7100e-003**	**0.1677**	**1.0300e-003**	**0.1687**	**0.0445**	**9.5000e-004**	**0.0454**		**170.6284**	**170.6284**	**4.7800e-003**		**170.7478**

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	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.3057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7601**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

3.6 Paving - 2019

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	0.0826	0.0507	0.6664	1.7100e-003	0.1677	1.0300e-003	0.1687	0.0445	9.5000e-004	0.0454		170.6284	170.6284	4.7800e-003		170.7478
Total	**0.0826**	**0.0507**	**0.6664**	**1.7100e-003**	**0.1677**	**1.0300e-003**	**0.1687**	**0.0445**	**9.5000e-004**	**0.0454**		**170.6284**	**170.6284**	**4.7800e-003**		**170.7478**

3.6 Paving - 2020

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.3057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6622**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.6 Paving - 2020

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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.0763**	**0.0451**	**0.6048**	**1.6600e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**165.2392**	**165.2392**	**4.2400e-003**		**165.3451**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	0.3057					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6622**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.6 Paving - 2020

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	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.0763**	**0.0451**	**0.6048**	**1.6600e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**165.2392**	**165.2392**	**4.2400e-003**		**165.3451**

3.7 Architectural Coating - 2020

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	4.2862					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**4.5284**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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	0.1323	0.0783	1.0484	2.8800e-003	0.2906	1.7600e-003	0.2924	0.0771	1.6200e-003	0.0787		286.4146	286.4146	7.3400e-003		286.5981
Total	**0.1323**	**0.0783**	**1.0484**	**2.8800e-003**	**0.2906**	**1.7600e-003**	**0.2924**	**0.0771**	**1.6200e-003**	**0.0787**		**286.4146**	**286.4146**	**7.3400e-003**		**286.5981**

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	4.2862					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**4.5284**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.7 Architectural Coating - 2020

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	0.1323	0.0783	1.0484	2.8800e-003	0.2906	1.7600e-003	0.2924	0.0771	1.6200e-003	0.0787		286.4146	286.4146	7.3400e-003		286.5981
Total	**0.1323**	**0.0783**	**1.0484**	**2.8800e-003**	**0.2906**	**1.7600e-003**	**0.2924**	**0.0771**	**1.6200e-003**	**0.0787**		**286.4146**	**286.4146**	**7.3400e-003**		**286.5981**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
General Office Building	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
General Office Building	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

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	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1119	0.1119	0.0000	0.0000	0.1125
NaturalGas Unmitigated	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1119	0.1119	0.0000	0.0000	0.1125

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					
General Office Building	0.950685	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1119	0.1119	0.0000	0.0000	0.1125
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.0000e-005**	**9.0000e-005**	**8.0000e-005**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**0.1119**	**0.1119**	**0.0000**	**0.0000**	**0.1125**

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					
General Office Building	0.000950685	1.0000e-005	9.0000e-005	8.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1119	0.1119	0.0000	0.0000	0.1125
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**1.0000e-005**	**9.0000e-005**	**8.0000e-005**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**0.1119**	**0.1119**	**0.0000**	**0.0000**	**0.1125**

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	0.1335	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.5500e-003	1.5500e-003	0.0000		1.6600e-003
Unmitigated	0.1335	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.5500e-003	1.5500e-003	0.0000		1.6600e-003

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	0.0235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.5500e-003	1.5500e-003	0.0000		1.6600e-003
Total	**0.1335**	**1.0000e-005**	**7.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.5500e-003**	**1.5500e-003**	**0.0000**		**1.6600e-003**

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	0.0235					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.0000e-005	1.0000e-005	7.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.5500e-003	1.5500e-003	0.0000		1.6600e-003
Total	**0.1335**	**1.0000e-005**	**7.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.5500e-003**	**1.5500e-003**	**0.0000**		**1.6600e-003**

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

APPENDIX C

Mobility Hub and Central Campus Linkages Transportation Assessment

FEHR PEERS

MEMORANDUM

Date: July 20, 2018

To: Lynn Kaufman & Shabnam Barati, Impact Sciences, Inc.

From: Kara Hall and & Sarah Brandenberg, Fehr & Peers

Subject: Mobility Hub and Central Campus Linkages Project Transportation Assessment

OC18-0584

This memorandum documents the transportation assessment completed by Fehr & Peers for the proposed University of California, Riverside (UCR) Mobility Hub and Central Campus Linkages Project. The proposed project will create a Mobility Hub providing access to campus for transit, active transportation, and pick-up/drop-off at the University Avenue Campus Gateway, which will be located adjacent to the University Avenue/Canyon Crest Drive intersection. The project will also improve pedestrian circulation along key east-west and north-south alignments through the addition of the North Recreational Mall and South Recreational Mall. A brief summary of the project is provided below followed by an overview of changes to the transit routes, active transportation and roadway network.

Project Description

The proposed project is comprised of two parts, the Mobility Hub and Campus Linkages, and the following section summarizes both of these project features.

Mobility Hub

The proposed Mobility Hub will create an easily accessible transit stop that will allow for the consolidation of transit routes currently serving campus and the new limited-stop bus routes, known as Rapid Link. Access to the Mobility Hub will be provided from University Avenue just east of the existing Canyon Crest Drive intersection. Circulation through the proposed site will be one-direction, controlled by a roundabout with a center median. On one side of the roundabout, closest to the academic buildings, passenger pick-up and drop-off is proposed. The other side of the

roundabout will feature six bus bays (four regular bus bays and two articulated bus bays). The Mobility Hub will also simplify emergency and service access, and bicycle and pedestrian connectivity by creating a central access point to campus.

Central Campus Linkages

The central campus currently lacks direct and continuous pedestrian pathways. The proposed project will extend and enhance connections from the Mobility Hub to the Student Recreation Center and planned future North District by creating the North Recreational Mall, and from the Mobility Hub to the Bourns building through the creation of the South Recreational Mall.

The North Recreational Mall will extend from Linden Street to the north end of Lot 25 and will provide a multi-modal pedestrian and bicycle corridor that will also serve emergency and service vehicles. The Mall will have a pedestrian pathway, separated pedestrian and bicycle sharrows, and parallel parking.

The South Recreational Mall will extend from the end of Lot 25 to the middle of the Bourns building and will feature a new pedestrian and bicycle corridor. The Mall will also create emergency vehicle access that does not currently exist, and will be access controlled. Once constructed, the future Multidisciplinary Research Building service drive will also be accessible using the South Recreational Mall.

In addition to the Mobility Hub and Campus Linkages, a new Local Campus Circulation road is proposed to be added to the Vehicular Circulation System defined in the approved 2005 LRDP. This local road would provide access to the Mobility Hub through a roundabout design at the terminus of University Avenue and Canyon Crest Drive. Public transportation buses, access vans, and private vehicles picking up or dropping off will be the majority of vehicles utilizing this new local roadway.

Traffic Analysis

A Level of Service (LOS) analysis was completed by Psomas as part of the design effort to determine how the preferred Mobility Hub alternative would affect traffic operations at the University Avenue/Canyon Crest Drive intersection. University Avenue serves as the western campus gateway and currently terminates at Canyon Crest Drive. With the implementation of the Mobility Hub, University Avenue will continue to the east to provide access to/from the Mobility Hub. A traffic signal will be construced at the intersection of University Avenue/Canyon Crest Drive and the approaches to the intersection will be widened to accommodate the following lane configurations:

- Two southbound right turn lanes and one southbound left turn lane on Canyon Crest Drive
- Two left turn lanes and one through lane on eastbound University Avenue
- Class II on-street bicycle lanes will be provided on both roadways
- An exclusive signal phase will be assigned to bicyclists and pedestrians (commonly referred to as a scramble phase)

The Mobility Hub is not anticipated to increase the number trips traveling to or from the campus. Rather than an increase in traffic volumes, the main change in traffic patterns near the project area would be a result of the centrally located transit connections and pick-up/drop-off. As current transit routes will be rerouted to stop at the Mobility Hub, the number of buses using the University Avenue/Canyon Crest Drive intersection will increase slightly. No other major changes to traffic volumes or traffic patterns are expected as a result of the Mobility Hub.

Traffic counts used in the operations assessment were collected by Psomas on Wednesday April 18, 2018. These traffic counts were then used to develop future traffic forecasts with the Mobility Hub in operation. Future year traffic volumes representing 2025 were used in the analysis to evaluate LOS and the 95th percentile queue lengths with the proposed project in place. **Table 1** shows the LOS and queue lengths results calculated using the Highway Capacity Manual (HCM) methodologies for the University Avenue/Canyon Crest Drive intersection with the proposed improvements and Mobility Hub in place.

TABLE 1
University Avenue/Canyon Crest Drive Intersection Operations

Scenario	LOS	Delay (seconds)	95th Percentile Queue (feet)	
			EBL[1]	SBR
With Project	D	38.7	179	324

Source: Canyon Crest Drive & University Avenue Alternative Analysis, Psomas, May 2018.
Notes:
1. Distance between Canyon Crest and W. Campus Drive is 200 feet between limit lines.

As shown in **Table 1**, the With Project Alternative was found to achieve acceptable operations and accommodate the 95th percentile queue for both the eastbound left turn and the southbound right turn at the University Avenue/Canyon Crest Drive intersection. This alternative will also

accommodate bicycles and pedestrians with the scramble phase and will cause no right-of-way impact.

Pick Up/Drop Offs

The Mobility Hub will feature a designated area for passenger pick-up/drop-off on the south side of University Avenue. In recent years, ridesharing companies like Uber, Lyft, etc., have become a popular alternative to driving and parking on-site. This trend has been reflected in travel to and from college campuses as faculty, staff and students are using ride-hailing services as an alternative choice for commuting to campus. Without designated areas for pick-up/drop-off to occur, these vehicles can create traffic circulation issues and concerns for riders being dropped off in areas without proper pedestrian facilities.

The proposed Mobility Hub will provide a designated area for drop-offs and pick-ups to occur as opposed to unregulated curb-side locations. The Mobility Hub project will not generate more pick-ups or drop-offs at UCR, but will provide designated facilities allowing the University to control where they occur. By providing a designated space for pick-ups and drop-offs, the Mobility Hub will minimize the number of pick-ups and drop-offs at other locations across campus and alleviate the circulation and pedestrian safety concerns.

Active Transportation

Bicyclists traveling to campus can utilize the Class II on-street bicycle lanes on Canyon Crest Drive and University Avenue. These Class II facilities provide a striped lane for one-way bike travel on University Avenue and Canyon Crest Drive, with the exception of the bicycle lane on the east side of Canyon Crest Drive, which provides two-way travel for bicyclists.

There are currently two pedestrian walkways providing access to the center of campus in the vicinity of the University Avenue/Canyon Crest Drive intersection. The north-south walkway extends directly south from Canyon Crest Drive, and the east-west walkway is located just north of University Avenue. However, the intersection is currently uncontrolled and no crosswalks are provided for pedestrians. Therefore, pedestrians use the signalized intersection of University Avenue/West Campus Drive to cross University Avenue.

The Mobility Hub project is proposing to improve bicycle and pedestrian facilities through the installation of a traffic signal with an exclusive bicycle/pedestrian scramble phase at the University Avenue/Canyon Crest Drive intersection and the North Recreation Mall and South Recreation Mall

on campus. For bicyclists, the Mobility Hub project will add separated bicycle lanes on University Avenue and Canyon Crest Drive. These separated bicycle lanes will feature a buffer from traffic and one-way travel for bicycles. The separated lanes will extend from the Mobility Hub to West Campus Drive on University Avenue on both sides of University Avenue. Separated bicycle lanes with one-way travel will also be provided on Canyon Crest Drive from the Mobility Hub to Bannockburn Village on Canyon Crest Drive. In addition to the exclusive scramble phase that bicyclists could use to cross University Avenue/Canyon Crest Drive, the intersection will feature striping and holding areas for a two-step left turn for cyclists, which will allow cyclists to make left-turns within the bicycle infrastructure, rather than merging with vehicles utilizing the left-turn lane. The Mobility Hub will also provide bicycle parking and a bicycle repair station.

For pedestrians, the Mobility Hub will improve pedestrian access to the campus at University Avenue/Canyon Crest Drive by eliminating the need for pedestrians to travel to adjacent intersections to cross University Avenue or Canyon Crest Drive. In addition, pedestrian access to the planned North Recreation Mall and South Recreation Mall will be provided. The North Recreation Mall will provide a ten-foot tree-lined pedestrian path from the Mobility Hub to Linden Avenue, while the South Recreation Mall will provide access to the Bourns Building.

The bicycle and pedestrian facilities proposed as part of the Mobility Hub project will help promote active transportation as a mode choice when traveling to campus and will improve access to the central campus. The separated bicycle lanes and two-step left-turn lane at the University Avenue/Canyon Crest intersection will also improve rider experience. As rider experience improves, average commuters are more likely to choose to commute using a bicycle rather than driving.

The improved pedestrian facilities, most notably the direct connection to campus at the University Avenue/Canyon Crest Drive intersection, will also promote walking to campus as an alternative mode choice. Improvements to pedestrian facilities are also expected to support an increase in transit ridership, as discussed in the transit assessment below.

Transit Assessment

UCR collaborates with Riverside Transit Authority (RTA) to provide students, faculty, and staff with an option to utilize free public transit to travel to and from campus. Currently, six transit routes serve UCR with stops near the campus at Bannockburn Village, University Village, West Campus Drive, and the Iowa Avenue/University Avenue intersection. The Mobility Hub will feature six full-length bus bays that will serve as the main bus stop for transit routes traveling to and from UCR.

Once the Mobility Hub project is complete, RTA routes serving UCR will be rerouted to stop at the Mobility Hub. The centralized stop for routes serving UCR is expected to promote transit ridership through the addition of a centralized stop and the increased access to transit from the central campus. The pedestrian facilities that will provide access to the Mobility Hub will allow users direct access to transit using the North Campus Mall or Recreational Mall providing access to the main campus and northern part of campus, respectively. Improved access to transit with the Mobility Hub will support an increase in ridership for users that might otherwise drive to campus.

Conclusion

Fehr & Peers has found that the Mobility Hub project is within the scope of development covered in the 2005 LRDP's traffic assessment and no further traffic analysis is required to determine potential traffic impacts associated with the proposed project. As the Mobility Hub will not contribute to additional population growth on campus, there is not expected to be an increase in traffic because of the proposed project. The proposed facilities will support alternative mode choice on campus, creating a reduction in commuter vehicle trips. The designated pick-up and drop-off location will allow UCR to control where people traveling to and from campus are picked-up/dropped-off eliminating traffic circulation issues often caused by pick-ups and drop-offs. The improved bicycle and pedestrian facilities will provide more direct access to campus with improved user experience. These facilities will promote active transportation and help eliminate vehicle trips to campus by encouraging walking and biking. The improved access to transit routes and transit facilities will also promote increases in transit ridership. As the proposed facilities will contribute to converting vehicle trips to alternative transportation trips, and the improvements were found to operate acceptably under 2025 conditions, these findings indicate that the Mobility Hub project is within the LRDP EIR transportation impact analysis.

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City of Riverside
N/S: West Campus Drive
E/W: University Avenue
Weather: Clear

File Name : 01_RIV_W Campus_University AM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Total Volume

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	6	29	0	35	37	0	11	48	0	26	28	54	137
07:15 AM	0	0	0	0	22	30	0	52	37	0	29	66	0	56	52	108	226
07:30 AM	0	0	0	0	26	52	0	78	36	0	44	80	0	92	73	165	323
07:45 AM	0	0	0	0	57	68	0	125	33	0	44	77	0	99	89	188	390
Total	0	0	0	0	111	179	0	290	143	0	128	271	0	273	242	515	1076
08:00 AM	0	0	0	0	41	53	0	94	45	0	50	95	0	88	59	147	336
08:15 AM	0	0	0	0	25	33	0	58	24	0	33	57	0	59	51	110	225
08:30 AM	0	0	0	0	30	31	0	61	29	0	23	52	0	51	67	118	231
08:45 AM	0	0	0	0	41	50	0	91	32	0	32	64	0	61	43	104	259
Total	0	0	0	0	137	167	0	304	130	0	138	268	0	259	220	479	1051
Grand Total	0	0	0	0	248	346	0	594	273	0	266	539	0	532	462	994	2127
Apprch %	0	0	0		41.8	58.2	0		50.6	0	49.4		0	53.5	46.5		
Total %	0	0	0	0	11.7	16.3	0	27.9	12.8	0	12.5	25.3	0	25	21.7	46.7	

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	22	30	0	52	37	0	29	66	0	56	52	108	226
07:30 AM	0	0	0	0	26	52	0	78	36	0	44	80	0	92	73	165	323
07:45 AM	0	0	0	0	**57**	**68**	0	**125**	33	0	44	77	0	**99**	**89**	**188**	**390**
08:00 AM	0	0	0	0	41	53	0	94	**45**	0	**50**	**95**	0	88	59	147	336
Total Volume	0	0	0	0	146	203	0	349	151	0	167	318	0	335	273	608	1275
% App. Total	0	0	0		41.8	58.2	0		47.5	0	52.5		0	55.1	44.9		
PHF	.000	.000	.000	.000	.640	.746	.000	.698	.839	.000	.835	.837	.000	.846	.767	.809	.817

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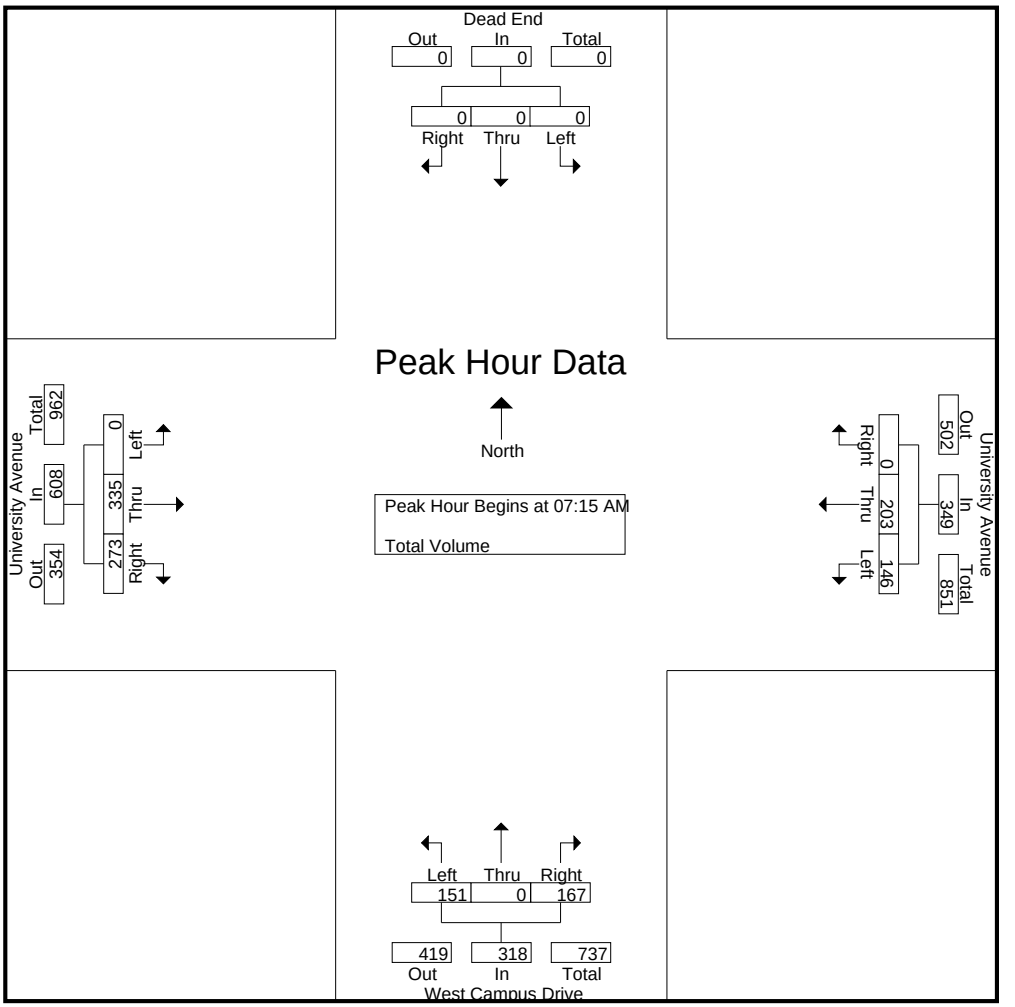
Site Code : 21718274
Start Date : 4/10/2018



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	0	0	0	0	26	52	0	78	37	0	29	66	0	92	73	165
+15 mins.	0	0	0	0	**57**	**68**	0	**125**	36	0	44	80	0	**99**	**89**	**188**
+30 mins.	0	0	0	0	41	53	0	94	33	0	44	77	0	88	59	147
+45 mins.	0	0	0	0	25	33	0	58	**45**	0	**50**	**95**	0	59	51	110
Total Volume	0	0	0	0	149	206	0	355	151	0	167	318	0	338	272	610
% App. Total	0	0	0		42	58	0		47.5	0	52.5		0	55.4	44.6	
PHF	.000	.000	.000	.000	.654	.757	.000	.710	.839	.000	.835	.837	.000	.854	.764	.811

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Groups Printed- Bikes

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	18	0	18	19
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	21	1	22	23
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	16	16
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	2	6	6
08:30 AM	0	0	0	0	0	0	0	0	2	0	0	2	0	3	0	3	5
08:45 AM	0	0	0	0	2	2	0	4	0	0	0	0	0	6	1	7	11
Total	0	0	0	0	2	2	0	4	2	0	0	2	0	29	3	32	38
Grand Total	0	0	0	0	2	2	0	4	3	0	0	3	0	50	4	54	61
Apprch %	0	0	0		50	50	0		100	0	0		0	92.6	7.4		
Total %	0	0	0	0	3.3	3.3	0	6.6	4.9	0	0	4.9	0	82	6.6	88.5	

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	**18**	0	**18**	**19**
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	16	16
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4	**2**	6	6
08:30 AM	0	0	0	0	0	0	0	0	**2**	0	0	**2**	0	3	0	3	5
Total Volume	0	0	0	0	0	0	0	0	3	0	0	3	0	41	2	43	46
% App. Total	0	0	0		0	0	0		100	0	0		0	95.3	4.7		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.375	.000	.000	.375	.000	.569	.250	.597	.605

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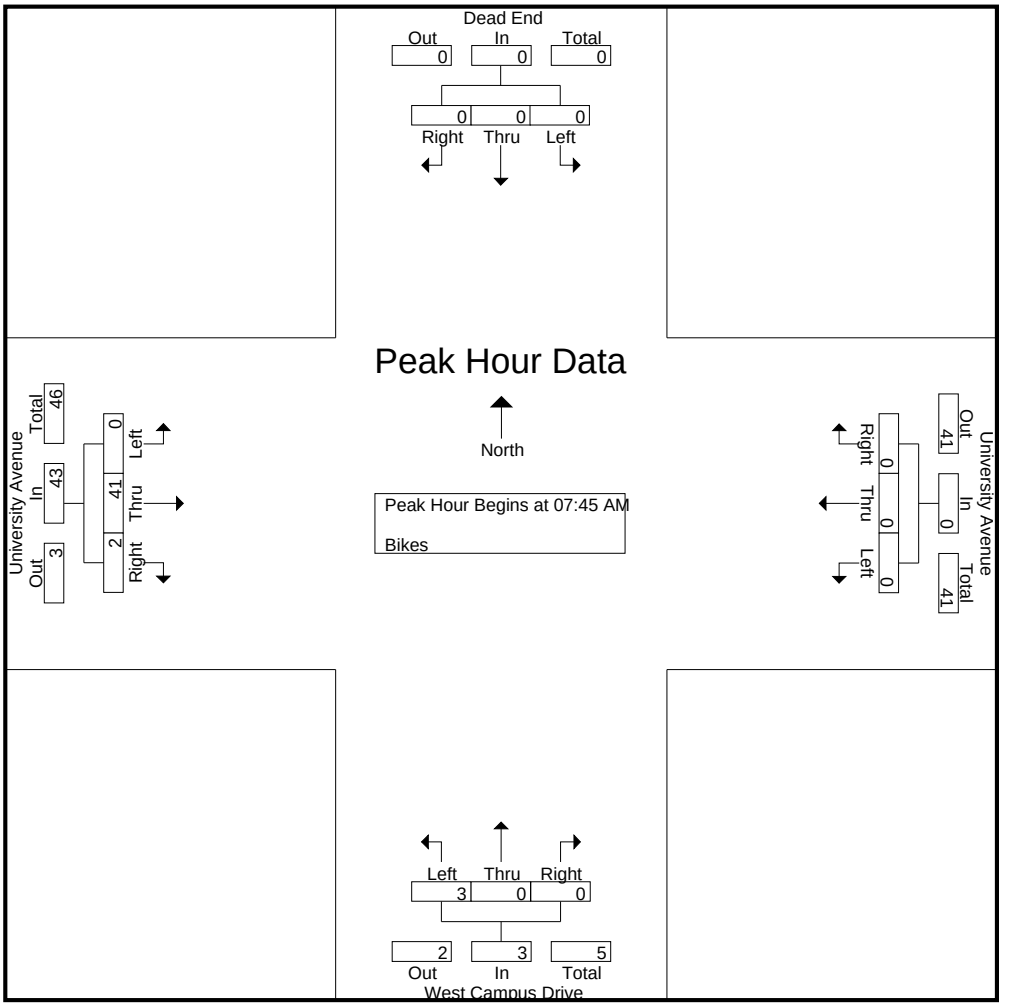
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:45 AM				07:45 AM			
+0 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	**18**	0	**18**
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	16
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	4	**2**	6
+45 mins.	0	0	0	0	**2**	**2**	0	**4**	**2**	0	0	**2**	0	3	0	3
Total Volume	0	0	0	0	2	2	0	4	3	0	0	3	0	41	2	43
% App. Total	0	0	0		50	50	0		100	0	0		0	95.3	4.7	
PHF	.000	.000	.000	.000	.250	.250	.000	.250	.375	.000	.000	.375	.000	.569	.250	.597

