University of California Riverside

Environmental Health & Safety Expansion (Project #950456), Parking Lot 27 (Project #956452), and Related Corporation Yard Reorganization and Existing EH&S Buildings Re-Use

Draft Environmental Impact Report
SCH NO. 2011061014

Prepared for
University of California, Riverside
Capital Programs
Capital Resource Management

Prepared by
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December 2011

APPENDIX 1.0

Initial Study, Notice of Preparation, and NOP Comments

State of California
Office of Planning and Research
1400 Tenth Street
Sacramento, CA 95814

NOTICE OF PREPARATION
ENVIRONMENTAL IMPACT REPORT

Project Title: Environmental Health & Safety Expansion

Lead Agency: University of California

Project Location: **University of California, Riverside**
900 University Ave, Riverside, CA 92521

County: Riverside County

Contact Person: Ms. Tricia D. Thrasher, ASLA, LEED AP
Principal Environmental Project Manager
UCR Office of Design and Construction
3615-A Canyon Crest Drive
Riverside, California 92507

The University of California proposes to develop an expanded Environmental Health & Safety (EH&S) facility and carry out related reorganization of campus support functions on the University of California, Riverside (UCR) campus in Riverside, California. The proposed project would: (1) construct a new EH&S building that would allow UCR to relocate the EH&S functions from their present location in the south-central area of the campus and provide space for administrative/office uses, training, laboratories, and materials handling and storage; (2) construct a new parking lot (Lot 27) to serve the new facility and provide parking for existing nearby athletic fields; (3) reorganize and relocate existing uses at the campus Corporation Yard, including demolition of two buildings and construction of a replacement warehouse; and (4) relocate campus Mail Services and Printing and Reprographic Services from their existing locations on- and off-campus to the existing EH&S buildings. The project would require approval by the UC Board of Regents.

The proposed project would not add to the total enrollment projected by the 2005 LRDP. The proposed project would not change any of the existing land use designations on the East Campus.

Environmental Review and Comment

The University of California will be the Lead Agency and will prepare an EIR for the proposed project. An Initial Study has been prepared in accordance with the California Environmental Quality Act (CEQA), the CEQA Guidelines, and the University of California Guidelines for the Implementation of CEQA to identify potential environmental impacts that will be addressed in the EIR (see **Attachment A**). The attached Initial Study also includes a description of the proposed project. At this time, it is anticipated that the EIR will address environmental impacts in the following resource areas: aesthetics, air quality, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, noise, transportation and traffic, and utilities.

The University will hold a public scoping meeting on Wednesday, July 6, 2011 for the EIR. The meeting will be held at Bannockburn J-102 located at 3637 Canyon Crest Drive, from 6:00 PM to 7:30 PM. More information regarding the scoping meeting will be posted on the UCR Office of Design & Construction website no later than June 3, 2011.

A copy of this NOP and public scoping meeting information will be placed on the following website:

http://www.odc.ucr.edu/

We request your views as to the scope and contents of the EIR for the proposed project. This NOP is being circulated for 30 days from June 3 through July 6, 2011. Your response must be received no later than 5:00 PM on July 6, 2011. Your name should be included with your response. Please send your response to the attention of Tricia D. Thrasher at the address noted above. Responses can also be submitted via email to the following address: **CEQA@ucr.edu. Email responses must also be received no later than 5 PM on July 6, 2011.**

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

Signature: _____ Date: _____
Tricia D. Thrasher, ASLA, LEED AP
University of California, Riverside

Attachment A: Initial Study

UC RIVERSIDE
ENVIRONMENTAL HEALTH & SAFETY EXPANSION (PROJECT #950456), PARKING LOT 27 (PROJECT #956452), AND RELATED CORPORATION YARD REORGANIZATION AND EXISTING EH&S BUILDINGS RE-USE

Initial Study

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

PREPARED BY:
OFFICE OF DESIGN AND CONSTRUCTION
3615-A CANYON CREST DRIVE
RIVERSIDE, CALIFORNIA 92507

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June 2011

CONTACT: TRICIA D. THRASHER, ASLA, LEED AP
PRINCIPAL ENVIRONMENTAL PROJECT MANAGER
OFFICE OF DESIGN AND CONSTRUCTION
(951) 827-1484

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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 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 (UCR) Environmental Health and Safety (EH&S) Facility Expansion and Parking Lot 27 ("the project" or "EH&S Expansion project") and related Corporation Yard Reorganization and Existing EH&S Buildings Re-use and 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 EH&S Expansion project could result in potentially significant impacts; therefore, preparation of an Environmental Impact Report (EIR) is appropriate.