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Start Date : 4/10/2018

Groups Printed- Total Volume

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	0	0	0	45	69	0	114	77	0	52	129	0	45	35	80	323
11:15 AM	0	0	0	0	25	70	0	95	35	0	27	62	0	51	28	79	236
11:30 AM	0	0	0	0	22	49	0	71	25	0	34	59	0	53	44	97	227
11:45 AM	0	0	0	0	38	67	0	105	38	0	28	66	0	69	48	117	288
Total	0	0	0	0	130	255	0	385	175	0	141	316	0	218	155	373	1074
12:00 PM	0	0	0	0	17	61	0	78	68	0	20	88	0	78	57	135	301
12:15 PM	0	0	0	0	43	62	0	105	49	0	35	84	0	69	43	112	301
12:30 PM	0	0	0	0	45	71	0	116	84	0	53	137	0	61	55	116	369
12:45 PM	0	0	0	0	26	60	0	86	57	0	39	96	0	62	52	114	296
Total	0	0	0	0	131	254	0	385	258	0	147	405	0	270	207	477	1267
01:00 PM	0	0	0	0	35	64	0	99	48	0	32	80	0	50	40	90	269
01:15 PM	0	0	0	0	29	58	0	87	42	0	22	64	0	49	30	79	230
01:30 PM	0	0	0	0	38	48	0	86	33	0	32	65	0	61	40	101	252
01:45 PM	0	0	0	0	48	44	0	92	30	0	38	68	0	63	69	132	292
Total	0	0	0	0	150	214	0	364	153	0	124	277	0	223	179	402	1043
Grand Total	0	0	0	0	411	723	0	1134	586	0	412	998	0	711	541	1252	3384
Apprch %	0	0	0		36.2	63.8	0		58.7	0	41.3		0	56.8	43.2		
Total %	0	0	0	0	12.1	21.4	0	33.5	17.3	0	12.2	29.5	0	21	16	37	

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	0	0	0	17	61	0	78	68	0	20	88	0	**78**	**57**	**135**	301
12:15 PM	0	0	0	0	43	62	0	105	49	0	35	84	0	69	43	112	301
12:30 PM	0	0	0	0	**45**	**71**	0	**116**	**84**	0	**53**	**137**	0	61	55	116	**369**
12:45 PM	0	0	0	0	26	60	0	86	57	0	39	96	0	62	52	114	296
Total Volume	0	0	0	0	131	254	0	385	258	0	147	405	0	270	207	477	1267
% App. Total	0	0	0		34	66	0		63.7	0	36.3		0	56.6	43.4		
PHF	.000	.000	.000	.000	.728	.894	.000	.830	.768	.000	.693	.739	.000	.865	.908	.883	.858

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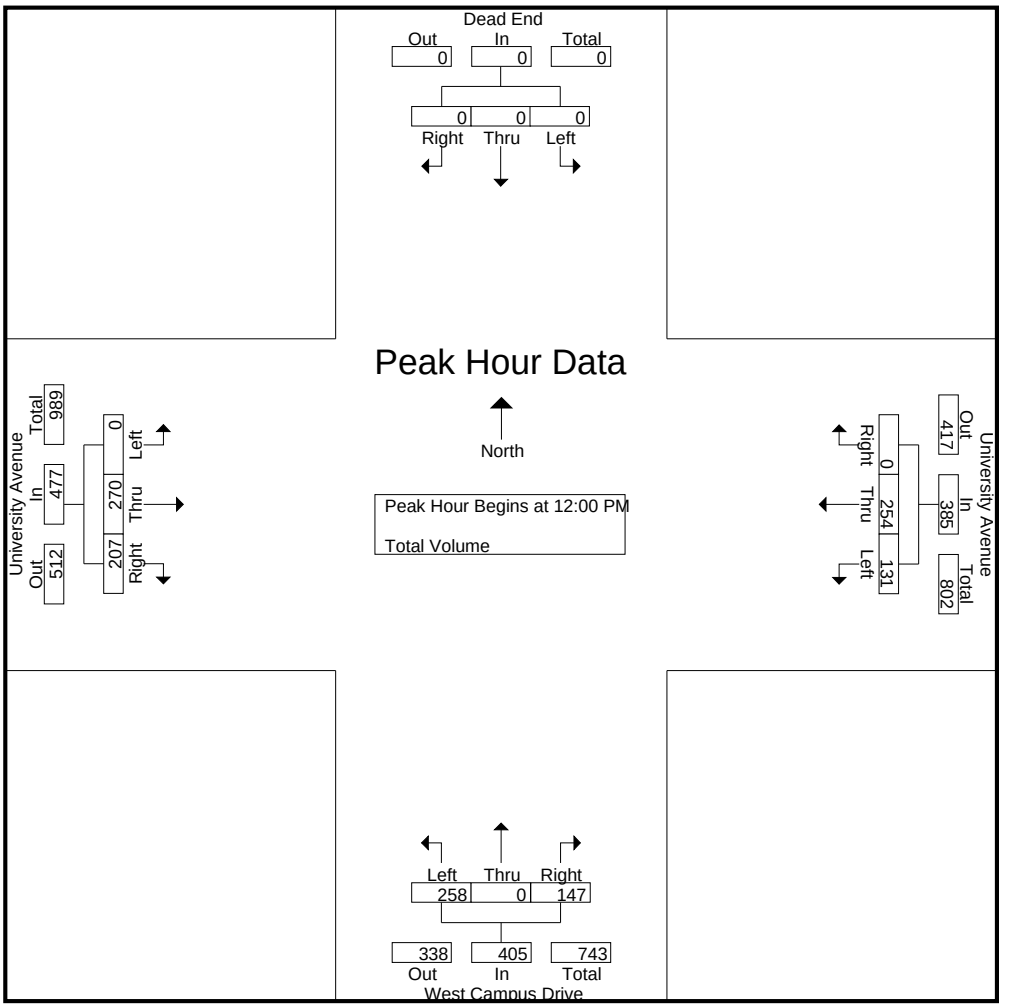
N/S: West Campus Drive
E/W: University Avenue
Weather: Clear

File Name : 01_RIV_W Campus_University MD
Site Code : 21718274
Start Date : 4/10/2018



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:00 AM				12:15 PM				12:00 PM				11:45 AM			
+0 mins.	0	0	0	0	43	62	0	105	68	0	20	88	0	69	48	117
+15 mins.	0	0	0	0	**45**	**71**	0	**116**	49	0	35	84	0	**78**	**57**	**135**
+30 mins.	0	0	0	0	26	60	0	86	**84**	0	**53**	**137**	0	69	43	112
+45 mins.	0	0	0	0	35	64	0	99	57	0	39	96	0	61	55	116
Total Volume	0	0	0	0	149	257	0	406	258	0	147	405	0	277	203	480
% App. Total	0	0	0		36.7	63.3	0		63.7	0	36.3		0	57.7	42.3	
PHF	.000	.000	.000	.000	.828	.905	.000	.875	.768	.000	.693	.739	.000	.888	.890	.889

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City of Riverside
N/S: West Campus Drive
E/W: University Avenue
Weather: Clear

File Name : 01_RIV_W Campus_University MD
Site Code : 21718274
Start Date : 4/10/2018

Groups Printed- Bikes

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	0	0	0	0	4	0	4	4	0	0	4	0	14	0	14	22
11:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	1	0	1	2
11:30 AM	0	0	0	0	0	2	0	2	3	0	0	3	0	2	0	2	7
11:45 AM	0	0	0	0	0	1	0	1	2	0	0	2	0	6	0	6	9
Total	0	0	0	0	0	7	0	7	10	0	0	10	0	23	0	23	40
12:00 PM	0	0	0	0	0	2	0	2	4	0	0	4	0	11	4	15	21
12:15 PM	0	0	0	0	2	1	0	3	2	0	1	3	0	9	0	9	15
12:30 PM	0	0	0	0	0	5	0	5	4	0	0	4	0	11	1	12	21
12:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	5	0	5	7
Total	0	0	0	0	2	9	0	11	11	0	1	12	0	36	5	41	64
01:00 PM	0	0	0	0	2	5	0	7	0	0	0	0	0	6	0	6	13
01:15 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	3	0	3	5
01:30 PM	0	0	0	0	0	1	0	1	1	0	0	1	0	6	0	6	8
01:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	7	2	9	10
Total	0	0	0	0	2	7	0	9	3	0	0	3	0	22	2	24	36
Grand Total	0	0	0	0	4	23	0	27	24	0	1	25	0	81	7	88	140
Apprch %	0	0	0		14.8	85.2	0		96	0	4		0	92	8		
Total %	0	0	0	0	2.9	16.4	0	19.3	17.1	0	0.7	17.9	0	57.9	5	62.9	

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:45 AM																	
11:45 AM	0	0	0	0	0	1	0	1	2	0	0	2	0	6	0	6	9
12:00 PM	0	0	0	0	0	2	0	2	**4**	0	0	**4**	0	**11**	**4**	**15**	**21**
12:15 PM	0	0	0	0	**2**	1	0	3	2	0	**1**	3	0	9	0	9	15
12:30 PM	0	0	0	0	0	**5**	0	**5**	4	0	0	4	0	11	1	12	21
Total Volume	0	0	0	0	2	9	0	11	12	0	1	13	0	37	5	42	66
% App. Total	0	0	0		18.2	81.8	0		92.3	0	7.7		0	88.1	11.9		
PHF	.000	.000	.000	.000	.250	.450	.000	.550	.750	.000	.250	.813	.000	.841	.313	.700	.786

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City of Riverside
N/S: West Campus Drive
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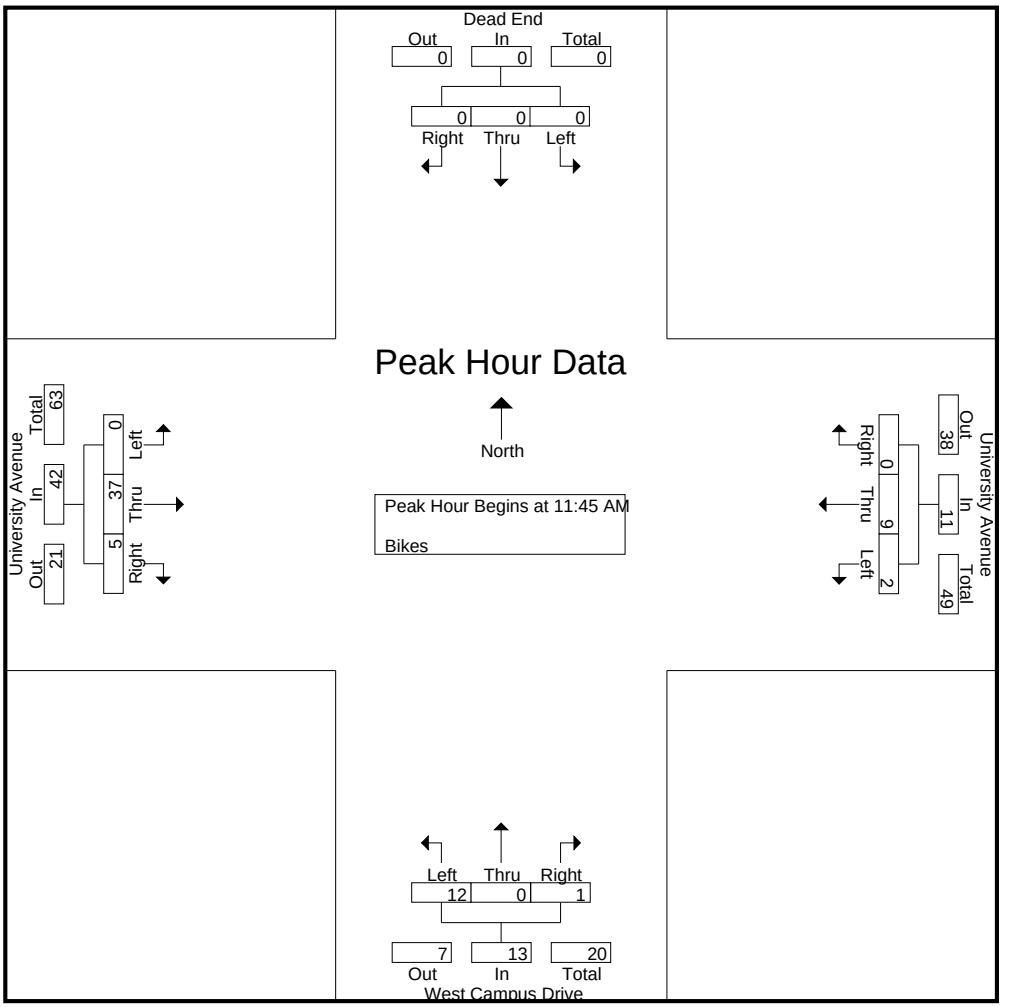
File Name : 01_RIV_W Campus_University MD
Site Code : 21718274
Start Date : 4/10/2018
Page No : 2



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:00 AM				12:15 PM				11:45 AM				11:45 AM			
+0 mins.	0	0	0	0	**2**	1	0	3	2	0	0	2	0	6	0	6
+15 mins.	0	0	0	0	0	**5**	0	5	**4**	0	0	**4**	0	**11**	**4**	**15**
+30 mins.	0	0	0	0	0	1	0	1	2	0	**1**	3	0	9	0	9
+45 mins.	0	0	0	0	2	5	0	**7**	4	0	0	4	0	11	1	12
Total Volume	0	0	0	0	4	12	0	16	12	0	1	13	0	37	5	42
% App. Total	0	0	0		25	75	0		92.3	0	7.7		0	88.1	11.9	
PHF	.000	.000	.000	.000	.500	.600	.000	.571	.750	.000	.250	.813	.000	.841	.313	.700

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City of Riverside
N/S: West Campus Drive
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Weather: Clear

File Name : 01_RIV_W Campus_University PM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Total Volume

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	48	73	0	121	69	0	35	104	0	46	44	90	315
04:15 PM	0	0	0	0	34	57	0	91	48	0	25	73	0	44	30	74	238
04:30 PM	0	0	0	0	46	105	0	151	67	0	32	99	0	65	49	114	364
04:45 PM	0	0	0	0	67	76	0	143	56	0	32	88	0	54	54	108	339
Total	0	0	0	0	195	311	0	506	240	0	124	364	0	209	177	386	1256
05:00 PM	0	0	0	0	56	115	0	171	122	0	44	166	0	59	43	102	439
05:15 PM	0	0	0	0	48	110	0	158	96	0	54	150	0	53	44	97	405
05:30 PM	0	0	0	0	49	94	0	143	53	0	52	105	0	62	37	99	347
05:45 PM	0	0	0	0	65	69	0	134	64	0	48	112	0	55	31	86	332
Total	0	0	0	0	218	388	0	606	335	0	198	533	0	229	155	384	1523
06:00 PM	0	0	0	0	43	67	0	110	77	0	44	121	0	57	31	88	319
06:15 PM	0	0	0	0	46	92	0	138	55	0	36	91	0	45	36	81	310
06:30 PM	0	0	0	0	45	80	0	125	96	0	44	140	0	56	40	96	361
06:45 PM	0	0	0	0	34	80	0	114	59	0	45	104	0	63	41	104	322
Total	0	0	0	0	168	319	0	487	287	0	169	456	0	221	148	369	1312
Grand Total	0	0	0	0	581	1018	0	1599	862	0	491	1353	0	659	480	1139	4091
Apprch %	0	0	0		36.3	63.7	0		63.7	0	36.3		0	57.9	42.1		
Total %	0	0	0	0	14.2	24.9	0	39.1	21.1	0	12	33.1	0	16.1	11.7	27.8	

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	46	105	0	151	67	0	32	99	0	**65**	49	**114**	364
04:45 PM	0	0	0	0	**67**	76	0	143	56	0	32	88	0	54	**54**	108	339
05:00 PM	0	0	0	0	56	**115**	0	**171**	**122**	0	44	**166**	0	59	43	102	**439**
05:15 PM	0	0	0	0	48	110	0	158	96	0	**54**	150	0	53	44	97	405
Total Volume	0	0	0	0	217	406	0	623	341	0	162	503	0	231	190	421	1547
% App. Total	0	0	0		34.8	65.2	0		67.8	0	32.2		0	54.9	45.1		
PHF	.000	.000	.000	.000	.810	.883	.000	.911	.699	.000	.750	.758	.000	.888	.880	.923	.881

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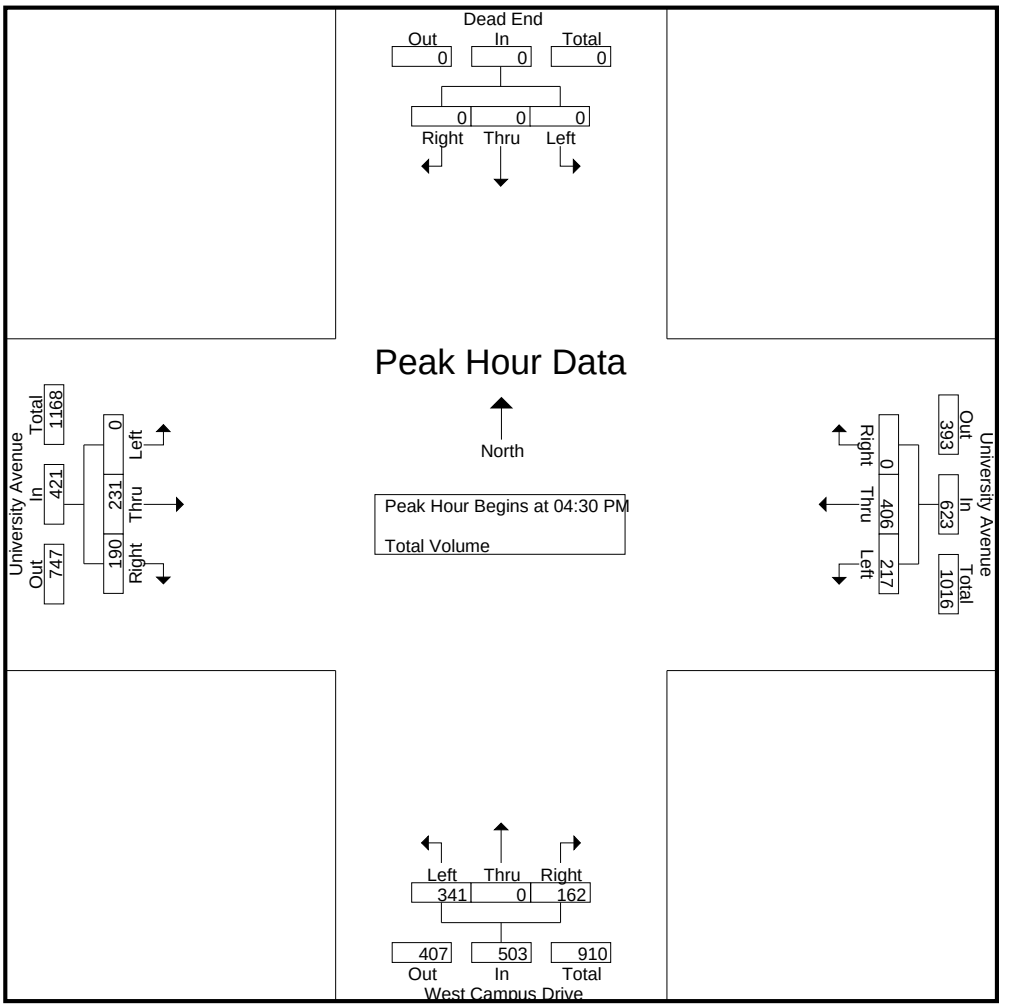
Site Code : 21718274
Start Date : 4/10/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				05:00 PM				04:30 PM			
+0 mins.	0	0	0	0	46	105	0	151	**122**	0	44	**166**	0	**65**	49	**114**
+15 mins.	0	0	0	0	**67**	76	0	143	96	0	**54**	150	0	54	**54**	108
+30 mins.	0	0	0	0	56	**115**	0	**171**	53	0	52	105	0	59	43	102
+45 mins.	0	0	0	0	48	110	0	158	64	0	48	112	0	53	44	97
Total Volume	0	0	0	0	217	406	0	623	335	0	198	533	0	231	190	421
% App. Total	0	0	0		34.8	65.2	0		62.9	0	37.1		0	54.9	45.1	
PHF	.000	.000	.000	.000	.810	.883	.000	.911	.686	.000	.917	.803	.000	.888	.880	.923

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City of Riverside
N/S: West Campus Drive
E/W: University Avenue
Weather: Clear

File Name : 01_RIV_W Campus_University PM
Site Code : 21718274
Start Date : 4/10/2018

Groups Printed- Bikes

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	1	0	1	3	0	0	3	0	0	1	1	5
04:15 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	0	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	2
04:45 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	4	0	4	8
Total	0	0	0	0	0	5	0	5	6	0	0	6	0	5	1	6	17
05:00 PM	0	0	0	0	0	4	0	4	8	0	0	8	0	3	0	3	15
05:15 PM	0	0	0	0	1	6	0	7	3	0	0	3	0	1	0	1	11
05:30 PM	0	0	0	0	0	2	0	2	2	0	0	2	0	2	0	2	6
05:45 PM	0	0	0	0	0	2	0	2	3	0	0	3	0	3	0	3	8
Total	0	0	0	0	1	14	0	15	16	0	0	16	0	9	0	9	40
06:00 PM	0	0	0	0	0	1	0	1	3	0	0	3	0	1	0	1	5
06:15 PM	0	0	0	0	0	3	0	3	9	0	0	9	0	1	0	1	13
06:30 PM	0	0	0	0	0	2	0	2	3	0	0	3	0	2	0	2	7
06:45 PM	0	0	0	0	0	2	0	2	1	0	0	1	0	2	0	2	5
Total	0	0	0	0	0	8	0	8	16	0	0	16	0	6	0	6	30
Grand Total	0	0	0	0	1	27	0	28	38	0	0	38	0	20	1	21	87
Apprch %	0	0	0		3.6	96.4	0		100	0	0		0	95.2	4.8		
Total %	0	0	0	0	1.1	31	0	32.2	43.7	0	0	43.7	0	23	1.1	24.1	

	Dead End Southbound				University Avenue Westbound				West Campus Drive Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	0	0	0	0	3	0	3	1	0	0	1	0	**4**	0	**4**	8
05:00 PM	0	0	0	0	0	4	0	4	**8**	0	0	**8**	0	3	0	3	**15**
05:15 PM	0	0	0	0	**1**	**6**	0	**7**	3	0	0	3	0	1	0	1	11
05:30 PM	0	0	0	0	0	2	0	2	2	0	0	2	0	2	0	2	6
Total Volume	0	0	0	0	1	15	0	16	14	0	0	14	0	10	0	10	40
% App. Total	0	0	0		6.2	93.8	0		100	0	0		0	100	0		
PHF	.000	.000	.000	.000	.250	.625	.000	.571	.438	.000	.000	.438	.000	.625	.000	.625	.667

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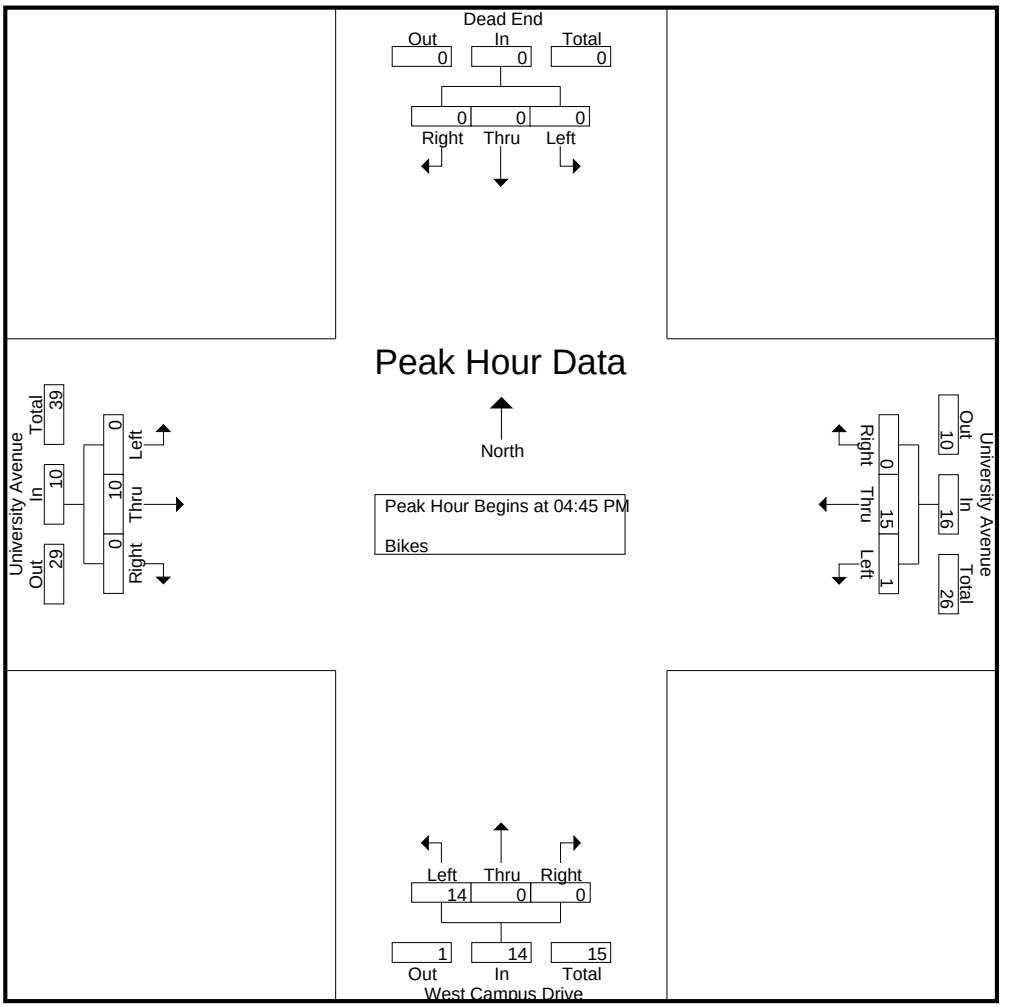
E/W: University Avenue
Weather: Clear

File Name : 01_RIV_W Campus_University PM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				05:45 PM				04:45 PM			
+0 mins.	0	0	0	0	0	3	0	3	3	0	0	3	0	**4**	0	**4**
+15 mins.	0	0	0	0	0	4	0	4	3	0	0	3	0	3	0	3
+30 mins.	0	0	0	0	**1**	**6**	0	**7**	**9**	0	0	**9**	0	1	0	1
+45 mins.	0	0	0	0	0	2	0	2	3	0	0	3	0	2	0	2
Total Volume	0	0	0	0	1	15	0	16	18	0	0	18	0	10	0	10
% App. Total	0	0	0		6.2	93.8	0		100	0	0		0	100	0	
PHF	.000	.000	.000	.000	.250	.625	.000	.571	.500	.000	.000	.500	.000	.625	.000	.625

Location: Riverside
N/S: Campus Drive
E/W: University Avenue

Date: 4/10/2018
Day: Tuesday

PEDESTRIANS

	North Leg Campus Drive	East Leg Dead End	South Leg Dead End	West Leg University Avenue	TOTAL
7:00 AM	0	5	1	0	6
7:15 AM	0	7	0	0	7
7:30 AM	0	14	10	0	24
7:45 AM	0	52	37	0	89
8:00 AM	0	23	25	0	48
8:15 AM	0	29	42	0	71
8:30 AM	0	22	30	0	52
8:45 AM	0	36	85	1	122
TOTAL VOLUMES:	0	188	230	1	419

	North Leg Campus Drive	East Leg Dead End	South Leg Dead End	West Leg University Avenue	TOTAL
11:00 AM	0	36	114	0	150
11:15 AM	0	7	33	0	40
11:30 AM	0	9	43	0	52
11:45 AM	0	24	47	0	71
12:00 PM	0	58	69	0	127
12:15 PM	0	36	78	0	114
12:30 PM	0	11	88	0	99
12:45 PM	0	19	35	0	54
1:00 PM	0	20	19	0	39
1:15 PM	0	11	17	0	28
1:30 PM	0	15	21	0	36
1:45 PM	0	20	37	0	57
TOTAL VOLUMES:	0	266	601	0	867

	North Leg Campus Drive	East Leg Dead End	South Leg Dead End	West Leg University Avenue	TOTAL
4:00 PM	0	17	44	0	61
4:15 PM	0	4	13	0	17
4:30 PM	0	8	17	0	25
4:45 PM	0	18	40	0	58
5:00 PM	0	31	52	0	83
5:15 PM	0	10	53	0	63
5:30 PM	0	15	36	0	51
5:45 PM	0	11	26	0	37
6:00 PM	0	24	40	0	64
6:15 PM	0	16	25	0	41
6:30 PM	0	26	59	0	85
6:45 PM	0	9	23	0	32
TOTAL VOLUMES:	0	189	428	0	617

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City of Riverside
N/S: Canyon Crest Drive
E/W: University Avenue
Weather: Clear

File Name : 02_RIV_Canyon Crest_University AM
Site Code : 21718274
Start Date : 4/10/2018

Groups Printed- Total Volume

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	33	33	0	0	0	0	0	0	0	0	43	0	0	43	76
07:15 AM	0	0	49	49	0	0	0	0	0	0	0	0	79	0	0	79	128
07:30 AM	0	0	72	72	0	0	0	0	0	0	0	0	128	0	0	128	200
07:45 AM	0	0	130	130	0	0	0	0	0	0	0	0	154	0	0	154	284
Total	0	0	284	284	0	0	0	0	0	0	0	0	404	0	0	404	688
08:00 AM	0	0	101	101	0	0	0	0	0	0	0	0	144	0	0	144	245
08:15 AM	0	0	60	60	0	0	0	0	0	0	0	0	94	0	0	94	154
08:30 AM	0	0	62	62	0	0	0	0	0	0	0	0	69	0	0	69	131
08:45 AM	0	0	94	94	0	0	0	0	0	0	0	0	98	0	0	98	192
Total	0	0	317	317	0	0	0	0	0	0	0	0	405	0	0	405	722
Grand Total	0	0	601	601	0	0	0	0	0	0	0	0	809	0	0	809	1410
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	42.6	42.6	0	0	0	0	0	0	0	0	57.4	0	0	57.4	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	72	72	0	0	0	0	0	0	0	0	128	0	0	128	200
07:45 AM	0	0	**130**	**130**	0	0	0	0	0	0	0	0	**154**	0	0	**154**	**284**
08:00 AM	0	0	101	101	0	0	0	0	0	0	0	0	144	0	0	144	245
08:15 AM	0	0	60	60	0	0	0	0	0	0	0	0	94	0	0	94	154
Total Volume	0	0	363	363	0	0	0	0	0	0	0	0	520	0	0	520	883
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.698	.698	.000	.000	.000	.000	.000	.000	.000	.000	.844	.000	.000	.844	.777

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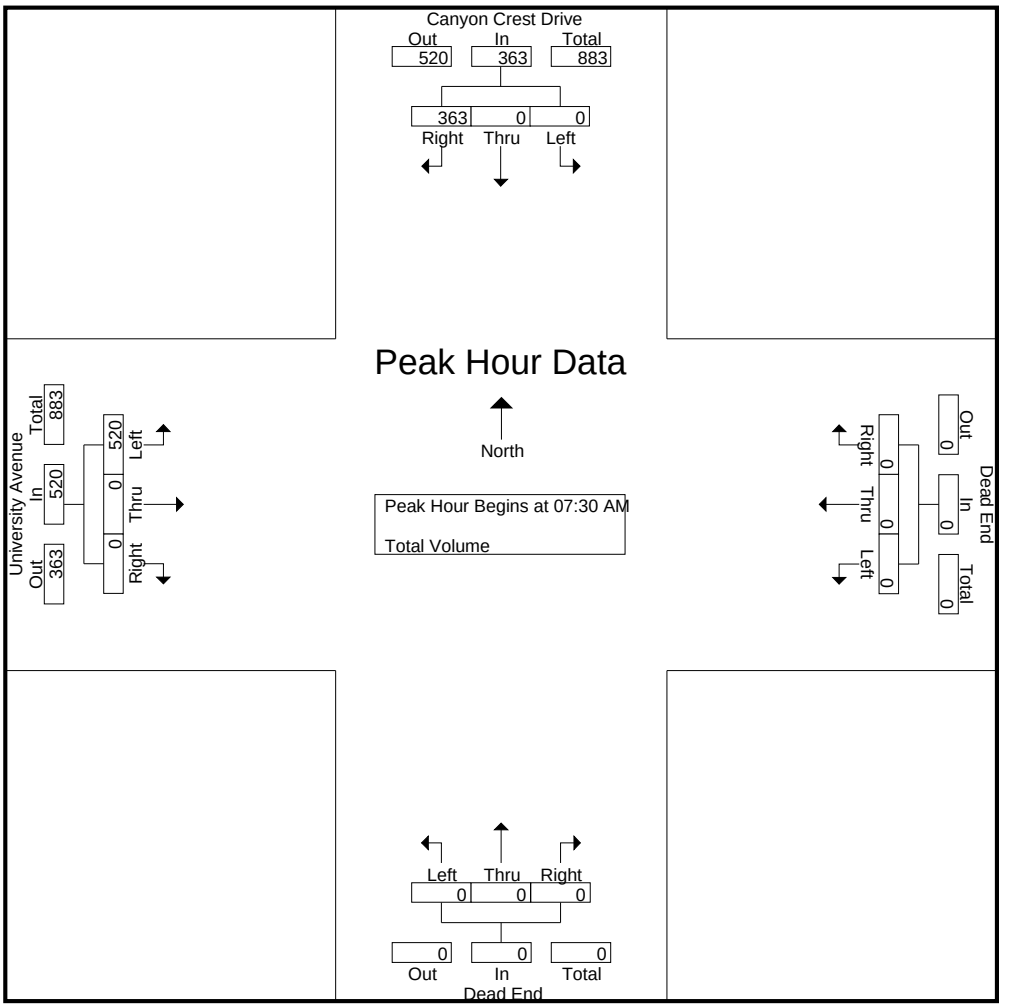
Corona, CA 92878
(951) 268-6268

City of Riverside
N/S: Canyon Crest Drive
E/W: University Avenue
Weather: Clear

File Name : 02_RIV_Canyon Crest_University AM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	0	0	72	72	0	0	0	0	0	0	0	0	128	0	0	128
+15 mins.	0	0	**130**	**130**	0	0	0	0	0	0	0	0	**154**	0	0	**154**
+30 mins.	0	0	101	101	0	0	0	0	0	0	0	0	144	0	0	144
+45 mins.	0	0	60	60	0	0	0	0	0	0	0	0	94	0	0	94
Total Volume	0	0	363	363	0	0	0	0	0	0	0	0	520	0	0	520
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.698	.698	.000	.000	.000	.000	.000	.000	.000	.000	.844	.000	.000	.844

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Groups Printed- East Side

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4	4
07:15 AM	1	2	0	3	0	0	0	0	0	2	1	3	1	0	1	2	8
07:30 AM	0	0	0	0	1	0	0	1	0	0	0	0	1	1	0	2	3
07:45 AM	8	16	0	24	4	1	0	5	1	0	0	1	1	12	7	20	50
Total	9	18	0	27	5	1	0	6	1	2	1	4	5	13	10	28	65
08:00 AM	4	20	0	24	2	1	0	3	0	0	0	0	0	11	14	25	52
08:15 AM	9	8	0	17	1	0	0	1	0	0	0	0	0	1	3	4	22
08:30 AM	4	5	0	9	1	4	1	6	0	0	1	1	0	1	1	2	18
08:45 AM	3	13	1	17	0	6	3	9	3	3	0	6	0	3	5	8	40
Total	20	46	1	67	4	11	4	19	3	3	1	7	0	16	23	39	132
Grand Total	29	64	1	94	9	12	4	25	4	5	2	11	5	29	33	67	197
Apprch %	30.9	68.1	1.1		36	48	16		36.4	45.5	18.2		7.5	43.3	49.3		
Total %	14.7	32.5	0.5	47.7	4.6	6.1	2	12.7	2	2.5	1	5.6	2.5	14.7	16.8	34	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	8	16	0	**24**	**4**	1	0	5	**1**	0	0	**1**	**1**	**12**	7	20	50
08:00 AM	4	**20**	0	24	2	1	0	3	0	0	0	0	0	11	**14**	**25**	**52**
08:15 AM	**9**	8	0	17	1	0	0	1	0	0	0	0	0	1	3	4	22
08:30 AM	4	5	0	9	1	**4**	**1**	**6**	0	0	**1**	1	0	1	1	2	18
Total Volume	25	49	0	74	8	6	1	15	1	0	1	2	1	25	25	51	142
% App. Total	33.8	66.2	0		53.3	40	6.7		50	0	50		2	49	49		
PHF	.694	.613	.000	.771	.500	.375	.250	.625	.250	.000	.250	.500	.250	.521	.446	.510	.683

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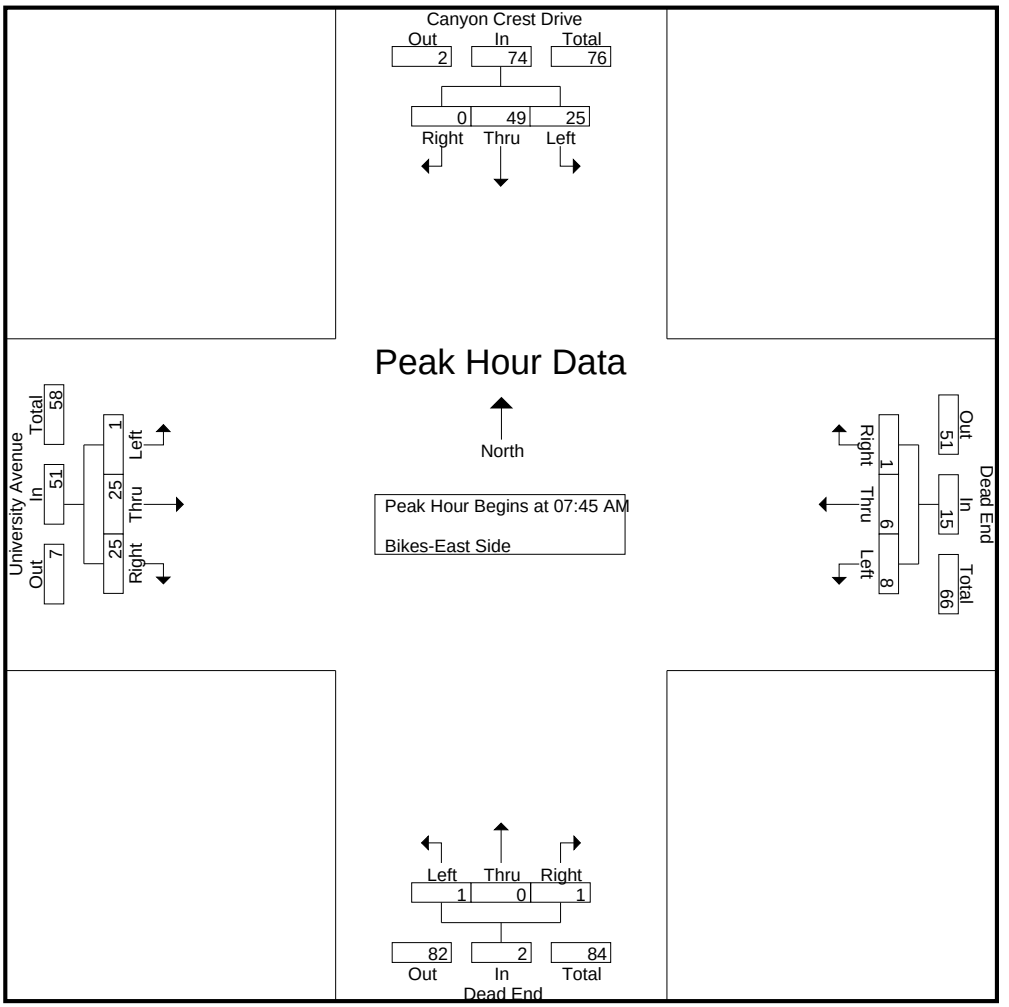

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				08:00 AM				08:00 AM				07:30 AM			
+0 mins.	8	16	0	**24**	**2**	1	0	3	0	0	0	0	**1**	1	0	2
+15 mins.	4	**20**	0	24	1	0	0	1	0	0	0	0	1	**12**	7	20
+30 mins.	**9**	8	0	17	1	4	1	6	0	0	**1**	1	0	11	**14**	**25**
+45 mins.	4	5	0	9	0	**6**	**3**	**9**	**3**	**3**	0	**6**	0	1	3	4
Total Volume	25	49	0	74	4	11	4	19	3	3	1	7	2	25	24	51
% App. Total	33.8	66.2	0		21.1	57.9	21.1		42.9	42.9	14.3		3.9	49	47.1	
PHF	.694	.613	.000	.771	.500	.458	.333	.528	.250	.250	.250	.292	.500	.521	.429	.510

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Groups Printed- West Side

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	5	5	0	0	0	0	0	0	0	0	0	0	0	0	5
Total	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Grand Total	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Apprch %	0	0	100		0	0	0		0	0	0		0	0	0		
Total %	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	**5**	**5**	0	0	0	0	0	0	0	0	0	0	0	0	**5**
Total Volume	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0	6
% App. Total	0	0	100		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.300	.300	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.300

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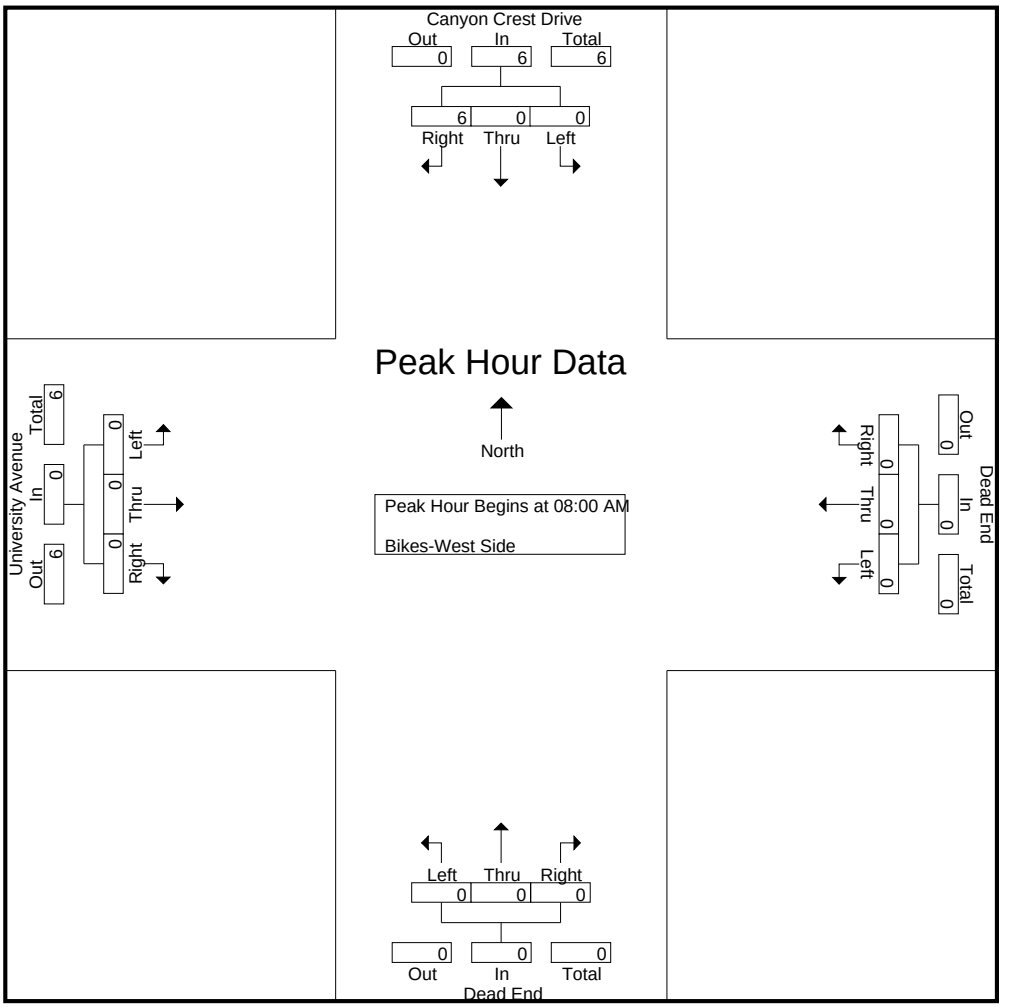

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	**5**	**5**	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	6	6	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	100		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.300	.300	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

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Groups Printed- Total Volume

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	0	113	113	0	0	0	0	0	0	0	0	87	0	0	87	200
11:15 AM	0	0	92	92	0	0	0	0	0	0	0	0	78	0	0	78	170
11:30 AM	0	0	73	73	0	0	0	0	0	0	0	0	80	0	0	80	153
11:45 AM	0	0	92	92	0	0	0	0	0	0	0	0	87	0	0	87	179
Total	0	0	370	370	0	0	0	0	0	0	0	0	332	0	0	332	702
12:00 PM	0	0	92	92	0	0	0	0	0	0	0	0	115	0	0	115	207
12:15 PM	0	0	102	102	0	0	0	0	0	0	0	0	111	0	0	111	213
12:30 PM	0	0	123	123	0	0	0	0	0	0	0	0	114	0	0	114	237
12:45 PM	0	0	85	85	0	0	0	0	0	0	0	0	105	0	0	105	190
Total	0	0	402	402	0	0	0	0	0	0	0	0	445	0	0	445	847
01:00 PM	0	0	103	103	0	0	0	0	0	0	0	0	80	0	0	80	183
01:15 PM	0	0	79	79	0	0	0	0	0	0	0	0	66	0	0	66	145
01:30 PM	0	0	89	89	0	0	0	0	0	0	0	0	93	0	0	93	182
01:45 PM	0	0	92	92	0	0	0	0	0	0	0	0	106	0	0	106	198
Total	0	0	363	363	0	0	0	0	0	0	0	0	345	0	0	345	708
Grand Total	0	0	1135	1135	0	0	0	0	0	0	0	0	1122	0	0	1122	2257
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	50.3	50.3	0	0	0	0	0	0	0	0	49.7	0	0	49.7	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	0	92	92	0	0	0	0	0	0	0	0	**115**	0	0	**115**	207
12:15 PM	0	0	102	102	0	0	0	0	0	0	0	0	111	0	0	111	213
12:30 PM	0	0	**123**	**123**	0	0	0	0	0	0	0	0	114	0	0	114	**237**
12:45 PM	0	0	85	85	0	0	0	0	0	0	0	0	105	0	0	105	190
Total Volume	0	0	402	402	0	0	0	0	0	0	0	0	445	0	0	445	847
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.817	.817	.000	.000	.000	.000	.000	.000	.000	.000	.967	.000	.000	.967	.893