Anticipated Project Approvals

The University will prepare an EIR that fully evaluates the environmental effects associated with the implementation of the proposed EH&S Expansion project. Necessary project approvals are anticipated to include, but are not limited to, consideration of the following by the University of California Board of Regents or its delegate (anticipated in early 2012):

- Certification of the Environmental Health and Safety (EH&S) Facility Expansion, Parking Lot 27, and related Corporation Yard Reorganization and Existing EH&S Buildings Re-use EIR, and
- Approval of the proposed Environmental Health and Safety (EH&S) Facility Expansion and Parking Lot 27.

Public and Agency Review

The Notice of Preparation (NOP) and this Initial Study will be circulated for public and agency review from June 3, 2011 through July 6, 2011. Copies of the Initial Study are available during normal operating hours at the Office of Design and Construction, UCR and online at www.pdc.ucr.edu. Comments on the NOP/Initial Study must be received by 5:00 PM on July 6, 2011. They may be e-mailed to CEQA@ucr.edu or sent to:

Office of Design and Construction
3615-A Canyon Crest Drive
Riverside, California 92507
Attn: Tricia D. Thrasher, ASLA, LEED AP

A public scoping meeting for the Environmental Health and Safety (EH&S) Facility Expansion, Parking Lot 27, and related Corporation Yard Reorganization and Existing EH&S Buildings Re-use EIR will be held on July 6, 2011, from 6:00 PM to 7:30 PM at Bannockburn J-102 located at 3637 Canyon Crest Drive on the UC Riverside Campus. The public and agency review period for the EIR is anticipated to commence in approximately August 2011.

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 EH&S Expansion 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 area. The checklist is used to assist in evaluating the potential environmental impacts of the proposed project. This section also presents an explanation of all checklist answers.

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.

Appendix A – LRDP Planning Strategies, Programs and Practices, and Mitigation Measures: lists the Planning Strategies, Programs and Practices, and Mitigation Measures that were adopted when the 2005 LRDP was approved and are applicable to the proposed EH&S Expansion project.

I. PROJECT INFORMATION

1. Project title:

   University of California, Riverside Environmental Health and Safety (EH&S) Facility Expansion, Parking Lot 27, and related Corporation Yard Reorganization and Existing EH&S Buildings Re-use

2. Lead agency name and address:

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

3. Contact person and phone number:

   Tricia D. Thrasher, ASLA, LEED AP
   Principal Environmental Project Manager
   University of California, Riverside
   (951) 827-1484
   CEQA@ucr.edu

4. Project location:

   UC Riverside Campus
   Riverside, California 92507

5. Project sponsor's name and address:

   UC Riverside
   Office of Design and Construction
   3615-A Canyon Crest Drive
   Riverside, CA 92507

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

   Same as above.

7. Identification of previous EIRs relied upon for tiering purposes (including all applicable LRDP and project EIRs) and address where a copy is available for inspection.)

   - 2005 Long Range Development Plan Final Environmental Impact Report (SCH # 2005041164) Available on-line at http://lrdp.ucr.edu or at the UCR Capital Resource Management Office, 3637 Canyon Crest Drive, Suite F101, Riverside, CA.

II. PROJECT LOCATION AND DESCRIPTION

1. Description of project:

Location: The UCR campus is located in the City of Riverside, 3 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, Project 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.