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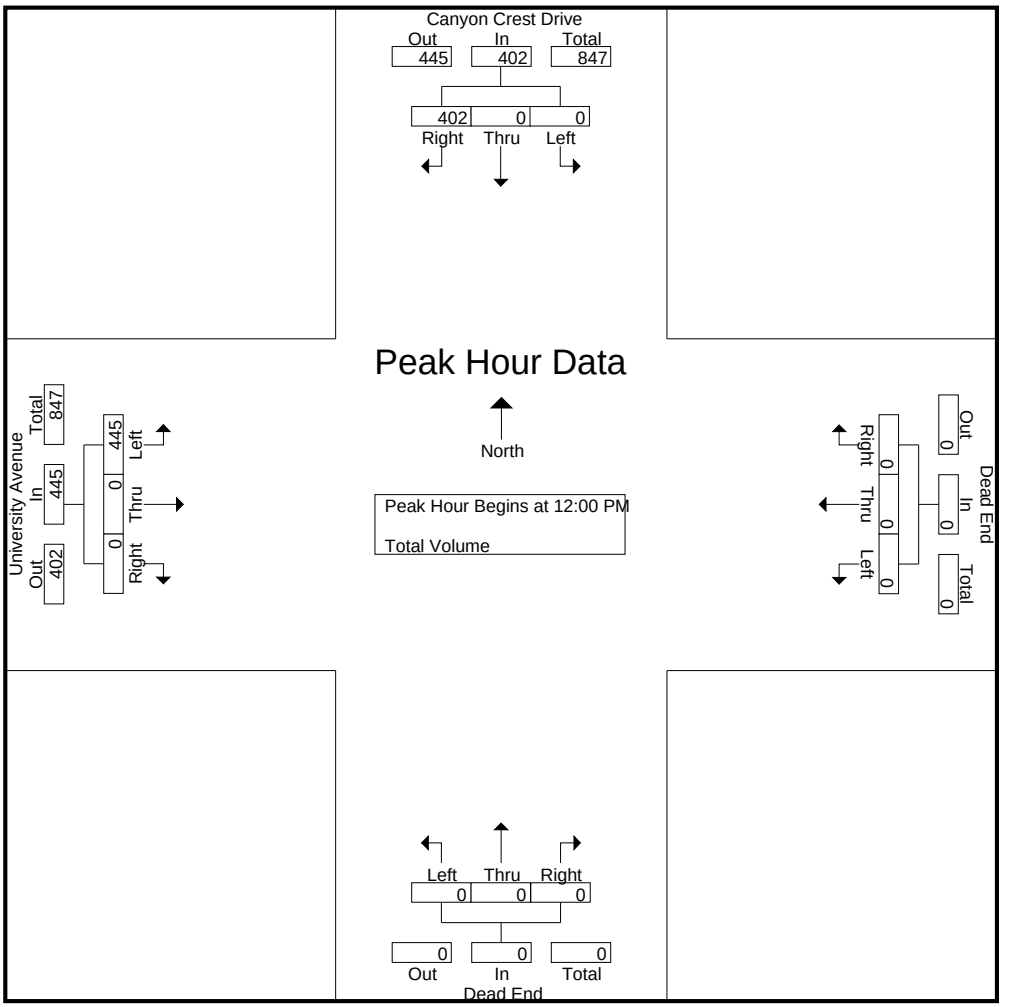

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				11:00 AM				11:00 AM				12:00 PM			
+0 mins.	0	0	102	102	0	0	0	0	0	0	0	0	**115**	0	0	**115**
+15 mins.	0	0	**123**	**123**	0	0	0	0	0	0	0	0	111	0	0	111
+30 mins.	0	0	85	85	0	0	0	0	0	0	0	0	114	0	0	114
+45 mins.	0	0	103	103	0	0	0	0	0	0	0	0	105	0	0	105
Total Volume	0	0	413	413	0	0	0	0	0	0	0	0	445	0	0	445
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.839	.839	.000	.000	.000	.000	.000	.000	.000	.000	.967	.000	.000	.967

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Groups Printed- East Side

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	5	11	0	16	1	6	8	15	2	3	0	5	10	7	3	20	56
11:15 AM	0	4	0	4	0	3	1	4	0	1	0	1	0	2	0	2	11
11:30 AM	3	5	0	8	0	4	0	4	1	4	2	7	1	4	1	6	25
11:45 AM	1	8	0	9	0	1	2	3	2	4	0	6	1	3	3	7	25
Total	9	28	0	37	1	14	11	26	5	12	2	19	12	16	7	35	117
12:00 PM	1	5	1	7	1	5	3	9	1	1	1	3	8	20	4	32	51
12:15 PM	2	7	0	9	1	5	4	10	1	2	1	4	5	7	4	16	39
12:30 PM	3	13	0	16	0	9	3	12	3	3	1	7	2	9	4	15	50
12:45 PM	2	5	1	8	0	3	2	5	1	1	0	2	1	7	4	12	27
Total	8	30	2	40	2	22	12	36	6	7	3	16	16	43	16	75	167
01:00 PM	0	8	2	10	0	3	2	5	1	5	1	7	3	5	3	11	33
01:15 PM	1	4	0	5	1	1	1	3	1	3	0	4	1	0	2	3	15
01:30 PM	1	2	0	3	0	1	3	4	0	2	0	2	0	6	2	8	17
01:45 PM	2	14	0	16	2	3	1	6	3	8	0	11	3	8	3	14	47
Total	4	28	2	34	3	8	7	18	5	18	1	24	7	19	10	36	112
Grand Total	21	86	4	111	6	44	30	80	16	37	6	59	35	78	33	146	396
Apprch %	18.9	77.5	3.6		7.5	55	37.5		27.1	62.7	10.2		24	53.4	22.6		
Total %	5.3	21.7	1	28	1.5	11.1	7.6	20.2	4	9.3	1.5	14.9	8.8	19.7	8.3	36.9	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	1	5	**1**	7	**1**	5	3	9	1	1	**1**	3	**8**	**20**	**4**	**32**	**51**
12:15 PM	2	7	0	9	1	5	**4**	10	1	2	1	4	5	7	4	16	39
12:30 PM	**3**	**13**	0	**16**	0	**9**	3	**12**	**3**	**3**	1	**7**	2	9	4	15	50
12:45 PM	2	5	1	8	0	3	2	5	1	1	0	2	1	7	4	12	27
Total Volume	8	30	2	40	2	22	12	36	6	7	3	16	16	43	16	75	167
% App. Total	20	75	5		5.6	61.1	33.3		37.5	43.8	18.8		21.3	57.3	21.3		
PHF	.667	.577	.500	.625	.500	.611	.750	.750	.500	.583	.750	.571	.500	.538	1.00	.586	.819

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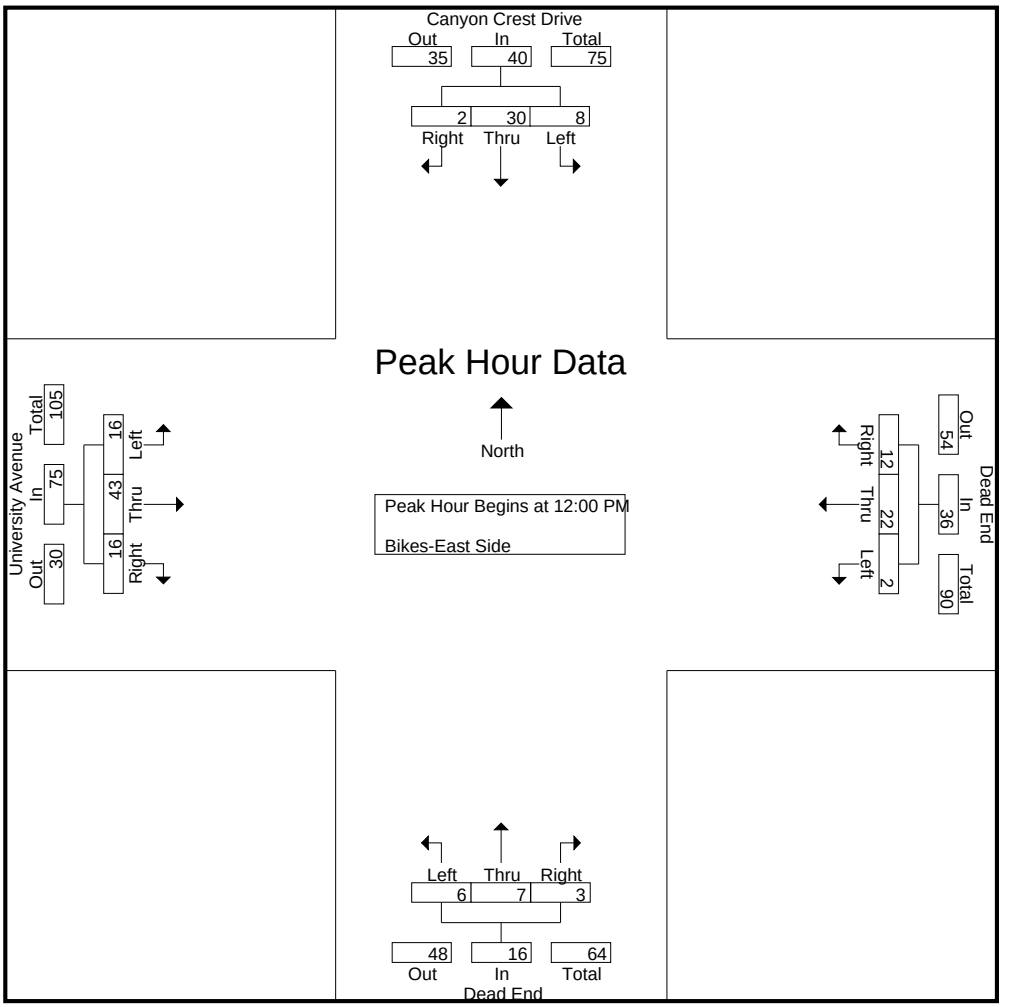

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				12:00 PM				01:00 PM				12:00 PM			
+0 mins.	2	7	0	9	**1**	5	3	9	1	5	**1**	7	**8**	**20**	**4**	**32**
+15 mins.	**3**	**13**	0	**16**	1	5	**4**	10	1	3	0	4	5	7	4	16
+30 mins.	2	5	1	8	0	**9**	3	**12**	0	2	0	2	2	9	4	15
+45 mins.	0	8	**2**	10	0	3	2	5	**3**	**8**	0	**11**	1	7	4	12
Total Volume	7	33	3	43	2	22	12	36	5	18	1	24	16	43	16	75
% App. Total	16.3	76.7	7		5.6	61.1	33.3		20.8	75	4.2		21.3	57.3	21.3	
PHF	.583	.635	.375	.672	.500	.611	.750	.750	.417	.563	.250	.545	.500	.538	1.000	.586

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Groups Printed- West Side

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:00 PM	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Total	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Grand Total	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	75	75	0	0	0	0	0	0	0	0	25	0	0	25	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 01:00 PM																	
01:00 PM	0	0	**3**	**3**	0	0	0	0	0	0	0	0	0	0	0	0	**3**
01:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
01:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	**1**	0	0	**1**	1
Total Volume	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1	4
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250	.333

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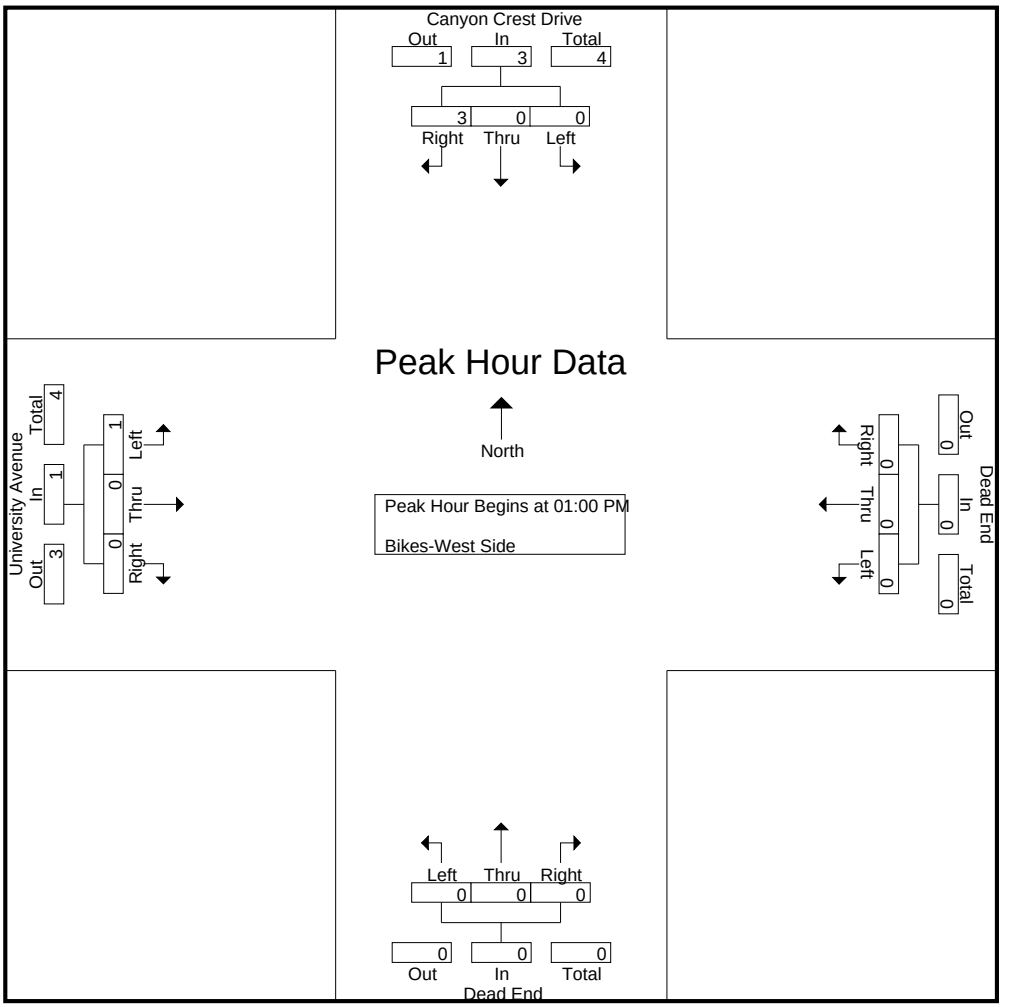

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				11:00 AM				11:00 AM				01:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	**3**	**3**	0	0	0	0	0	0	0	0	**1**	0	0	**1**
Total Volume	0	0	3	3	0	0	0	0	0	0	0	0	1	0	0	1
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.250	.000	.000	.250

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Groups Printed- Total Volume

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	123	123	0	0	0	0	0	0	0	0	85	0	0	85	208
04:15 PM	0	0	101	101	0	0	0	0	0	0	0	0	68	0	0	68	169
04:30 PM	0	0	135	135	0	0	0	0	0	0	0	0	92	0	0	92	227
04:45 PM	0	0	149	149	0	0	0	0	0	0	0	0	80	0	0	80	229
Total	0	0	508	508	0	0	0	0	0	0	0	0	325	0	0	325	833
05:00 PM	0	0	173	173	0	0	0	0	0	0	0	0	114	0	0	114	287
05:15 PM	0	0	165	165	0	0	0	0	0	0	0	0	113	0	0	113	278
05:30 PM	0	0	136	136	0	0	0	0	0	0	0	0	119	0	0	119	255
05:45 PM	0	0	144	144	0	0	0	0	0	0	0	0	88	0	0	88	232
Total	0	0	618	618	0	0	0	0	0	0	0	0	434	0	0	434	1052
06:00 PM	0	0	124	124	0	0	0	0	0	0	0	0	109	0	0	109	233
06:15 PM	0	0	132	132	0	0	0	0	0	0	0	0	79	0	0	79	211
06:30 PM	0	0	131	131	0	0	0	0	0	0	0	0	102	0	0	102	233
06:45 PM	0	0	99	99	0	0	0	0	0	0	0	0	115	0	0	115	214
Total	0	0	486	486	0	0	0	0	0	0	0	0	405	0	0	405	891
Grand Total	0	0	1612	1612	0	0	0	0	0	0	0	0	1164	0	0	1164	2776
Apprch %	0	0	100		0	0	0		0	0	0		100	0	0		
Total %	0	0	58.1	58.1	0	0	0	0	0	0	0	0	41.9	0	0	41.9	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	**173**	**173**	0	0	0	0	0	0	0	0	114	0	0	114	**287**
05:15 PM	0	0	165	165	0	0	0	0	0	0	0	0	113	0	0	113	278
05:30 PM	0	0	136	136	0	0	0	0	0	0	0	0	**119**	0	0	**119**	255
05:45 PM	0	0	144	144	0	0	0	0	0	0	0	0	88	0	0	88	232
Total Volume	0	0	618	618	0	0	0	0	0	0	0	0	434	0	0	434	1052
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0		
PHF	.000	.000	.893	.893	.000	.000	.000	.000	.000	.000	.000	.000	.912	.000	.000	.912	.916

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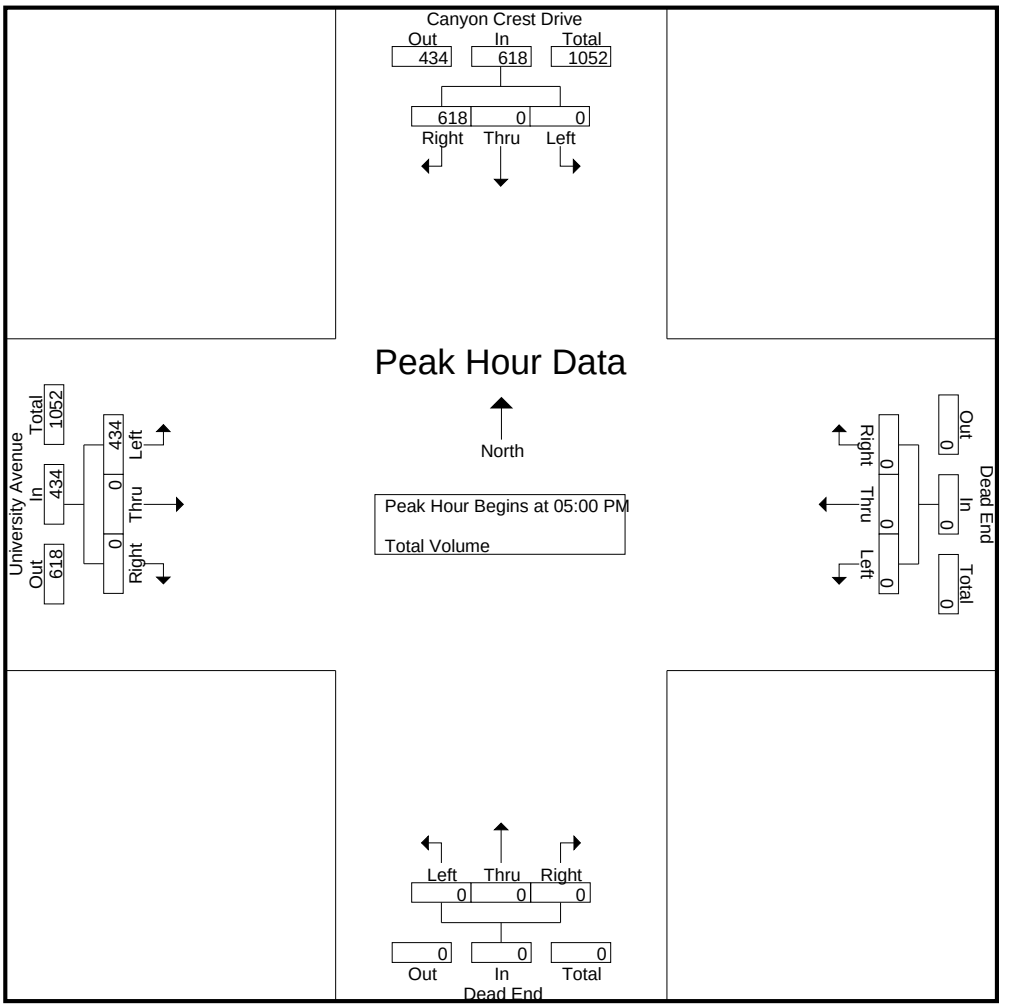

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:00 PM				05:00 PM			
+0 mins.	0	0	149	149	0	0	0	0	0	0	0	0	114	0	0	114
+15 mins.	0	0	**173**	**173**	0	0	0	0	0	0	0	0	113	0	0	113
+30 mins.	0	0	165	165	0	0	0	0	0	0	0	0	**119**	0	0	**119**
+45 mins.	0	0	136	136	0	0	0	0	0	0	0	0	88	0	0	88
Total Volume	0	0	623	623	0	0	0	0	0	0	0	0	434	0	0	434
% App. Total	0	0	100		0	0	0		0	0	0		100	0	0	
PHF	.000	.000	.900	.900	.000	.000	.000	.000	.000	.000	.000	.000	.912	.000	.000	.912

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File Name : 02_RIV_Canyon Crest_University PM
Site Code : 21718274
Start Date : 4/10/2018

Groups Printed- East Side

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	1	8	0	9	0	0	0	0	11
04:15 PM	0	2	1	3	0	0	0	0	3	1	0	4	0	0	0	0	7
04:30 PM	0	1	0	1	0	0	0	0	4	1	0	5	0	0	0	0	6
04:45 PM	0	0	0	0	0	0	0	0	3	3	0	6	0	0	2	2	8
Total	0	5	1	6	0	0	0	0	11	13	0	24	0	0	2	2	32
05:00 PM	0	1	0	1	0	0	0	0	5	4	0	9	0	0	0	0	10
05:15 PM	0	0	0	0	0	0	0	0	2	3	1	6	1	0	0	1	7
05:30 PM	0	1	0	1	0	0	0	0	1	6	0	7	0	0	0	0	8
05:45 PM	0	1	0	1	0	0	0	0	1	3	0	4	0	0	1	1	6
Total	0	3	0	3	0	0	0	0	9	16	1	26	1	0	1	2	31
06:00 PM	0	1	1	2	0	0	0	0	3	4	0	7	1	0	3	4	13
06:15 PM	0	1	1	2	0	0	0	0	1	2	0	3	0	0	0	0	5
06:30 PM	0	0	0	0	0	0	0	0	4	2	0	6	0	0	0	0	6
06:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	3	2	5	0	0	0	0	8	10	0	18	1	0	3	4	27
Grand Total	0	11	3	14	0	0	0	0	28	39	1	68	2	0	6	8	90
Apprch %	0	78.6	21.4		0	0	0		41.2	57.4	1.5		25	0	75		
Total %	0	12.2	3.3	15.6	0	0	0	0	31.1	43.3	1.1	75.6	2.2	0	6.7	8.9	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	0	0	0	0	0	0	0	0	2	3	**1**	6	**1**	0	0	1	7
05:30 PM	0	**1**	0	1	0	0	0	0	1	**6**	0	**7**	0	0	0	0	8
05:45 PM	0	1	0	1	0	0	0	0	1	3	0	4	0	0	1	1	6
06:00 PM	0	1	**1**	**2**	0	0	0	0	**3**	4	0	7	1	0	**3**	**4**	**13**
Total Volume	0	3	1	4	0	0	0	0	7	16	1	24	2	0	4	6	34
% App. Total	0	75	25		0	0	0		29.2	66.7	4.2		33.3	0	66.7		
PHF	.000	.750	.250	.500	.000	.000	.000	.000	.583	.667	.250	.857	.500	.000	.333	.375	.654