The proposed EH&S Expansion and Parking Lot 27 project site is located in the northeast portion of the UCR campus, north of Linden Street, south of Watkins Drive, west of Valencia Hill Drive, and east of the UCR Corporation Yard and Transportation and Parking Services (TAPS) building. **Figure 2, Existing EH&S and EH&S Expansion Project Locations**, shows the project site and surrounding land uses. The approximately 2.7-acre project site consists of undeveloped land with little vegetation, except for a small community garden located on the western part of the site. It is essentially flat and slopes gently from the east to the southwest. Palm trees border the southern edge of the site along West Linden Street and its extension, while Watkins Drive forms the northern boundary. A rail line runs parallel to Watkins Drive along its northern side, with residential development to the north beyond the rail line and to the east across Valencia Hill Drive. Parking lots, recreational fields, and the Glen Mor 1 student housing complex are located to the south of the project site. The Corporation Yard is located adjacent to the west of the proposed EH&S project site. It has an area of approximately 9 acres and includes three campus support facility buildings (Corporation A, B, and C), two warehouses (Warehouse #1 and #2), the Mail Services building, the Transportation and Parking Services (TAPS) building and yard, a car shed, a gas storage building, and outdoor storage and parking areas (see **Figure 2**).

The existing EH&S facility, which would be renovated subsequent to the construction of the EH&S Expansion building and reused as described below, is located in the southernmost part of the East Campus, at the intersection of South Campus Drive and East Campus Drive and adjacent to the east of the I-215 freeway. It consists of approximately 2.5 acres and includes two buildings, storage trailers, and parking areas. It has been used for EH&S functions since 1989.

Project Elements: The proposed project includes three components:

1. Environmental Health & Safety Expansion: This component of the project includes construction of a new single-story EH&S building that would allow UCR to relocate the EH&S functions from their present location in the south-central area of the campus. The new EH&S facility is intended to provide a long-term, consolidated campus facility for all EH&S functions in a building designed using principles of environmental sustainability. The building would include approximately 27,265 gross square feet (gsf) of space, including about 18,674 assignable square feet (asf). Uses would include about 6,823 asf of administrative/office space; 2,158 asf for a safety learning center; 1,358 asf of laboratories; and 8,335 asf of materials handling and storage space for chemical, radiation, biomedical, and universal waste and building support services. Outside yard areas with an area of about 6,400 square feet would house specialized storage containers and provide secure materials handling access. The

proposed facility would be oriented east to west across the site, with materials handling, laboratories, and training areas in the western section of the building, administrative areas in the eastern section, and a central entrance lobby connecting the two sections. The exterior of the building would be finished primarily in brick, glass, concrete block, and stucco, compatible with existing campus buildings. The building would have a 750-kilowatt diesel emergency generator with a 600-gallon aboveground base-mounted fuel tank. The generator would be located within an enclosure on the roof and the exhaust vent would be placed a minimum of 2 feet above the nearest parapet. The project would also include landscape and utility extensions. The project's goals include meeting the requirements for LEED® certification.

The main access for pedestrians and visitors would be from the south along Linden Street, and primary vendor/service access would be from Watkins Drive to the north into a secure EH&S yard. Access to the yard would be restricted to authorized vehicles. The EH&S yard gate would lead to a controlled dock area serving the materials handling area and to site storage containers and parking spaces. The existing EH&S storage trailers would be relocated to an area north of the TAPS building along Watkins Drive, adjacent to the west of the new EH&S building.

Landscaping elements would include native and drought-tolerant plantings, shade trees, and colored concrete walks. A garden with seating would be provided in the outdoor employee break area and a small terrace would be installed adjacent to the building. A row of trees would be planted along the northern edge of the project site to screen views from the north of Watkins Avenue. The existing row of palm trees on the south side of the site along Linden Avenue would be retained. Bioswales and stormwater retention areas would be incorporated into the landscaping.

2. Parking Lot 27*:* A new parking lot would be built at the east end of the proposed EH&S Expansion site to jointly serve the EH&S facility and the adjacent recreation fields. Approximately 50 parking spaces would be provided. Access to the lot would be via a driveway connecting to Linden Street. While the lot would provide parking for EH&S Expansion facility users and would have a pedestrian connection to the EH&S Expansion building, it would be outside the secured EH&S delivery/pickup area and would not include any connection to the secured yard.

3. Renovation and Reuse of Existing EH&S Building*:* Mail Services, currently located at the Corporation Yard, would occupy the existing 2,400-square-foot EH&S modular building, after renovation. Printing & Reprographic Services, currently located off campus in leased space at 2100 Atlanta Avenue in Riverside, would occupy the existing 6,200-square-foot EH&S building, after renovation. The new uses would continue to be served by existing driveways and parking areas. **Figure 3, Proposed EH&S Expansion Project Site Plan**, shows the proposed uses.

4. Corporation Yard Reorganization: Because the proposed EH&S building and yard would use the existing TAPS yard area, these functions would need to be relocated. Under the proposed reorganization, the Corporation Yard would accommodate TAPS uses while transferring some units to the existing EH&S building (see above). Elements of the reorganization include the following:

- The Mail Services operations, currently located in the north-central portion of the Corporation Yard, would be relocated to the existing EH&S facility. The existing Mail Services building, which has an area of approximately 2,800 gsf, would be demolished.

- Corporation Yard Warehouse #2, which has an area of approximately 4,000 gsf, would be demolished because of its age and its construction, which does not meet current building standards. A new warehouse building would be constructed in the north-central portion of the Corporation Yard, near the location of the current Mail Services operation.

- The TAPS/Special Events program storage and operations area currently located north of the TAPS building would be transferred to the south-central portion of the site, at the current location of Warehouse #2. Support structures, including a bus wash station, would be constructed at this location.

Infrastructure*:* Infrastructure improvements to support the proposed EH&S Expansion element of the project would include new driveways for internal circulation, the installation of underground utilities and connections to municipal services, and incidental hardscape and landscape improvements described above. Necessary utility relocation or extensions for the Corporation Yard Reorganization elements will also be made.

Circulation: As described above, vehicular access to the proposed new EH&S Expansion facility for pedestrians and visitors would be from the south along Linden Street, and primary vendor/service access would be from Watkins Drive. EH&S vehicles would access the facility via Linden Street. Access to the Corporation Yard and to the relocated Mail Services and the Printing & Reprographic Services at the current EH&S facility would remain unchanged from current conditions.

Vehicle Trips: Under existing conditions, the EH&S facility operations involve approximately 16 truck trips daily and a small additional number of trips that occur weekly, monthly, or a few times per year. Following completion of the proposed EH&S Expansion facility, these trips would be transferred to the new facility. Vehicle trips currently associated with the Mail Services and Printing & Reprographic operations would be rerouted to the existing EH&S facility once those operations were relocated. No increase in vehicle trips related to Corporation Yard functions beyond that considered in the 2005 LRDP EIR would occur.

Under long-term (2015/2016) operating conditions, the amount of waste generated on campus is projected to increase as the campus population grows. For the purposes of this Initial Study, it is assumed that the quantities of hazardous materials and wastes handled at the EH&S facility would increase four-fold. However, the number of truck trips would not increase by a corresponding factor because trucks currently are not loaded to full capacity during each run, and because the new facility would allow greater efficiency in storage and packaging operations, reducing the number of trips needed to handle waste generated over a given period of time. **Table 1, Existing**

and Long-term EH&S Truck Trips, shows the estimated number of daily, weekly, and occasional trips that would be generated by the new facility. The trips associated with operation of the proposed EH&S Expansion facility, as well as those associated with the other elements of the project, were included in the projections used in the 2005 LRDP EIR.