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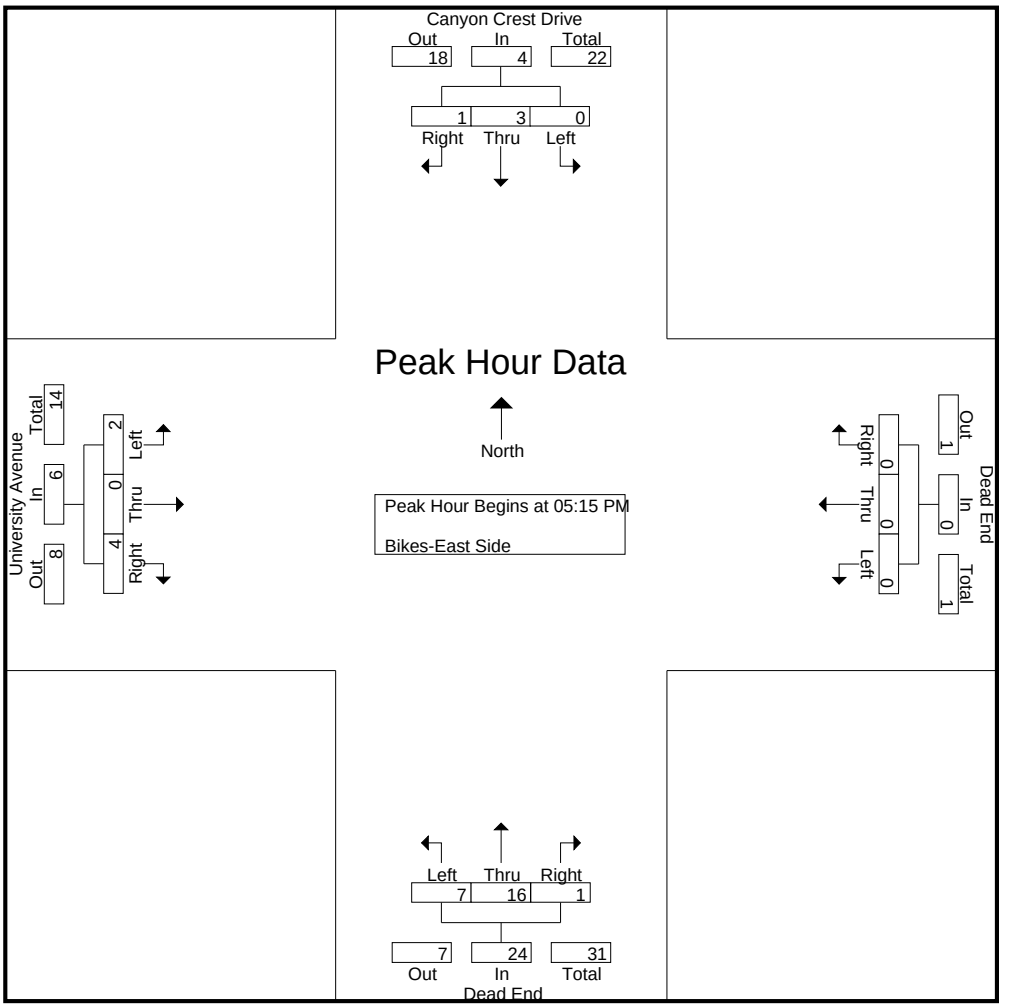

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				04:45 PM				05:15 PM			
+0 mins.	0	**2**	0	2	0	0	0	0	3	3	0	6	**1**	0	0	1
+15 mins.	0	2	**1**	**3**	0	0	0	0	**5**	4	0	**9**	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	2	3	**1**	6	0	0	1	1
+45 mins.	0	0	0	0	0	0	0	0	1	**6**	0	7	1	0	**3**	**4**
Total Volume	0	5	1	6	0	0	0	0	11	16	1	28	2	0	4	6
% App. Total	0	83.3	16.7		0	0	0		39.3	57.1	3.6		33.3	0	66.7	
PHF	.000	.625	.250	.500	.000	.000	.000	.000	.550	.667	.250	.778	.500	.000	.333	.375

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Start Date : 4/10/2018

Groups Printed- West Side

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grand Total	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
Apprch %	0	0	100		0	0	0		0	0	0		0	0	0		
Total %	0	0	100	100	0	0	0	0	0	0	0	0	0	0	0	0	

	Canyon Crest Drive Southbound				Dead End Westbound				Dead End Northbound				University Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	**2**	**2**	0	0	0	0	0	0	0	0	0	0	0	0	**2**
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0	3
% App. Total	0	0	100		0	0	0		0	0	0		0	0	0		
PHF	.000	.000	.375	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.375

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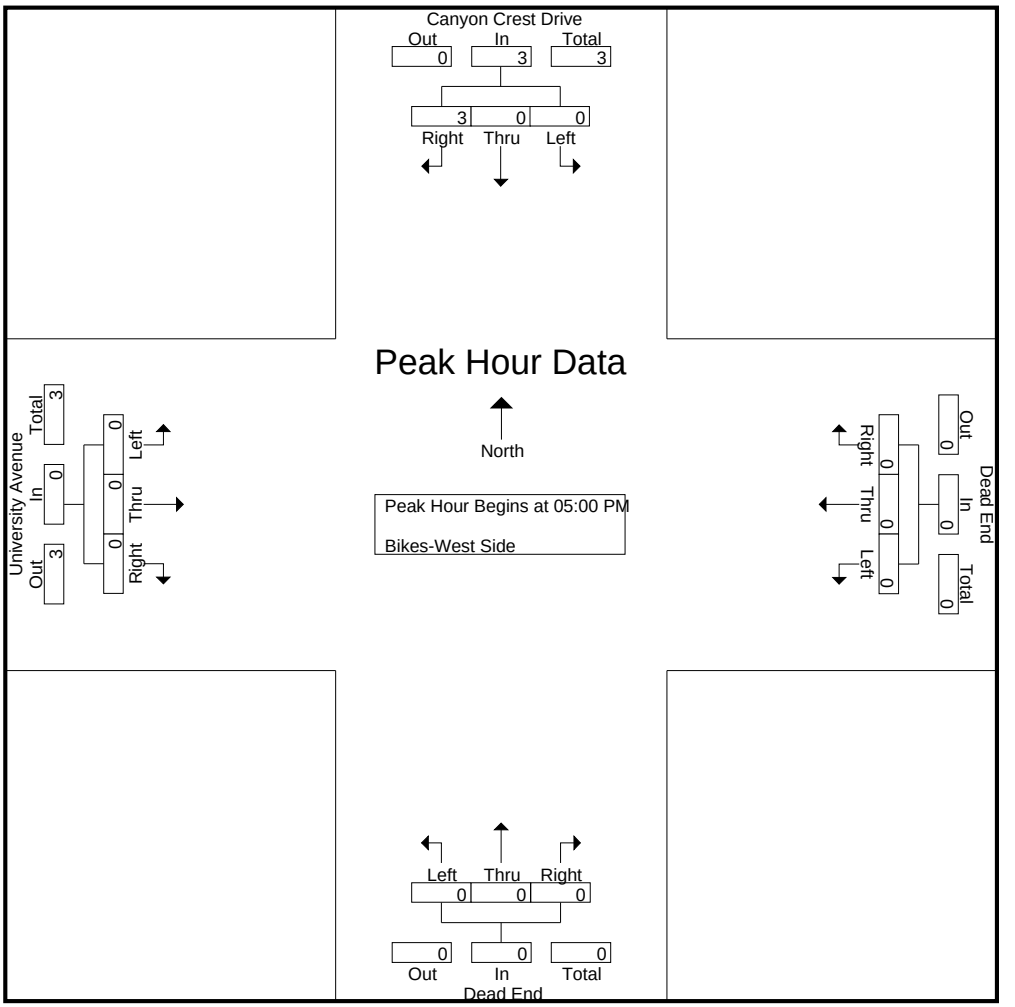

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM				04:00 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	**2**	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	3	3	0	0	0	0	0	0	0	0	0	0	0	0
% App. Total	0	0	100		0	0	0		0	0	0		0	0	0	
PHF	.000	.000	.375	.375	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

Location: Riverside
N/S: Canyon Crest Drive
E/W: University Avenue

Date: 4/10/2018
Day: Tuesday

PEDESTRIANS

	North Leg Canyon Crest Drive	East Leg Dead End	South Leg Dead End	West Leg University Avenue	TOTAL
7:00 AM	1	0	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	2	0	0	0	2
7:45 AM	1	0	0	0	1
8:00 AM	0	0	0	0	0
8:15 AM	2	0	0	0	2
8:30 AM	1	0	0	0	1
8:45 AM	3	0	0	0	3
TOTAL VOLUMES:	10	0	0	0	10

	North Leg Canyon Crest Drive	East Leg Dead End	South Leg Dead End	West Leg University Avenue	TOTAL
11:00 AM	3	0	0	0	3
11:15 AM	2	0	0	0	2
11:30 AM	1	0	0	0	1
11:45 AM	4	0	0	0	4
12:00 PM	1	0	0	0	1
12:15 PM	2	0	0	0	2
12:30 PM	1	0	0	0	1
12:45 PM	0	0	0	0	0
1:00 PM	2	0	0	0	2
1:15 PM	3	0	0	0	3
1:30 PM	2	0	0	0	2
1:45 PM	1	0	0	0	1
TOTAL VOLUMES:	22	0	0	0	22

	North Leg Canyon Crest Drive	East Leg Dead End	South Leg Dead End	West Leg University Avenue	TOTAL
4:00 PM	2	0	0	0	2
4:15 PM	0	0	0	0	0
4:30 PM	2	0	0	0	2
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	2	0	0	0	2
5:30 PM	2	0	0	0	2
5:45 PM	3	0	0	0	3
6:00 PM	3	0	0	0	3
6:15 PM	2	0	0	0	2
6:30 PM	1	0	0	0	1
6:45 PM	2	0	0	0	2
TOTAL VOLUMES:	20	0	0	0	20

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City of Riverside
N/S: Canyon Crest Drive
E/W: Bannockburn Village Driveway South
Weather: Clear

File Name : 03_RIV_Cyn Crest_Bannockburn DW_AM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Total Volume

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	33	1	34	0	0	0	0	1	42	0	43	0	0	0	0	77
07:15 AM	0	50	5	55	0	0	0	0	4	72	0	76	3	0	1	4	135
07:30 AM	0	65	4	69	0	0	0	0	8	117	0	125	1	0	4	5	199
07:45 AM	0	129	7	136	0	0	0	0	12	144	0	156	6	0	5	11	303
Total	0	277	17	294	0	0	0	0	25	375	0	400	10	0	10	20	714
08:00 AM	0	89	4	93	0	0	0	0	14	126	0	140	5	0	4	9	242
08:15 AM	0	57	2	59	0	0	0	0	8	87	1	96	0	0	2	2	157
08:30 AM	0	56	4	60	0	0	1	1	2	67	0	69	2	0	5	7	137
08:45 AM	0	91	9	100	0	0	0	0	6	84	0	90	5	0	6	11	201
Total	0	293	19	312	0	0	1	1	30	364	1	395	12	0	17	29	737
Grand Total	0	570	36	606	0	0	1	1	55	739	1	795	22	0	27	49	1451
Apprch %	0	94.1	5.9		0	0	100		6.9	93	0.1		44.9	0	55.1		
Total %	0	39.3	2.5	41.8	0	0	0.1	0.1	3.8	50.9	0.1	54.8	1.5	0	1.9	3.4	

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	65	4	69	0	0	0	0	8	117	0	125	1	0	4	5	199
07:45 AM	0	**129**	**7**	**136**	0	0	0	0	12	**144**	0	**156**	**6**	0	**5**	**11**	**303**
08:00 AM	0	89	4	93	0	0	0	0	**14**	126	0	140	5	0	4	9	242
08:15 AM	0	57	2	59	0	0	0	0	8	87	**1**	96	0	0	2	2	157
Total Volume	0	340	17	357	0	0	0	0	42	474	1	517	12	0	15	27	901
% App. Total	0	95.2	4.8		0	0	0		8.1	91.7	0.2		44.4	0	55.6		
PHF	.000	.659	.607	.656	.000	.000	.000	.000	.750	.823	.250	.829	.500	.000	.750	.614	.743

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File Name : 03_RIV_Cyn Crest_Bannockburn DW_AM
Site Code : 21718274
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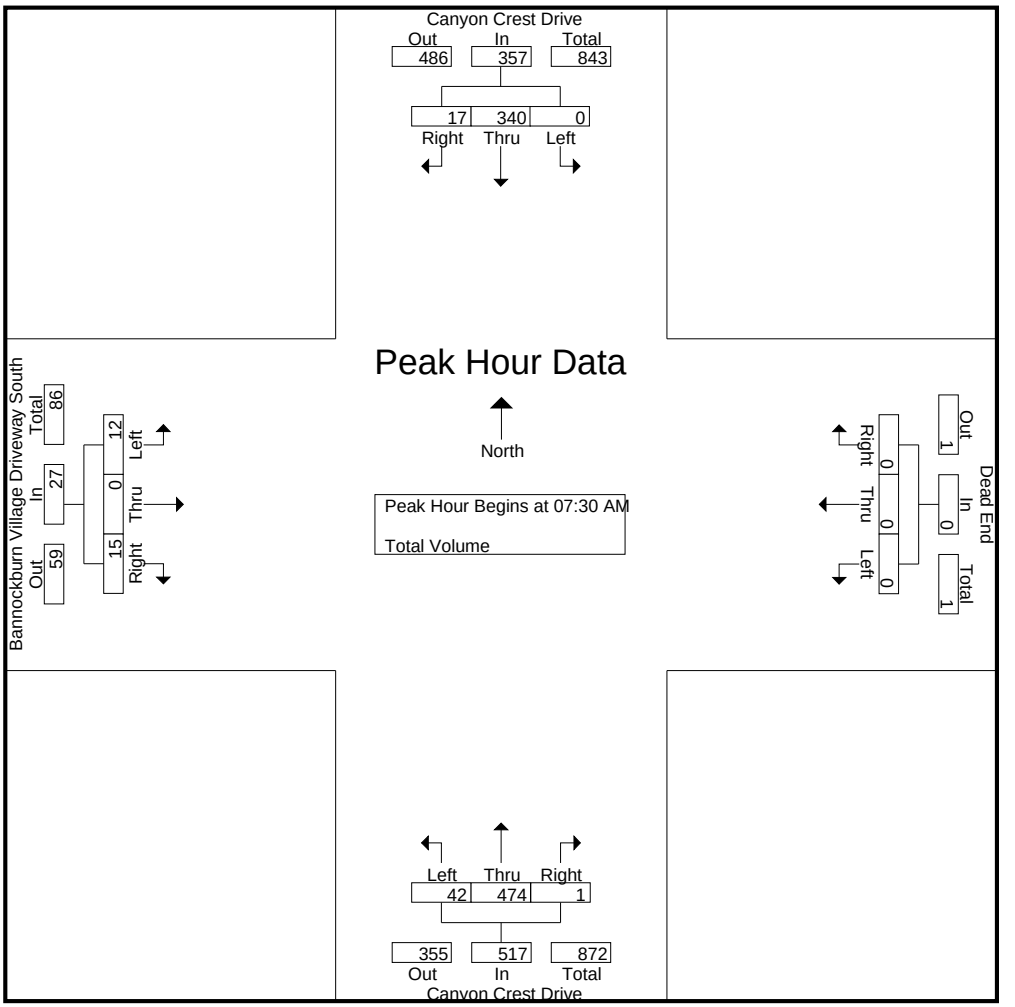

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:45 AM				07:30 AM				07:15 AM			
+0 mins.	0	65	4	69	0	0	0	0	8	117	0	125	3	0	1	4
+15 mins.	0	**129**	**7**	**136**	0	0	0	0	12	**144**	0	**156**	1	0	4	5
+30 mins.	0	89	4	93	0	0	0	0	**14**	126	0	140	**6**	0	**5**	**11**
+45 mins.	0	57	2	59	0	0	**1**	**1**	8	87	**1**	96	5	0	4	9
Total Volume	0	340	17	357	0	0	1	1	42	474	1	517	15	0	14	29
% App. Total	0	95.2	4.8		0	0	100		8.1	91.7	0.2		51.7	0	48.3	
PHF	.000	.659	.607	.656	.000	.000	.250	.250	.750	.823	.250	.829	.625	.000	.700	.659

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File Name : 03_RIV_Cyn Crest_Bannockburn DW_AM
Site Code : 21718274
Start Date : 4/10/2018
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Groups Printed- Bikes

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:15 AM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
07:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
07:45 AM	0	22	0	22	0	0	0	0	0	1	0	1	0	0	1	1	24
Total	0	27	0	27	0	0	0	0	0	7	0	7	0	0	1	1	35
08:00 AM	0	29	0	29	0	0	0	0	0	0	0	0	0	0	0	0	29
08:15 AM	0	10	0	10	0	0	0	0	0	0	0	0	1	0	1	2	12
08:30 AM	0	9	0	9	0	1	0	1	0	0	0	0	0	0	0	0	10
08:45 AM	0	18	0	18	0	0	0	0	0	2	0	2	0	0	0	0	20
Total	0	66	0	66	0	1	0	1	0	2	0	2	1	0	1	2	71
Grand Total	0	93	0	93	0	1	0	1	0	9	0	9	1	0	2	3	106
Apprch %	0	100	0		0	100	0		0	100	0		33.3	0	66.7		
Total %	0	87.7	0	87.7	0	0.9	0	0.9	0	8.5	0	8.5	0.9	0	1.9	2.8	

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	0	22	0	22	0	0	0	0	0	**1**	0	**1**	0	0	**1**	1	24
08:00 AM	0	**29**	0	**29**	0	0	0	0	0	0	0	0	0	0	0	0	**29**
08:15 AM	0	10	0	10	0	0	0	0	0	0	0	0	**1**	0	1	**2**	12
08:30 AM	0	9	0	9	0	**1**	0	**1**	0	0	0	0	0	0	0	0	10
Total Volume	0	70	0	70	0	1	0	1	0	1	0	1	1	0	2	3	75
% App. Total	0	100	0		0	100	0		0	100	0		33.3	0	66.7		
PHF	.000	.603	.000	.603	.000	.250	.000	.250	.000	.250	.000	.250	.250	.000	.500	.375	.647

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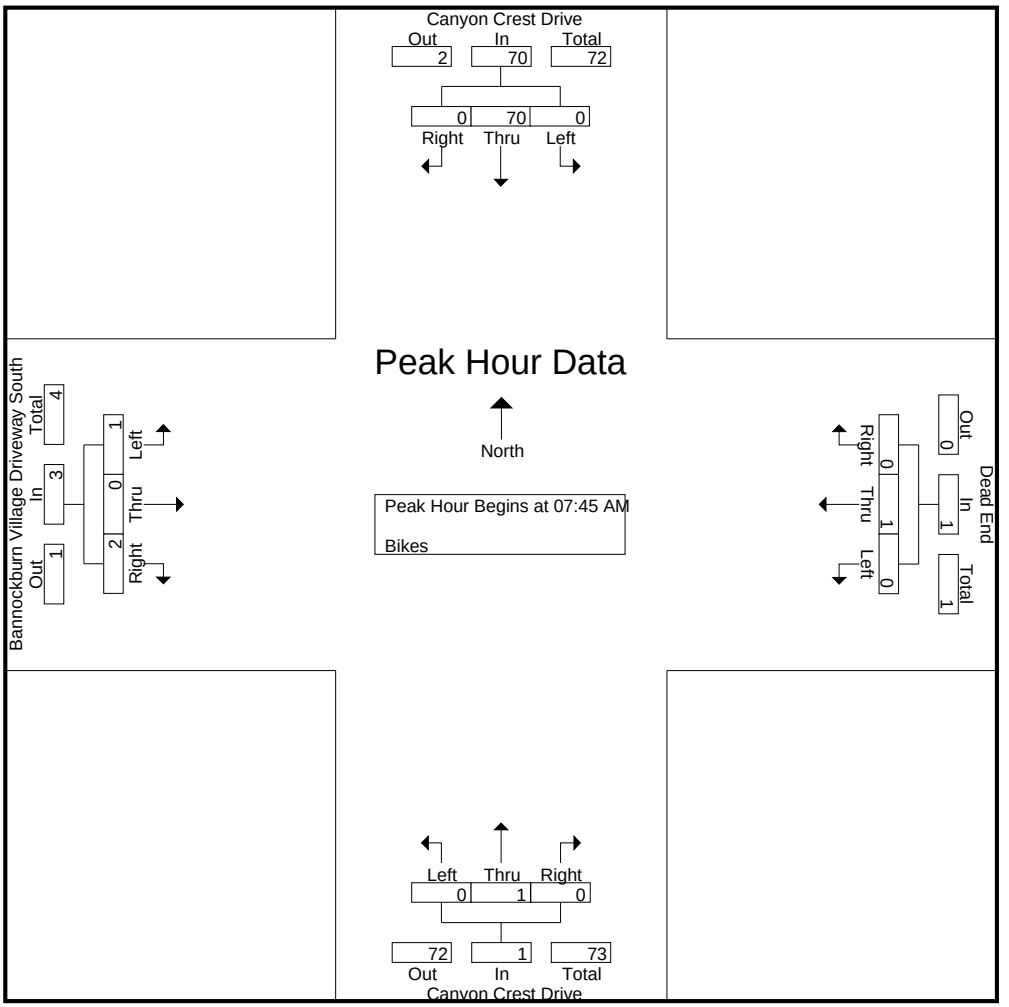
File Name : 03_RIV_Cyn Crest_Bannockburn DW_AM
Site Code : 21718274
Start Date : 4/10/2018



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				07:00 AM				07:30 AM			
+0 mins.	0	22	0	22	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	**29**	0	**29**	0	0	0	0	0	**3**	0	**3**	0	0	**1**	1
+30 mins.	0	10	0	10	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	9	0	9	0	**1**	0	**1**	0	1	0	1	**1**	0	1	**2**
Total Volume	0	70	0	70	0	1	0	1	0	7	0	7	1	0	2	3
% App. Total	0	100	0		0	100	0		0	100	0		33.3	0	66.7	
PHF	.000	.603	.000	.603	.000	.250	.000	.250	.000	.583	.000	.583	.250	.000	.500	.375

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File Name : 03_RIV_Cyn Crest_Bannockburn DW_MD
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Total Volume

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	94	5	99	0	0	0	0	9	87	0	96	7	0	14	21	216
11:15 AM	0	92	5	97	0	0	0	0	11	68	0	79	4	0	5	9	185
11:30 AM	0	64	7	71	0	0	0	0	11	68	0	79	5	0	8	13	163
11:45 AM	0	76	8	84	0	0	0	0	11	81	0	92	3	0	13	16	192
Total	0	326	25	351	0	0	0	0	42	304	0	346	19	0	40	59	756
12:00 PM	0	79	7	86	0	0	0	0	12	89	0	101	6	0	16	22	209
12:15 PM	0	92	10	102	0	0	0	0	9	100	0	109	1	0	13	14	225
12:30 PM	0	99	5	104	0	0	0	0	13	110	0	123	8	0	16	24	251
12:45 PM	0	80	2	82	0	0	0	0	8	98	0	106	6	0	9	15	203
Total	0	350	24	374	0	0	0	0	42	397	0	439	21	0	54	75	888
01:00 PM	0	94	2	96	0	0	0	0	10	72	0	82	9	0	2	11	189
01:15 PM	0	72	9	81	0	0	0	0	7	53	0	60	6	0	11	17	158
01:30 PM	0	80	6	86	0	0	0	0	4	82	0	86	3	0	9	12	184
01:45 PM	0	92	6	98	0	0	0	0	12	106	0	118	6	0	3	9	225
Total	0	338	23	361	0	0	0	0	33	313	0	346	24	0	25	49	756
Grand Total	0	1014	72	1086	0	0	0	0	117	1014	0	1131	64	0	119	183	2400
Apprch %	0	93.4	6.6		0	0	0		10.3	89.7	0		35	0	65		
Total %	0	42.2	3	45.2	0	0	0	0	4.9	42.2	0	47.1	2.7	0	5	7.6	

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 12:00 PM																	
12:00 PM	0	79	7	86	0	0	0	0	12	89	0	101	6	0	**16**	22	209
12:15 PM	0	92	**10**	102	0	0	0	0	9	100	0	109	1	0	13	14	225
12:30 PM	0	**99**	5	**104**	0	0	0	0	**13**	**110**	0	**123**	**8**	0	16	**24**	**251**
12:45 PM	0	80	2	82	0	0	0	0	8	98	0	106	6	0	9	15	203
Total Volume	0	350	24	374	0	0	0	0	42	397	0	439	21	0	54	75	888
% App. Total	0	93.6	6.4		0	0	0		9.6	90.4	0		28	0	72		
PHF	.000	.884	.600	.899	.000	.000	.000	.000	.808	.902	.000	.892	.656	.000	.844	.781	.884

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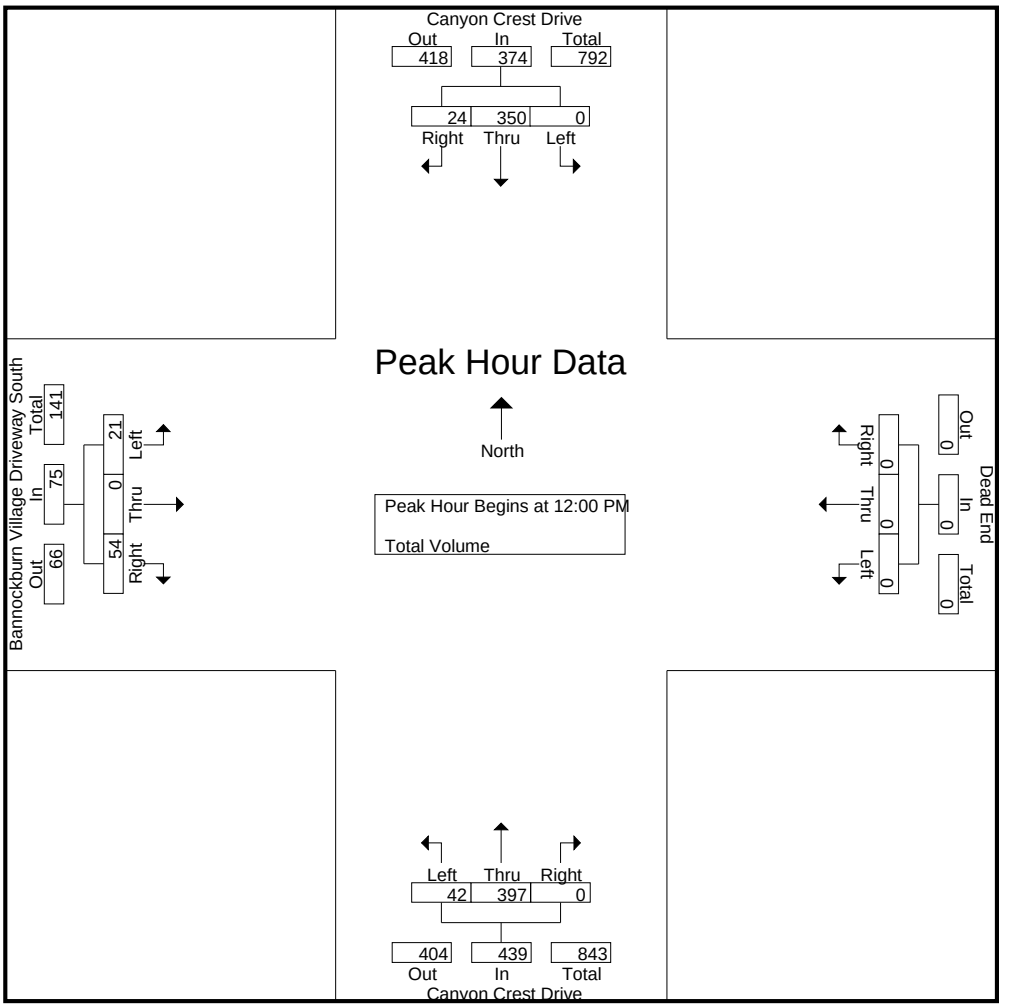
Weather: Clear

File Name : 03_RIV_Cyn Crest_Bannockburn DW_MD
Site Code : 21718274
Start Date : 4/10/2018



Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	12:15 PM				11:00 AM				12:00 PM				11:45 AM			
+0 mins.	0	92	**10**	102	0	0	0	0	12	89	0	101	3	0	13	16
+15 mins.	0	**99**	5	**104**	0	0	0	0	9	100	0	109	6	0	**16**	22
+30 mins.	0	80	2	82	0	0	0	0	**13**	**110**	0	**123**	1	0	13	14
+45 mins.	0	94	2	96	0	0	0	0	8	98	0	106	**8**	0	16	**24**
Total Volume	0	365	19	384	0	0	0	0	42	397	0	439	18	0	58	76
% App. Total	0	95.1	4.9		0	0	0		9.6	90.4	0		23.7	0	76.3	
PHF	.000	.922	.475	.923	.000	.000	.000	.000	.808	.902	.000	.892	.563	.000	.906	.792

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File Name : 03_RIV_Cyn Crest_Bannockburn DW_MD
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Bikes

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	16	0	16	0	0	0	0	1	19	0	20	0	0	0	0	36
11:15 AM	0	5	1	6	0	0	0	0	0	3	0	3	0	0	0	0	9
11:30 AM	0	6	0	6	0	0	0	0	0	2	0	2	0	0	1	1	9
11:45 AM	0	9	0	9	0	0	0	0	0	2	0	2	0	0	0	0	11
Total	0	36	1	37	0	0	0	0	1	26	0	27	0	0	1	1	65
12:00 PM	0	12	0	12	0	0	0	0	0	11	0	11	0	0	0	0	23
12:15 PM	0	8	0	8	0	0	0	0	0	9	0	9	0	0	0	0	17
12:30 PM	0	12	0	12	0	0	0	0	0	10	0	10	0	0	0	0	22
12:45 PM	0	8	1	9	0	0	0	0	0	2	0	2	0	0	0	0	11
Total	0	40	1	41	0	0	0	0	0	32	0	32	0	0	0	0	73
01:00 PM	0	10	0	10	0	0	0	0	1	9	0	10	0	0	1	1	21
01:15 PM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	1	1	9
01:30 PM	0	3	0	3	0	0	0	0	1	3	0	4	0	0	1	1	8
01:45 PM	0	13	0	13	0	0	0	0	1	9	0	10	0	0	1	1	24
Total	0	30	0	30	0	0	0	0	3	25	0	28	0	0	4	4	62
Grand Total	0	106	2	108	0	0	0	0	4	83	0	87	0	0	5	5	200
Apprch %	0	98.1	1.9		0	0	0		4.6	95.4	0		0	0	100		
Total %	0	53	1	54	0	0	0	0	2	41.5	0	43.5	0	0	2.5	2.5	

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:45 AM																	
11:45 AM	0	9	0	9	0	0	0	0	0	2	0	2	0	0	0	0	11
12:00 PM	0	**12**	0	**12**	0	0	0	0	0	**11**	0	**11**	0	0	0	0	**23**
12:15 PM	0	8	0	8	0	0	0	0	0	9	0	9	0	0	0	0	17
12:30 PM	0	12	0	12	0	0	0	0	0	10	0	10	0	0	0	0	22
Total Volume	0	41	0	41	0	0	0	0	0	32	0	32	0	0	0	0	73
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.854	.000	.854	.000	.000	.000	.000	.000	.727	.000	.727	.000	.000	.000	.000	.793

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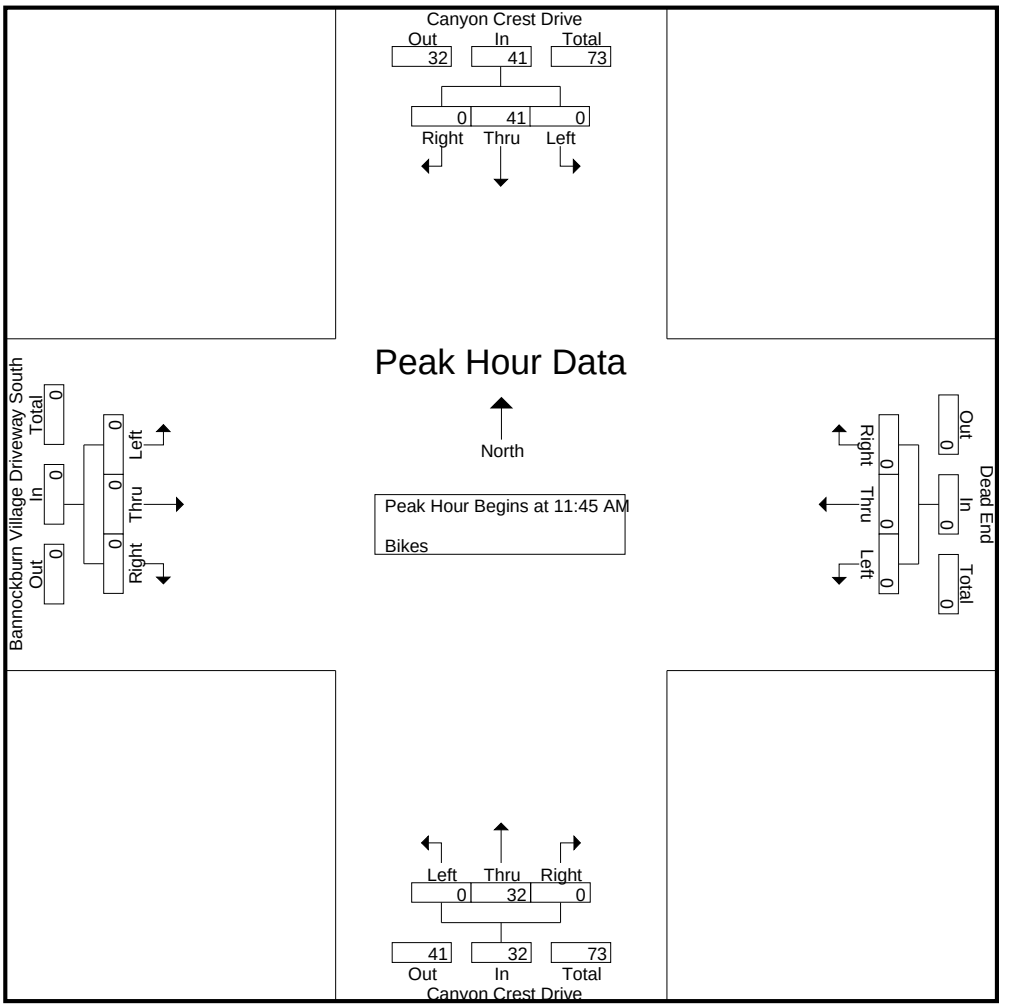

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:45 AM				11:00 AM				11:45 AM				01:00 PM			
+0 mins.	0	9	0	9	0	0	0	0	0	2	0	2	0	0	**1**	**1**
+15 mins.	0	**12**	0	**12**	0	0	0	0	0	**11**	0	**11**	0	0	1	1
+30 mins.	0	8	0	8	0	0	0	0	0	9	0	9	0	0	1	1
+45 mins.	0	12	0	12	0	0	0	0	0	10	0	10	0	0	1	1
Total Volume	0	41	0	41	0	0	0	0	0	32	0	32	0	0	4	4
% App. Total	0	100	0		0	0	0		0	100	0		0	0	100	
PHF	.000	.854	.000	.854	.000	.000	.000	.000	.000	.727	.000	.727	.000	.000	1.000	1.000

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File Name : 03_RIV_Cyn Crest_Bannockburn DW_PM
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Groups Printed- Total Volume

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	115	9	124	0	0	0	0	4	79	0	83	5	0	8	13	220
04:15 PM	0	93	4	97	0	0	0	0	7	65	0	72	5	0	11	16	185
04:30 PM	0	123	8	131	0	0	0	0	5	83	0	88	3	0	10	13	232
04:45 PM	0	145	5	150	0	0	0	0	8	74	0	82	4	0	7	11	243
Total	0	476	26	502	0	0	0	0	24	301	0	325	17	0	36	53	880
05:00 PM	0	169	3	172	0	0	0	0	9	105	0	114	6	0	9	15	301
05:15 PM	0	153	3	156	0	0	0	0	5	107	0	112	5	0	10	15	283
05:30 PM	0	131	2	133	0	0	0	0	7	111	0	118	7	0	12	19	270
05:45 PM	0	135	5	140	0	0	0	0	6	85	0	91	2	0	7	9	240
Total	0	588	13	601	0	0	0	0	27	408	0	435	20	0	38	58	1094
06:00 PM	0	119	8	127	0	0	0	0	6	102	0	108	5	0	8	13	248
06:15 PM	0	123	4	127	0	0	0	0	5	77	0	82	5	0	5	10	219
06:30 PM	0	123	5	128	0	0	0	0	3	103	0	106	3	0	5	8	242
06:45 PM	0	91	3	94	0	0	0	0	3	110	0	113	2	0	8	10	217
Total	0	456	20	476	0	0	0	0	17	392	0	409	15	0	26	41	926
Grand Total	0	1520	59	1579	0	0	0	0	68	1101	0	1169	52	0	100	152	2900
Apprch %	0	96.3	3.7		0	0	0		5.8	94.2	0		34.2	0	65.8		
Total %	0	52.4	2	54.4	0	0	0	0	2.3	38	0	40.3	1.8	0	3.4	5.2	

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	145	**5**	150	0	0	0	0	8	74	0	82	4	0	7	11	243
05:00 PM	0	**169**	3	**172**	0	0	0	0	**9**	105	0	114	6	0	9	15	**301**
05:15 PM	0	153	3	156	0	0	0	0	5	107	0	112	5	0	10	15	283
05:30 PM	0	131	2	133	0	0	0	0	7	**111**	0	**118**	**7**	0	**12**	**19**	270
Total Volume	0	598	13	611	0	0	0	0	29	397	0	426	22	0	38	60	1097
% App. Total	0	97.9	2.1		0	0	0		6.8	93.2	0		36.7	0	63.3		
PHF	.000	.885	.650	.888	.000	.000	.000	.000	.806	.894	.000	.903	.786	.000	.792	.789	.911

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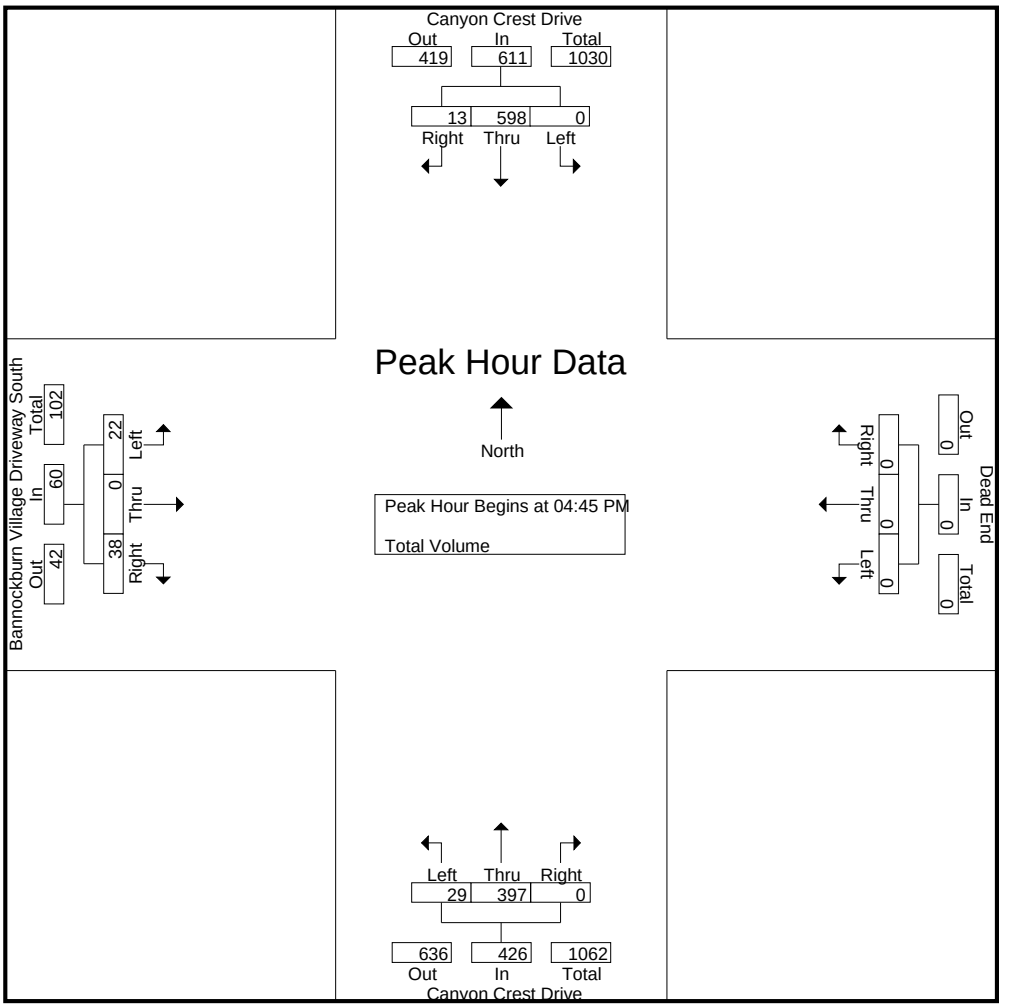
City of Riverside
N/S: Canyon Crest Drive
E/W: Bannockburn Village Driveway South
Weather: Clear

File Name : 03_RIV_Cyn Crest_Bannockburn DW_PM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				05:00 PM				04:45 PM			
+0 mins.	0	145	**5**	150	0	0	0	0	**9**	105	0	114	4	0	7	11
+15 mins.	0	**169**	3	**172**	0	0	0	0	5	107	0	112	6	0	9	15
+30 mins.	0	153	3	156	0	0	0	0	7	**111**	0	**118**	5	0	10	15
+45 mins.	0	131	2	133	0	0	0	0	6	85	0	91	**7**	0	**12**	**19**
Total Volume	0	598	13	611	0	0	0	0	27	408	0	435	22	0	38	60
% App. Total	0	97.9	2.1		0	0	0		6.2	93.8	0		36.7	0	63.3	
PHF	.000	.885	.650	.888	.000	.000	.000	.000	.750	.919	.000	.922	.786	.000	.792	.789

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City of Riverside
N/S: Canyon Crest Drive
E/W: Bannockburn Village Driveway South
Weather: Clear

File Name : 03_RIV_Cyn Crest_Bannockburn DW_PM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Bikes

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	0	2	0	2	0	0	0	0	0	7	0	7	0	0	0	0	9
04:15 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:45 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
Total	0	6	0	6	0	0	0	0	0	12	0	12	0	0	0	0	18
05:00 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
05:15 PM	0	2	0	2	0	0	0	0	1	2	0	3	0	0	0	0	5
05:30 PM	0	1	0	1	0	0	0	0	1	5	0	6	0	0	0	0	7
05:45 PM	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
Total	0	5	0	5	0	0	0	0	2	14	0	16	0	0	0	0	21
06:00 PM	0	2	0	2	0	0	0	0	1	3	0	4	0	0	0	0	6
06:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
06:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
06:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	5	0	5	0	0	0	0	1	8	0	9	0	0	0	0	14
Grand Total	0	16	0	16	0	0	0	0	3	34	0	37	0	0	0	0	53
Apprch %	0	100	0		0	0	0		8.1	91.9	0		0	0	0		
Total %	0	30.2	0	30.2	0	0	0	0	5.7	64.2	0	69.8	0	0	0	0	

	Canyon Crest Drive Southbound				Dead End Westbound				Canyon Crest Drive Northbound				Bannockburn Village Driveway South Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:15 PM																	
05:15 PM	0	**2**	0	**2**	0	0	0	0	**1**	2	0	3	0	0	0	0	5
05:30 PM	0	1	0	1	0	0	0	0	1	**5**	0	**6**	0	0	0	0	**7**
05:45 PM	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0	5
06:00 PM	0	2	0	2	0	0	0	0	1	3	0	4	0	0	0	0	6
Total Volume	0	6	0	6	0	0	0	0	3	14	0	17	0	0	0	0	23
% App. Total	0	100	0		0	0	0		17.6	82.4	0		0	0	0		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.750	.700	.000	.708	.000	.000	.000	.000	.821

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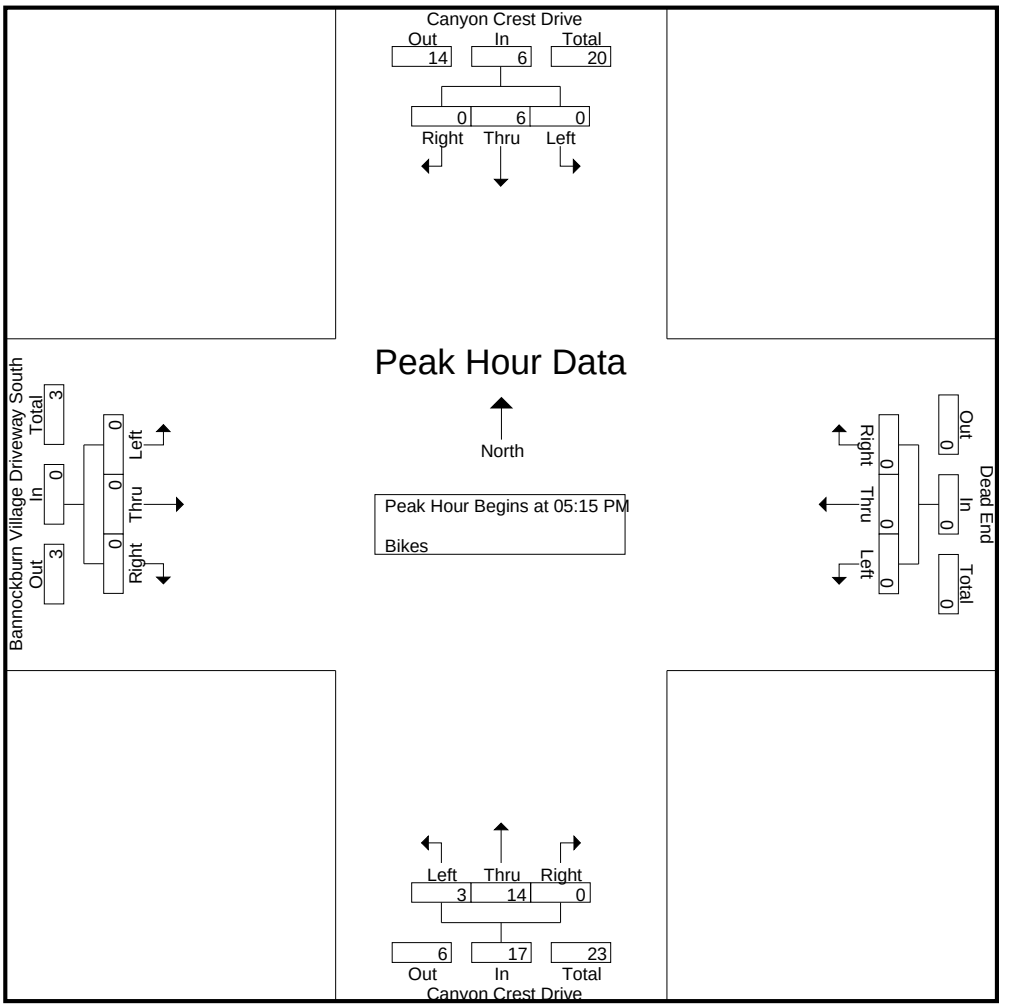
City of Riverside
N/S: Canyon Crest Drive
E/W: Bannockburn Village Driveway South
Weather: Clear

File Name : 03_RIV_Cyn Crest_Bannockburn DW_PM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:00 PM				05:15 PM				04:00 PM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	**1**	2	0	3	0	0	0	0
+15 mins.	0	2	0	2	0	0	0	0	1	**5**	0	**6**	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	4	0	4	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	1	3	0	4	0	0	0	0
Total Volume	0	6	0	6	0	0	0	0	3	14	0	17	0	0	0	0
% App. Total	0	100	0		0	0	0		17.6	82.4	0		0	0	0	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.750	.700	.000	.708	.000	.000	.000	.000

Location: Riverside
N/S: Canyon Crest Drive
E/W: Bannockburn Village

Date: 4/10/2018
Day: Tuesday

PEDESTRIANS

	North Leg Canyon Crest Drive	East Leg Dead End	South Leg Canyon Crest Drive	West Leg Bannockburn Village	TOTAL
7:00 AM	9	0	0	0	9
7:15 AM	10	0	0	3	13
7:30 AM	25	0	0	0	25
7:45 AM	180	0	3	4	187
8:00 AM	96	0	7	5	108
8:15 AM	46	0	1	4	51
8:30 AM	40	0	1	13	54
8:45 AM	82	0	4	10	96
TOTAL VOLUMES:	488	0	16	39	543

	North Leg Canyon Crest Drive	East Leg Dead End	South Leg Canyon Crest Drive	West Leg Bannockburn Village	TOTAL
11:00 AM	162	0	8	8	178
11:15 AM	61	0	5	6	72
11:30 AM	75	0	1	3	79
11:45 AM	41	0	8	3	52
12:00 PM	89	0	6	19	114
12:15 PM	116	0	2	4	122
12:30 PM	145	0	10	9	164
12:45 PM	86	0	5	11	102
1:00 PM	53	0	4	5	62
1:15 PM	40	0	5	9	54
1:30 PM	79	0	3	7	89
1:45 PM	127	0	5	7	139
TOTAL VOLUMES:	1074	0	62	91	1227

	North Leg Canyon Crest Drive	East Leg Dead End	South Leg Canyon Crest Drive	West Leg Bannockburn Village	TOTAL
4:00 PM	65	0	0	10	75
4:15 PM	77	0	0	20	97
4:30 PM	64	0	0	13	77
4:45 PM	73	0	0	6	79
5:00 PM	65	0	0	7	72
5:15 PM	68	0	0	2	70
5:30 PM	51	0	0	5	56
5:45 PM	64	0	0	2	66
6:00 PM	32	0	0	4	36
6:15 PM	45	0	0	4	49
6:30 PM	51	0	0	1	52
6:45 PM	62	0	0	18	80
TOTAL VOLUMES:	717	0	0	92	809

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City of Riverside
N/S: Aberdeen Drive
E/W: North Campus Drive
Weather: Clear

File Name : 04_RIV_Aberdeen Dr_N Campus AM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Total Volume

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	24	0	8	32	0	3	15	18	0	0	0	0	5	1	0	6	56
07:15 AM	42	0	8	50	0	9	33	42	0	0	0	0	6	0	0	6	98
07:30 AM	58	0	13	71	0	9	37	46	0	0	0	0	4	8	0	12	129
07:45 AM	56	0	8	64	0	7	22	29	0	0	0	0	4	1	0	5	98
Total	180	0	37	217	0	28	107	135	0	0	0	0	19	10	0	29	381
08:00 AM	23	0	10	33	0	2	25	27	0	0	0	0	3	0	0	3	63
08:15 AM	26	0	9	35	0	5	24	29	0	0	0	0	1	5	0	6	70
08:30 AM	44	0	8	52	0	1	32	33	0	0	0	0	6	2	0	8	93
08:45 AM	42	0	8	50	0	5	28	33	0	0	0	0	3	0	0	3	86
Total	135	0	35	170	0	13	109	122	0	0	0	0	13	7	0	20	312
Grand Total	315	0	72	387	0	41	216	257	0	0	0	0	32	17	0	49	693
Apprch %	81.4	0	18.6		0	16	84		0	0	0		65.3	34.7	0		
Total %	45.5	0	10.4	55.8	0	5.9	31.2	37.1	0	0	0	0	4.6	2.5	0	7.1	

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	42	0	8	50	0	**9**	33	42	0	0	0	0	**6**	0	0	6	98
07:30 AM	**58**	0	**13**	**71**	0	9	**37**	**46**	0	0	0	0	4	**8**	0	**12**	**129**
07:45 AM	56	0	8	64	0	7	22	29	0	0	0	0	4	1	0	5	98
08:00 AM	23	0	10	33	0	2	25	27	0	0	0	0	3	0	0	3	63
Total Volume	179	0	39	218	0	27	117	144	0	0	0	0	17	9	0	26	388
% App. Total	82.1	0	17.9		0	18.8	81.2		0	0	0		65.4	34.6	0		
PHF	.772	.000	.750	.768	.000	.750	.791	.783	.000	.000	.000	.000	.708	.281	.000	.542	.752

Counts Unlimited, Inc.