Table 1
Existing and Long-term EH&S Truck Trips

Truck Trip Description	Type	Current	2020/2021[a]
EH&S Waste Truck Pick-up (waste from campus)	On campus	6/day	6-8/day
FedEx/UPS	On campus	5/day	5/day
Campus Storehouse Delivery Truck	On campus	2/day	2/day
Physical Plant Electrician (used fluorescent tube drop-off)	On campus	3/day	6-8/day
Daily Total		*16*	*16-20*
Housing (used fluorescent tube drop-off)	On campus	2/week	4/week
Uniform Cleaning Services vendor	Off campus	1/week	1/week
Medical Waste Vendor Pick-up	Off campus	1/month	1/month
Universal & E-waste Waste Vendor Pick-up	Off campus	6/year	6-8/year
Hazardous Waste Vendor Pick-up	Off campus	6/year	6-8/year
Radioactive Waste Vendor Pick-up	Off campus	2/year	2-3/year

Note:
[a] Although the LRDP horizon year is 2015-2016, the 2020-2021 estimates were used to provide a higher and therefore more conservative estimate of project impacts.
Source: UC Riverside 2010

The proposed new EH&S Expansion facility and other project components would be included in transportation strategies offered by the Campus to reduce vehicular traffic, including:

- a car-sharing program available to students, faculty, and staff;
- the UPASS program for students, faculty, and staff;
- campus shuttle service;
- bicycle facilities, including bicycle racks and lockers as well as shower facilities; and
- preferential parking spaces for carpools and vanpools.

Construction Phasing: The project would proceed in the following phases:

- Relocation of outdoor TAPS operations (Special Events program, buses, and trolleys) to

temporary accommodations within the Corporation Yard prior to the start of construction of the proposed new EH&S Expansion facility.

- Construction of new EH&S facility. The future Parking Lot #27 area would be used for construction lay-down, and would then be completed and striped for parking.

- Renovation of the existing EH&S facilities and occupancy by Mail Services and Printing & Reprographic Services.

- Demolition of Mail Services building and construction of new Warehouse #2 building in the Corporation Yard area.

- Demolition of the existing Warehouse #2 building.

- Construction of the new TAPS Special Events program area and relocation of the Special Events program operations from temporary location to the new facility.

Construction of the EH&S Expansion facility and Parking Lot #27 is expected to be complete by Fall 2014. The Renovation and Reuse of the Existing EH&S Building and the Corporation Yard Reorganization is expected to be completed by Fall 2016.

Population: The project would not add to the total enrollment projected in the 2005 LRDP, but would increase employment for the EH&S facility by approximately 8 employees, from the present 22 to approximately 30 FTE. This increase was projected in the 2005 LRDP.

2. Proposed Changes to LRDP

Background: In 2005, The Regents certified the 2005 UCR LRDP EIR and adopted the 2005 LRDP, a plan that would guide the development and growth of the campus through the 2015/16 academic year. The 2005 LRDP provided for the growth of the campus up to 25,000 students and associated faculty and staff, and the development of up to 7.1 million gsf of new academic buildings, support facilities, and student housing to accommodate at least 50 percent of the students on campus. The 2005 LRDP designated the existing EH&S site for Academic uses, and designated the Corporation Yard and the adjacent proposed EH&S project site for Campus Support uses.

In 2008, following the adoption of the 2005 LRDP, the Campus adopted an amendment to the 2005 LRDP designating an approximately 3-acre site on the West Campus as *Campus Support* as part of the approval for development of a new EH&S Expansion facility, with the remainder of the site, approximately 3 acres, remaining as *Parking*. The site is located near the northeast corner of Canyon Crest Drive and Martin Luther King, Jr. Boulevard (MLK), west of and immediately adjacent to I-215/SR 60, in the south-central portion of the campus.

At present, the Campus is considering an amendment to the 2005 LRDP (known as the 2005 LRDP Amendment 2) that would locate a new School of Medicine on a 38.7-acre site located at the northeast corner of Iowa Avenue and MLK. Under the proposed 2005 LRDP Amendment 2 project, the site currently approved for the new EH&S Expansion facility would be designated for *Parking* uses as part of the planned redistribution of parking areas on the West Campus related to the proposed School of Medicine. The potential environmental effects of the 2005 LRDP Amendment 2, including the change in land use designation from *Campus Support* and *Parking* (2008 LRDP land use amendment) to *Parking*, are being addressed in a separate environmental document.

LRDP Land Use Designation: The proposed project would not change the existing land use designations on the East Campus. The land use designation for the proposed EH&S facility site would remain Campus Support; this designation allows for uses such as the proposed EH&S facility. The land uses for the campus, including the existing EH&S site, the Corporation Yard and adjacent area, and the 2008 LRDP EH&S site, are shown in **Figure 4, Campus Land Use Designations**.