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City of Riverside
Canyon Crest Drive
N/ University Avenue
24 Hour Directional Volume Count

RIV001
Site Code: 217-18274

Start Time	4/10/2018 Tue	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		36	**96**			26	97				
12:15		21	**108**			27	92				
12:30		18	**127**			21	123				
12:45		18	**112**	93	443	10	89	84	401	177	844
01:00		10	86			19	90				
01:15		8	63			10	95				
01:30		9	81			7	81				
01:45		9	118	36	348	3	95	39	361	75	709
02:00		4	100			6	111				
02:15		5	95			6	107				
02:30		1	70			3	107				
02:45		4	74	14	339	1	121	16	446	30	785
03:00		13	99			8	108				
03:15		3	98			3	96				
03:30		4	121			0	144				
03:45		2	114	22	432	4	131	15	479	37	911
04:00		0	86			4	129				
04:15		5	76			2	101				
04:30		5	85			5	126				
04:45		6	89	16	336	5	**145**	16	501	32	837
05:00		6	110			8	**157**				
05:15		14	107			7	**168**				
05:30		32	124			8	**143**				
05:45		56	93	108	434	8	137	31	605	139	1039
06:00		54	100			23	120				
06:15		33	87			12	126				
06:30		35	94			33	139				
06:45		52	113	174	394	25	97	93	482	267	876
07:00		47	102			26	122				
07:15		74	75			52	100				
07:30		**118**	86			74	100				
07:45		**152**	70	391	333	116	149	268	471	659	804
08:00		**151**	97			127	114				
08:15		**105**	106			56	125				
08:30		70	73			71	80				
08:45		88	76	414	352	86	69	340	388	754	740
09:00		103	91			82	73				
09:15		109	85			91	89				
09:30		109	72			92	72				
09:45		92	57	413	305	81	70	346	304	759	609
10:00		73	61			73	74				
10:15		57	49			77	60				
10:30		90	53			**81**	60				
10:45		121	35	341	198	**101**	39	332	233	673	431
11:00		96	44			**109**	41				
11:15		73	38			**98**	42				
11:30		82	36			80	56				
11:45		90	32	341	150	82	41	369	180	710	330
Total		2363	4064	2363	4064	1949	4851	1949	4851	4312	8915
Combined Total		6427		6427		6800		6800		13227	
AM Peak	-	07:30	-	-	-	10:30	-	-	-	-	-
Vol.	-	526	-	-	-	389	-	-	-	-	-
P.H.F.		0.865				0.766					
PM Peak	-	-	12:00	-	-	-	04:45	-	-	-	-
Vol.	-	-	443	-	-	-	613	-	-	-	-
P.H.F.			0.872				0.912				
Percentage		36.8%	63.2%			28.7%	71.3%				
ADT/AADT		ADT 13,227		AADT 13,227							

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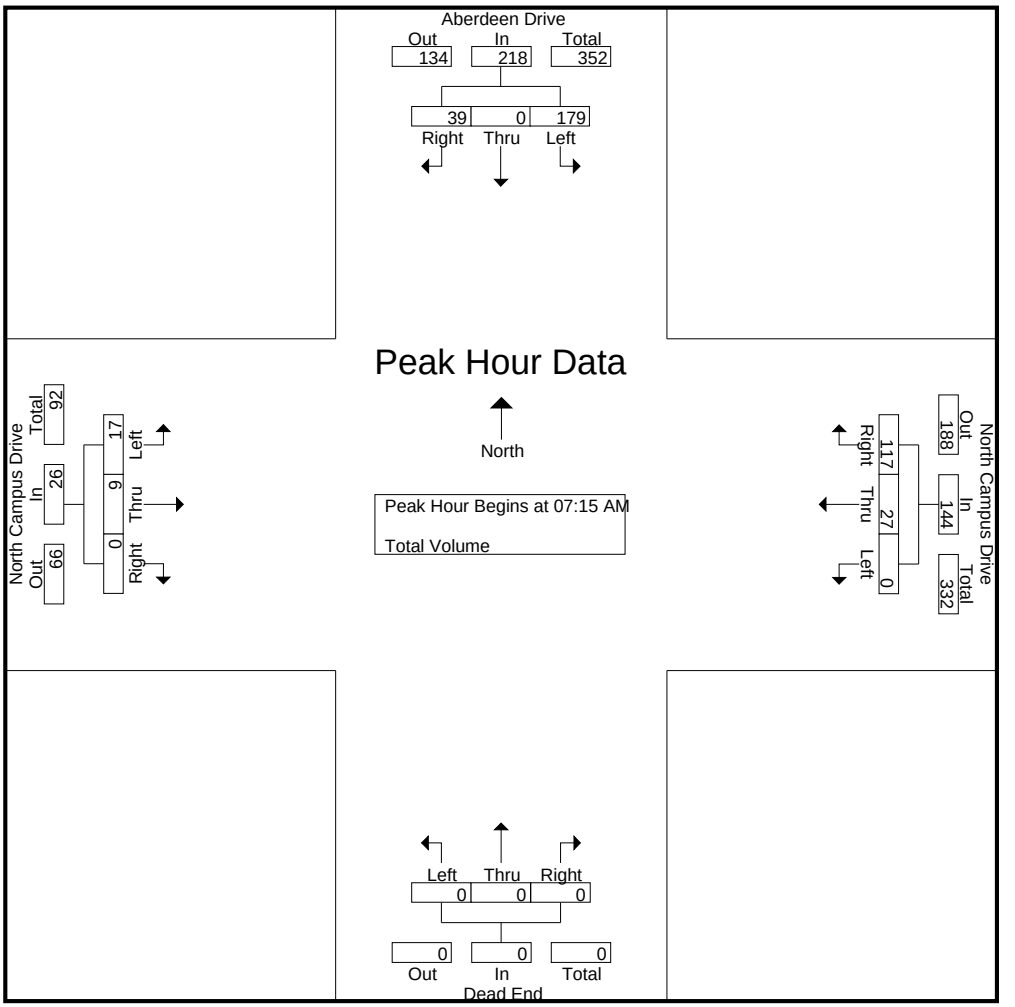
City of Riverside
N/S: Aberdeen Drive
E/W: North Campus Drive
Weather: Clear

File Name : 04_RIV_Aberdeen Dr_N Campus AM
Site Code : 21718274
Start Date : 4/10/2018



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:00 AM			
+0 mins.	42	0	8	50	0	**9**	33	42	0	0	0	0	5	1	0	6
+15 mins.	**58**	0	**13**	**71**	0	9	**37**	**46**	0	0	0	0	**6**	0	0	6
+30 mins.	56	0	8	64	0	7	22	29	0	0	0	0	4	**8**	0	**12**
+45 mins.	23	0	10	33	0	2	25	27	0	0	0	0	4	1	0	5
Total Volume	179	0	39	218	0	27	117	144	0	0	0	0	19	10	0	29
% App. Total	82.1	0	17.9		0	18.8	81.2		0	0	0		65.5	34.5	0	
PHF	.772	.000	.750	.768	.000	.750	.791	.783	.000	.000	.000	.000	.792	.313	.000	.604

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City of Riverside
N/S: Aberdeen Drive
E/W: North Campus Drive
Weather: Clear

File Name : 04_RIV_Aberdeen Dr_N Campus AM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 1

Groups Printed- Bikes

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	0	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2
07:15 AM	3	1	5	9	0	2	1	3	0	0	0	0	0	3	0	3	15
07:30 AM	5	0	1	6	0	4	1	5	0	0	0	0	0	3	0	3	14
07:45 AM	4	0	1	5	0	5	0	5	0	0	0	0	1	4	0	5	15
Total	13	1	7	21	0	11	2	13	0	0	0	0	1	11	0	12	46
08:00 AM	4	0	0	4	0	1	0	1	0	0	0	0	0	3	0	3	8
08:15 AM	1	0	1	2	0	2	0	2	0	0	0	0	0	4	0	4	8
08:30 AM	6	0	2	8	0	12	1	13	0	0	0	0	0	6	0	6	27
08:45 AM	1	0	0	1	0	4	0	4	0	0	0	0	0	0	0	0	5
Total	12	0	3	15	0	19	1	20	0	0	0	0	0	13	0	13	48
Grand Total	25	1	10	36	0	30	3	33	0	0	0	0	1	24	0	25	94
Apprch %	69.4	2.8	27.8		0	90.9	9.1		0	0	0		4	96	0		
Total %	26.6	1.1	10.6	38.3	0	31.9	3.2	35.1	0	0	0	0	1.1	25.5	0	26.6	

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:45 AM																	
07:45 AM	4	0	1	5	0	5	0	5	0	0	0	0	**1**	4	0	5	15
08:00 AM	4	0	0	4	0	1	0	1	0	0	0	0	0	3	0	3	8
08:15 AM	1	0	1	2	0	2	0	2	0	0	0	0	0	4	0	4	8
08:30 AM	**6**	0	**2**	**8**	0	**12**	**1**	**13**	0	0	0	0	0	**6**	0	**6**	**27**
Total Volume	15	0	4	19	0	20	1	21	0	0	0	0	1	17	0	18	58
% App. Total	78.9	0	21.1		0	95.2	4.8		0	0	0		5.6	94.4	0		
PHF	.625	.000	.500	.594	.000	.417	.250	.404	.000	.000	.000	.000	.250	.708	.000	.750	.537

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Site Code : 21718274
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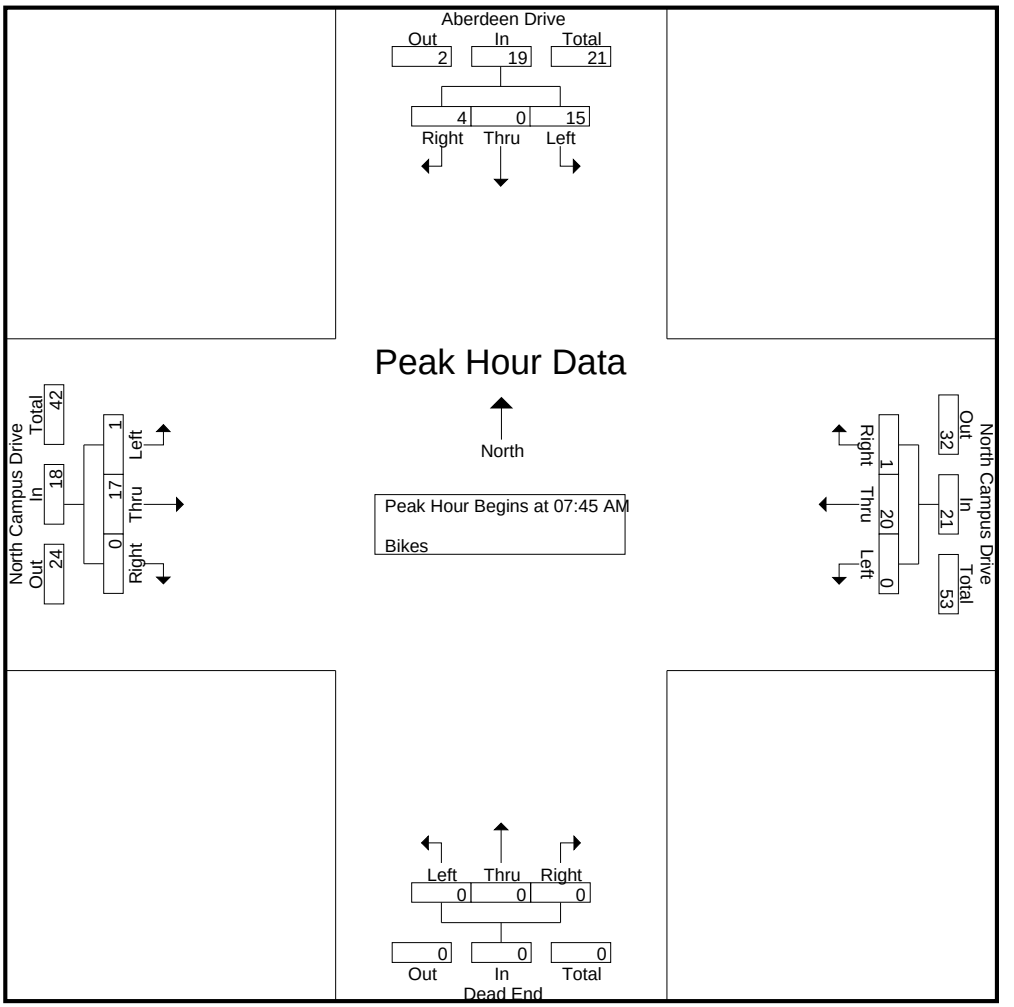

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:45 AM				07:00 AM				07:45 AM			
+0 mins.	3	**1**	**5**	**9**	0	5	0	5	0	0	0	0	**1**	4	0	5
+15 mins.	**5**	0	1	6	0	1	0	1	0	0	0	0	0	3	0	3
+30 mins.	4	0	1	5	0	2	0	2	0	0	0	0	0	4	0	4
+45 mins.	4	0	0	4	0	**12**	**1**	**13**	0	0	0	0	0	**6**	0	**6**
Total Volume	16	1	7	24	0	20	1	21	0	0	0	0	1	17	0	18
% App. Total	66.7	4.2	29.2		0	95.2	4.8		0	0	0		5.6	94.4	0	
PHF	.800	.250	.350	.667	.000	.417	.250	.404	.000	.000	.000	.000	.250	.708	.000	.750

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File Name : 04_RIV_Aberdeen Dr_N Campus MD
Site Code : 21718274
Start Date : 4/10/2018

Groups Printed- Total Volume

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	33	0	4	37	0	1	35	36	0	0	0	0	2	3	0	5	78
11:15 AM	34	0	5	39	0	6	46	52	0	0	0	0	1	6	0	7	98
11:30 AM	45	0	5	50	0	3	34	37	0	0	0	0	8	10	0	18	105
11:45 AM	50	0	2	52	0	4	34	38	0	0	0	0	6	4	0	10	100
Total	162	0	16	178	0	14	149	163	0	0	0	0	17	23	0	40	381
12:00 PM	59	0	5	64	0	3	38	41	0	0	0	0	4	6	0	10	115
12:15 PM	55	0	6	61	0	3	42	45	0	0	0	0	6	5	0	11	117
12:30 PM	43	0	2	45	0	6	25	31	0	0	0	0	1	3	0	4	80
12:45 PM	41	0	9	50	0	4	30	34	0	0	0	0	0	4	0	4	88
Total	198	0	22	220	0	16	135	151	0	0	0	0	11	18	0	29	400
01:00 PM	33	0	11	44	0	3	27	30	0	0	0	0	6	0	0	6	80
01:15 PM	54	0	5	59	0	1	35	36	0	0	0	0	4	1	0	5	100
01:30 PM	56	0	6	62	0	3	42	45	0	0	0	0	5	4	0	9	116
01:45 PM	43	0	1	44	0	4	42	46	0	0	0	0	5	5	0	10	100
Total	186	0	23	209	0	11	146	157	0	0	0	0	20	10	0	30	396
Grand Total	546	0	61	607	0	41	430	471	0	0	0	0	48	51	0	99	1177
Apprch %	90	0	10		0	8.7	91.3		0	0	0		48.5	51.5	0		
Total %	46.4	0	5.2	51.6	0	3.5	36.5	40	0	0	0	0	4.1	4.3	0	8.4	

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 11:30 AM																	
11:30 AM	45	0	5	50	0	3	34	37	0	0	0	0	**8**	**10**	0	**18**	105
11:45 AM	50	0	2	52	0	**4**	34	38	0	0	0	0	6	4	0	10	100
12:00 PM	**59**	0	5	**64**	0	3	38	41	0	0	0	0	4	6	0	10	115
12:15 PM	55	0	**6**	61	0	3	**42**	**45**	0	0	0	0	6	5	0	11	**117**
Total Volume	209	0	18	227	0	13	148	161	0	0	0	0	24	25	0	49	437
% App. Total	92.1	0	7.9		0	8.1	91.9		0	0	0		49	51	0		
PHF	.886	.000	.750	.887	.000	.813	.881	.894	.000	.000	.000	.000	.750	.625	.000	.681	.934

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Site Code : 21718274
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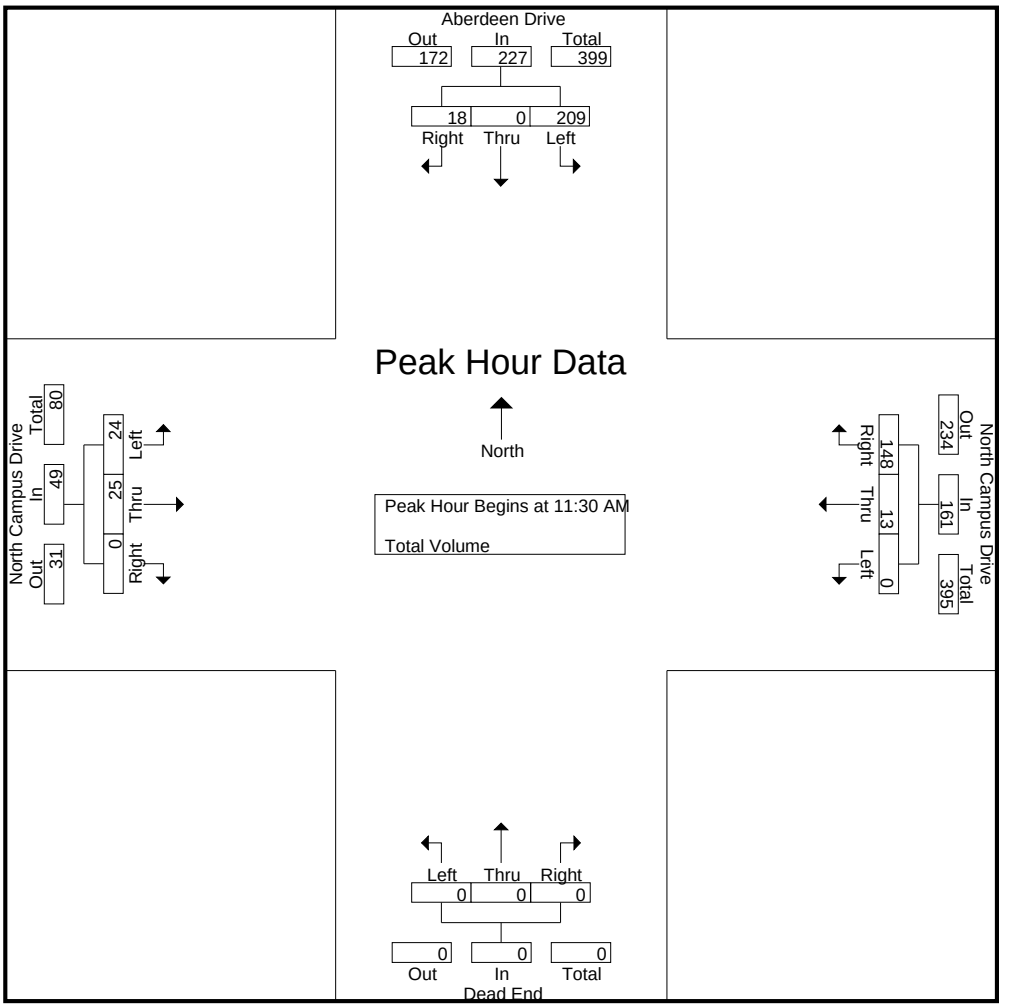

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	11:30 AM				11:15 AM				11:00 AM				11:30 AM			
+0 mins.	45	0	5	50	0	**6**	**46**	**52**	0	0	0	0	**8**	**10**	0	**18**
+15 mins.	50	0	2	52	0	3	34	37	0	0	0	0	6	4	0	10
+30 mins.	**59**	0	5	**64**	0	4	34	38	0	0	0	0	4	6	0	10
+45 mins.	55	0	**6**	61	0	3	38	41	0	0	0	0	6	5	0	11
Total Volume	209	0	18	227	0	16	152	168	0	0	0	0	24	25	0	49
% App. Total	92.1	0	7.9		0	9.5	90.5		0	0	0		49	51	0	
PHF	.886	.000	.750	.887	.000	.667	.826	.808	.000	.000	.000	.000	.750	.625	.000	.681

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File Name : 04_RIV_Aberdeen Dr_N Campus MD
Site Code : 21718274
Start Date : 4/10/2018

Groups Printed- Bikes

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
11:00 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	2	0	2	3
11:15 AM	1	0	1	2	0	2	0	2	0	0	0	0	0	0	0	0	4
11:30 AM	0	0	1	1	0	0	3	3	1	1	0	2	1	1	0	2	8
11:45 AM	4	0	0	4	0	0	0	0	0	1	0	1	1	1	0	2	7
Total	5	0	2	7	0	2	4	6	1	2	0	3	2	4	0	6	22
12:00 PM	0	0	0	0	0	4	1	5	0	0	0	0	0	1	0	1	6
12:15 PM	4	0	1	5	0	2	1	3	0	0	0	0	1	2	0	3	11
12:30 PM	1	0	1	2	0	5	0	5	0	0	0	0	1	1	0	2	9
12:45 PM	0	0	0	0	0	2	0	2	0	0	0	0	0	1	0	1	3
Total	5	0	2	7	0	13	2	15	0	0	0	0	2	5	0	7	29
01:00 PM	0	0	2	2	0	1	2	3	0	0	0	0	1	1	0	2	7
01:15 PM	2	0	2	4	0	3	0	3	0	0	0	0	4	4	0	8	15
01:30 PM	1	0	7	8	0	13	6	19	0	0	0	0	6	10	0	16	43
01:45 PM	2	0	1	3	0	3	2	5	0	0	0	0	2	2	0	4	12
Total	5	0	12	17	0	20	10	30	0	0	0	0	13	17	0	30	77
Grand Total	15	0	16	31	0	35	16	51	1	2	0	3	17	26	0	43	128
Apprch %	48.4	0	51.6		0	68.6	31.4		33.3	66.7	0		39.5	60.5	0		
Total %	11.7	0	12.5	24.2	0	27.3	12.5	39.8	0.8	1.6	0	2.3	13.3	20.3	0	33.6	

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 01:00 PM																	
01:00 PM	0	0	2	2	0	1	2	3	0	0	0	0	1	1	0	2	7
01:15 PM	**2**	0	2	4	0	3	0	3	0	0	0	0	4	4	0	8	15
01:30 PM	1	0	**7**	**8**	0	**13**	**6**	**19**	0	0	0	0	**6**	**10**	0	**16**	**43**
01:45 PM	2	0	1	3	0	3	2	5	0	0	0	0	2	2	0	4	12
Total Volume	5	0	12	17	0	20	10	30	0	0	0	0	13	17	0	30	77
% App. Total	29.4	0	70.6		0	66.7	33.3		0	0	0		43.3	56.7	0		
PHF	.625	.000	.429	.531	.000	.385	.417	.395	.000	.000	.000	.000	.542	.425	.000	.469	.448

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Site Code : 21718274
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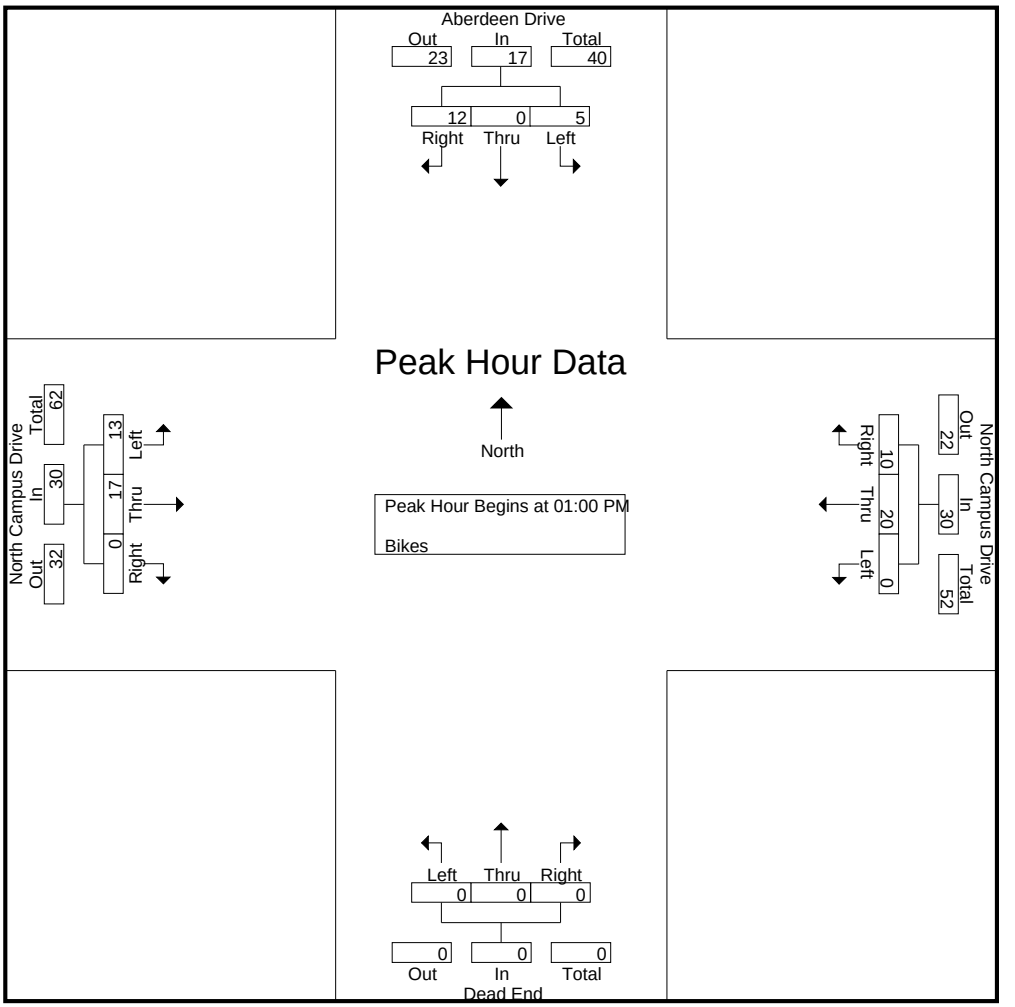

Peak Hour Analysis From 11:00 AM to 01:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	01:00 PM				01:00 PM				11:00 AM				01:00 PM			
+0 mins.	0	0	2	2	0	1	2	3	0	0	0	0	1	1	0	2
+15 mins.	**2**	0	2	4	0	3	0	3	0	0	0	0	4	4	0	8
+30 mins.	1	0	**7**	**8**	0	**13**	**6**	**19**	**1**	**1**	0	**2**	**6**	**10**	0	**16**
+45 mins.	2	0	1	3	0	3	2	5	0	1	0	1	2	2	0	4
Total Volume	5	0	12	17	0	20	10	30	1	2	0	3	13	17	0	30
% App. Total	29.4	0	70.6		0	66.7	33.3		33.3	66.7	0		43.3	56.7	0	
PHF	.625	.000	.429	.531	.000	.385	.417	.395	.250	.500	.000	.375	.542	.425	.000	.469

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Groups Printed- Total Volume

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	31	0	2	33	0	2	37	39	0	0	0	0	8	12	0	20	92
04:15 PM	40	0	4	44	0	2	37	39	0	0	0	0	6	4	0	10	93
04:30 PM	72	0	2	74	0	4	51	55	0	0	0	0	16	13	0	29	158
04:45 PM	82	0	4	86	0	4	53	57	0	0	0	0	14	13	0	27	170
Total	225	0	12	237	0	12	178	190	0	0	0	0	44	42	0	86	513
05:00 PM	48	0	1	49	0	4	36	40	0	0	0	0	4	10	0	14	103
05:15 PM	60	0	3	63	0	0	57	57	0	0	0	0	8	4	0	12	132
05:30 PM	42	0	1	43	0	2	33	35	0	0	0	0	10	8	0	18	96
05:45 PM	36	0	1	37	0	0	34	34	0	0	0	0	5	3	0	8	79
Total	186	0	6	192	0	6	160	166	0	0	0	0	27	25	0	52	410
06:00 PM	67	0	0	67	0	1	43	44	0	0	0	0	12	3	0	15	126
06:15 PM	66	0	3	69	0	3	40	43	0	0	0	0	3	7	0	10	122
06:30 PM	62	0	5	67	0	1	54	55	0	0	0	0	4	2	0	6	128
06:45 PM	34	0	3	37	0	3	51	54	0	0	0	0	0	6	0	6	97
Total	229	0	11	240	0	8	188	196	0	0	0	0	19	18	0	37	473
Grand Total	640	0	29	669	0	26	526	552	0	0	0	0	90	85	0	175	1396
Apprch %	95.7	0	4.3		0	4.7	95.3		0	0	0		51.4	48.6	0		
Total %	45.8	0	2.1	47.9	0	1.9	37.7	39.5	0	0	0	0	6.4	6.1	0	12.5	

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	72	0	2	74	0	**4**	51	55	0	0	0	0	**16**	**13**	0	**29**	158
04:45 PM	**82**	0	**4**	**86**	0	4	53	**57**	0	0	0	0	14	13	0	27	**170**
05:00 PM	48	0	1	49	0	4	36	40	0	0	0	0	4	10	0	14	103
05:15 PM	60	0	3	63	0	0	**57**	57	0	0	0	0	8	4	0	12	132
Total Volume	262	0	10	272	0	12	197	209	0	0	0	0	42	40	0	82	563
% App. Total	96.3	0	3.7		0	5.7	94.3		0	0	0		51.2	48.8	0		
PHF	.799	.000	.625	.791	.000	.750	.864	.917	.000	.000	.000	.000	.656	.769	.000	.707	.828

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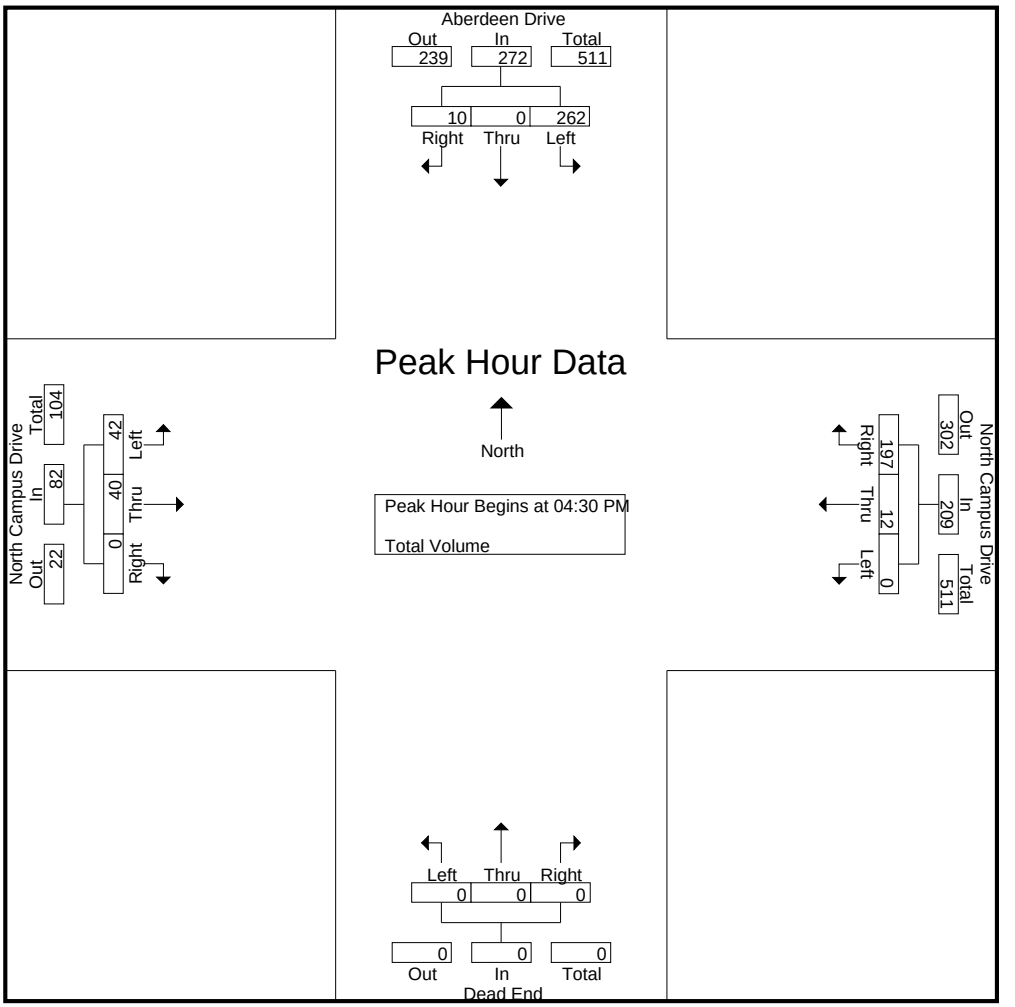

Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:00 PM				04:00 PM			
+0 mins.	72	0	2	74	0	**4**	51	55	0	0	0	0	8	12	0	20
+15 mins.	**82**	0	**4**	**86**	0	4	53	**57**	0	0	0	0	6	4	0	10
+30 mins.	48	0	1	49	0	4	36	40	0	0	0	0	**16**	**13**	0	**29**
+45 mins.	60	0	3	63	0	0	**57**	57	0	0	0	0	14	13	0	27
Total Volume	262	0	10	272	0	12	197	209	0	0	0	0	44	42	0	86
% App. Total	96.3	0	3.7		0	5.7	94.3		0	0	0		51.2	48.8	0	
PHF	.799	.000	.625	.791	.000	.750	.864	.917	.000	.000	.000	.000	.688	.808	.000	.741

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Groups Printed- Bikes

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	2	0	0	2	0	0	4	4	0	0	0	0	2	1	0	3	9
04:15 PM	3	0	1	4	0	5	5	10	0	0	0	0	1	2	0	3	17
04:30 PM	9	0	1	10	0	2	7	9	0	0	0	0	6	2	0	8	27
04:45 PM	0	0	1	1	0	1	4	5	0	0	0	0	0	4	0	4	10
Total	14	0	3	17	0	8	20	28	0	0	0	0	9	9	0	18	63
05:00 PM	2	0	0	2	0	4	4	8	0	0	0	0	2	2	0	4	14
05:15 PM	2	0	1	3	0	0	2	2	0	0	0	0	1	2	0	3	8
05:30 PM	2	0	0	2	0	3	2	5	0	0	0	0	4	0	0	4	11
05:45 PM	2	0	0	2	0	1	3	4	0	0	0	0	4	2	0	6	12
Total	8	0	1	9	0	8	11	19	0	0	0	0	11	6	0	17	45
06:00 PM	3	0	1	4	0	2	1	3	0	0	0	0	3	5	0	8	15
06:15 PM	0	0	0	0	0	0	3	3	0	0	0	0	0	2	0	2	5
06:30 PM	1	0	0	1	0	1	3	4	0	0	0	0	1	1	0	2	7
06:45 PM	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	2
Total	4	0	1	5	0	4	8	12	0	0	0	0	4	8	0	12	29
Grand Total	26	0	5	31	0	20	39	59	0	0	0	0	24	23	0	47	137
Apprch %	83.9	0	16.1		0	33.9	66.1		0	0	0		51.1	48.9	0		
Total %	19	0	3.6	22.6	0	14.6	28.5	43.1	0	0	0	0	17.5	16.8	0	34.3	

	Aberdeen Drive Southbound				North Campus Drive Westbound				Dead End Northbound				North Campus Drive Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	3	0	**1**	4	0	**5**	5	**10**	0	0	0	0	1	2	0	3	17
04:30 PM	**9**	0	1	**10**	0	2	**7**	9	0	0	0	0	**6**	2	0	**8**	**27**
04:45 PM	0	0	1	1	0	1	4	5	0	0	0	0	0	**4**	0	4	10
05:00 PM	2	0	0	2	0	4	4	8	0	0	0	0	2	2	0	4	14
Total Volume	14	0	3	17	0	12	20	32	0	0	0	0	9	10	0	19	68
% App. Total	82.4	0	17.6		0	37.5	62.5		0	0	0		47.4	52.6	0		
PHF	.389	.000	.750	.425	.000	.600	.714	.800	.000	.000	.000	.000	.375	.625	.000	.594	.630

Counts Unlimited, Inc.
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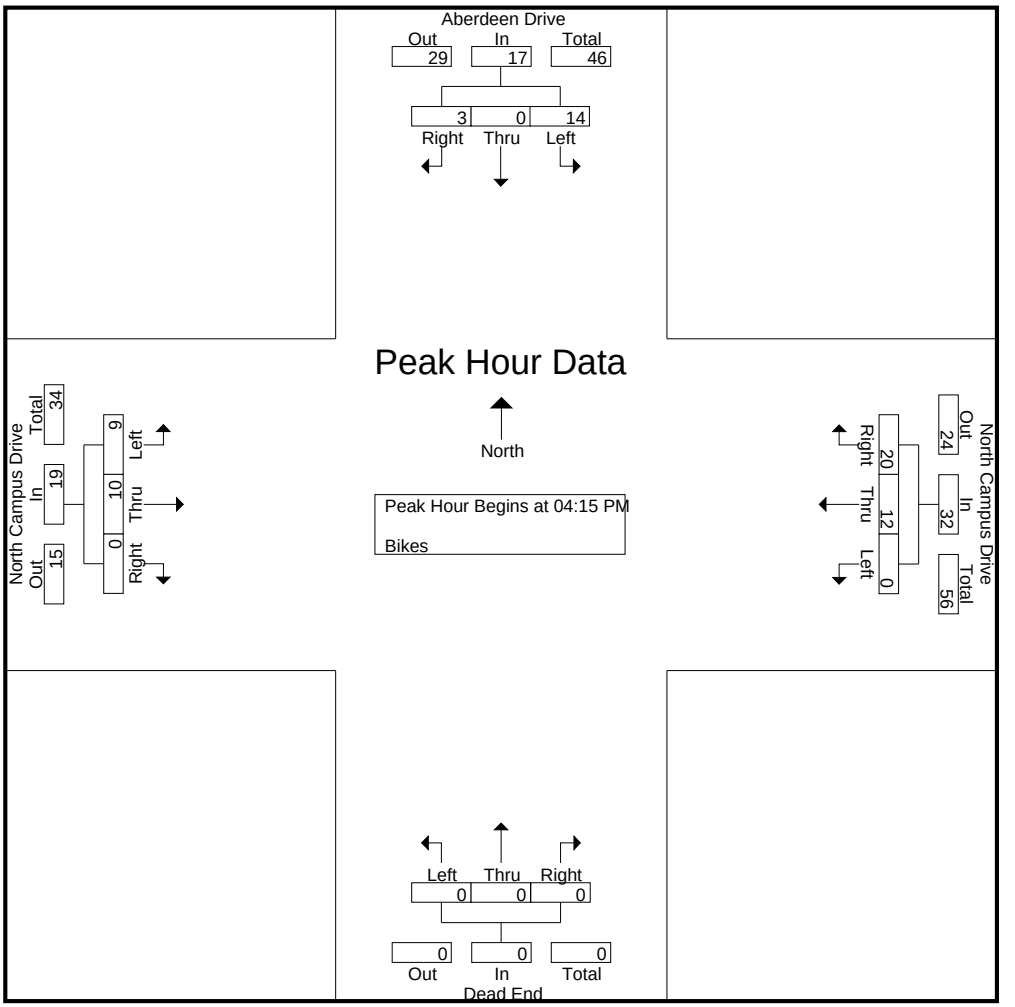
City of Riverside
N/S: Aberdeen Drive
E/W: North Campus Drive
Weather: Clear

File Name : 04_RIV_Aberdeen Dr_N Campus PM
Site Code : 21718274
Start Date : 4/10/2018
Page No : 2



Peak Hour Analysis From 04:00 PM to 06:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:00 PM				05:15 PM			
+0 mins.	2	0	0	2	0	**5**	5	**10**	0	0	0	0	1	2	0	3
+15 mins.	3	0	**1**	4	0	2	**7**	9	0	0	0	0	**4**	0	0	4
+30 mins.	**9**	0	1	**10**	0	1	4	5	0	0	0	0	4	2	0	6
+45 mins.	0	0	1	1	0	4	4	8	0	0	0	0	3	**5**	0	**8**
Total Volume	14	0	3	17	0	12	20	32	0	0	0	0	12	9	0	21
% App. Total	82.4	0	17.6		0	37.5	62.5		0	0	0		57.1	42.9	0	
PHF	.389	.000	.750	.425	.000	.600	.714	.800	.000	.000	.000	.000	.750	.450	.000	.656

Location: Riverside
N/S: Aberdeen Drive
E/W: Campus Drive

Date: 4/10/2018
Day: Tuesday

PEDESTRIANS

	North Leg Aberdeen Drive	East Leg Campus Drive	South Leg Dead End	West Leg Campus Drive	TOTAL
7:00 AM	4	10	0	3	17
7:15 AM	16	93	0	16	125
7:30 AM	65	204	0	32	301
7:45 AM	19	28	0	13	60
8:00 AM	21	14	0	11	46
8:15 AM	50	52	0	10	112
8:30 AM	42	61	0	15	118
8:45 AM	15	42	0	15	72
TOTAL VOLUMES:	232	504	0	115	851

	North Leg Aberdeen Drive	East Leg Campus Drive	South Leg Dead End	West Leg Campus Drive	TOTAL
11:00 AM	10	58	0	25	93
11:15 AM	23	60	0	42	125
11:30 AM	57	126	0	37	220
11:45 AM	42	125	0	34	201
12:00 PM	272	292	0	142	706
12:15 PM	42	126	0	33	201
12:30 PM	23	97	0	29	149
12:45 PM	5	61	0	26	92
1:00 PM	12	58	0	22	92
1:15 PM	40	101	0	28	169
1:30 PM	71	215	0	130	416
1:45 PM	8	102	0	41	151
TOTAL VOLUMES:	605	1421	0	589	2615

	North Leg Aberdeen Drive	East Leg Campus Drive	South Leg Dead End	West Leg Campus Drive	TOTAL
4:00 PM	9	46	0	14	69
4:15 PM	51	79	0	27	157
4:30 PM	73	288	0	71	432
4:45 PM	14	54	0	27	95
5:00 PM	23	48	0	13	84
5:15 PM	28	70	0	19	117
5:30 PM	30	77	0	14	121
5:45 PM	93	128	0	36	257
6:00 PM	33	117	0	27	177
6:15 PM	19	62	0	19	100
6:30 PM	17	55	0	24	96
6:45 PM	20	31	0	15	66
TOTAL VOLUMES:	410	1055	0	306	1771

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email: counts@countsunlimited.com

City of Riverside
Kiosk Driveway
From Campus Drive
24 Hour Directional Volume Count

RIV002
Site Code: 217-18274

Start Time	4/10/2018 Tue	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon	Morning	Afternoon
12:00		0	2			0	0				
12:15		0	**6**			0	0				
12:30		0	**5**			0	0				
12:45		0	**8**	0	21	0	0	0	0	0	21
01:00		0	**5**			0	0				
01:15		0	5			0	0				
01:30		0	5			0	0				
01:45		0	2	0	17	0	0	0	0	0	17
02:00		0	4			0	0				
02:15		0	6			0	0				
02:30		0	2			0	0				
02:45		0	2	0	14	0	0	0	0	0	14
03:00		0	2			0	0				
03:15		0	2			0	0				
03:30		0	2			0	0				
03:45		0	5	0	11	0	0	0	0	0	11
04:00		0	1			0	0				
04:15		0	1			0	0				
04:30		0	3			0	0				
04:45		0	4	0	9	0	0	0	0	0	9
05:00		0	5			0	0				
05:15		0	9			0	0				
05:30		0	3			0	0				
05:45		0	4	0	21	0	0	0	0	0	21
06:00		0	2			0	0				
06:15		1	2			0	0				
06:30		2	1			0	0				
06:45		1	2	4	7	0	0	0	0	4	7
07:00		1	3			0	0				
07:15		1	1			0	0				
07:30		1	1			0	0				
07:45		9	3	12	8	0	0	0	0	12	8
08:00		6	0			0	0				
08:15		3	0			0	0				
08:30		**11**	0			0	0				
08:45		**7**	0	27	0	0	0	0	0	27	0
09:00		**12**	0			0	0				
09:15		**13**	0			0	0				
09:30		6	0			0	0				
09:45		8	0	39	0	0	0	0	0	39	0
10:00		10	0			0	0				
10:15		7	0			0	0				
10:30		13	0			0	0				
10:45		4	0	34	0	0	0	0	0	34	0
11:00		11	0			0	0				
11:15		13	0			0	0				
11:30		6	0			0	0				
11:45		4	0	34	0	0	0	0	0	34	0
Total		150	108	150	108	0	0	0	0	150	108
Combined Total		258		258		0		0		258	
AM Peak	-	08:30	-	-	-	-	-	-	-	-	-
Vol.	-	43	-	-	-	-	-	-	-	-	-
P.H.F.		0.827									
PM Peak	-	-	00:15	-	-	-	-	-	-	-	-
Vol.	-	-	24	-	-	-	-	-	-	-	-
P.H.F.			0.750								
Percentage		58.1%	41.9%			0.0%	0.0%				
ADT/AADT		ADT 258		AADT 258							