3. Project objectives:

Background: The Riverside campus has seen considerable growth since the existing EH&S facility was developed in 1989. In the last 12 years, student enrollment has grown from 8,200 full-time equivalent (FTE) students in 1997-98 to 19,439 FTE students in 2009-2010, representing an increase of 137 percent. During the same period, faculty has increased by 107 percent, from 448 FTE faculty in 1997-1998 to 928 FTE faculty in 2009-2010. Much of the recent enrollment growth has occurred in the science and engineering disciplines. Because of their emphasis on laboratory and technology-related programs, this increase in scientific instruction and research has increased the waste stream going to the Campus' existing EH&S facility, with further increases expected as campus student enrollment continues to grow and new science and engineering facilities are built. In addition, new and more stringent regulatory requirements imposed by federal and state agencies regarding the safe storage and handling of hazardous wastes have affected EH&S operations. These factors have brought the existing facility close to the limits of its capacity to support the campus' instruction and research programs. A new facility is therefore needed to meet

the current and growing environmental health and safety needs of UCR.

The existing EH&S facility was designed to support a much smaller campus of fewer than 8,000 FTE students, and it has become inadequate to support the needs of the current student population and to provide the required integrated waste management process, site access, safety and security, laboratory space, and training facilities. The following deficiencies in waste management facilities have been identified at the current facility:

Integrated Waste Management: The size of the current facility constrains operations in several ways, including:

- Insufficient space for bulking operations, resulting in increased operating costs from the shipment of smaller batches of chemical wastes.
- Undersized waste processing rooms.
- Insufficient floor space for weekly receiving of materials.
- Inadequate ventilation and climate control for flammable liquids.
- Lack of segregation between storage areas and office/administrative space.
- Inadequate separation between public and waste-handling functions.

Existing Service Yard/Loading Dock: Trucks serving the existing facility must negotiate a steep hill into the parking lot. The facility is not designed to accommodate larger commercial trucks, which have increasingly been needed as the amount of UCR-generated waste has increased. In addition, the existing facility has a non-standard loading dock, creating difficulties in handling internal campus waste as well as commercial pick-up and delivery of materials. The loading dock lacks secondary containment, creating a risk that any spill at the dock area would flow down a steep grade into existing campus roads and storm drains.

Safety/Security: Since 2001, federal agencies have adopted new regulations requiring increased segregation and security of certain hazardous materials. With the growing requirements for safety training, as well as commercial delivery access, public presence has increased at the facility. However, it is difficult to limit access to non-EH&S personnel because administrative and training functions are not physically segregated from the waste handling areas of EH&S.

Laboratory Functions: Several EH&S functions and programs require laboratory space for their operations. These include Radiation Safety Review, Approval and Compliance Monitoring, which has generated increased demand for the use of radioisotopes and radiation-producing machines by instruction and research activities and the Campus Health Center. In addition, Respiratory Protection, Bio-safety Review, Hazard Assessment, Exposure Monitoring Services, and Indoor Air Quality programs require respiratory equipment testing, waste treatment verification, and indoor air sampling. These functions require laboratory space to ensure proper testing and instrumentation. Currently, there is a lack of dedicated space for required testing, inadequate storage space, and a lack of controlled environment for sensitive equipment storage. Laboratory space within the existing EH&S facility is not sufficient to

handle the increase in required testing of waste materials associated with the increased volume of waste and the laboratory facilities cannot meet more stringent regulatory requirements. These programmatic needs are thus severely constrained or must be served at other locations on campus.

Safety Training Services: The EH&S office provides hundreds of training classes to over 2,000 participants each year in topics such as radiation safety to maintain campus licenses. However, the existing EH&S facility does not include suitable training rooms, and many EH&S classes are conducted in other facilities throughout the campus, posing a challenge due to the competing demands for space. The demand for EH&S training services is expected to increase with expansion of science and engineering instruction and research activities. The lack of space limits the ability of EH&S to provide timely training to campus users, and the projected long-term increase in personnel requiring safety training would pose further challenges on an already constrained facility.

Administration and Information Technology: The existing facility was designed for a staff of four to six FTE employees. With a current staff of 22 FTE, which is expected to increase to approximately 26 FTE specialists, technicians, and support personnel anticipated by 2015-2016 and to 30 FTE by 2020-2021, there is a need for additional facilities and office space. A triple-wide trailer was installed in 2000 on EH&S grounds as a temporary measure to accommodate growth in administrative functions and employees. Even with this increase, the existing facilities do not provide sufficient storage space for technical material or adequate space for meetings, offices, and information technology.

Existing Site Constraints: Expansion options on site are limited due to steep topography that would require substantial grading and the removal of large quantities of granite. The area surrounding the existing facility is also a potential habitat area. The facility is located adjacent to a sharply curved campus access road, which does not allow for ease of entry by larger commercial trucks needed to service EH&S. Additionally, the site has been reduced in area by a recently completed adjacent freeway expansion project.

The proposed EH&S Expansion project would address campus growth, expanded regulatory requirements, and anticipated growth in the areas of waste handling, administrative support, and training while supporting the EH&S mission to create a safe campus environment.

Objectives: The primary objectives of the proposed EH&S Expansion project, as identified in the Detailed Project Program (DPP), include providing a long-term, consolidated campus facility for all EH&S functions including Administration, Safety, Training and Hazardous Materials Assessment, Mitigation, and Storage. The project objectives will be described in greater detail in the EIR.

4. Surrounding land uses and environmental setting:
Land uses surrounding the campus are primarily residential with some commercial uses along the major streets, and University Avenue as the primary commercial corridor between the UCR campus and downtown Riverside. Existing development east of UCR to the base of the Box Springs Mountains is predominantly single-family residential with some multi-family and limited commercial. Land to the south of the West Campus area is also largely developed with single-family residences, with a multifamily residential and commercial development in the vicinity of

the intersection of Central Avenue and Canyon Crest Drive. The area west of the campus contains a mix of land uses, including single and multifamily residential, vacant land, limited agriculture, and commercial uses. The area located generally north of University Avenue and west of Canyon Crest Drive contains a mixture of mostly multi-family residential, industrial, public (i.e., churches), institutional (i.e., schools), and commercial uses, as well as vacant land.

Blaine Street generally forms the northern border of the East Campus. Land uses north of Blaine Street consist of multi-family residential and commercial uses. Watkins Drive forms the northeastern edge of the East Campus and is separated from mostly one-story single-family residential uses (to the northeast) by an active railroad line, a high pressure jet fuel line (turns south along Valencia Hill Drive) and a California Department of Water Resources pipeline and easement. Valencia Hill Drive fronts the eastern edge of the campus (north of Big Springs Road), with one-story single-family residential uses along the northern portion and two-story multi-family residential structures just north and south of Big Springs Road west of Watkins Drive. South of Big Springs Road, the campus directly abuts one-story single-family residences. Further south (e.g., south of Frost Court and Picacho Drive), the eastern campus edge is fronted by undeveloped hilly terrain, with scattered one- and two-story homes located further east along Watkins Drive. The I-215/SR-60 freeway borders the southern edge of the East Campus. In the vicinity of the campus the freeway has three mixed-flow lanes and one HOV lane in each direction. Lands to the west of the East Campus along Linden Avenue and Blaine Streets are occupied primarily by two and three-story multi-family residential uses.

Everton Place and its extension west one block south of University Avenue border the West Campus to the north. This corridor includes a collection of retail shops, fast food outlets, hotels and motels and multi-family residential complexes, with most buildings one to two stories in height, although some of the more recent development in the area is three to five stories and even six stories in height. The I-215/SR-60 freeway borders the eastern edge of the West Campus. Le Conte Drive and its extension east forms the southern boundary of the West Campus, with one-story single-family homes located across the street from and backing up to the campus.

Chicago Avenue, a four-lane street, forms the western edge of the West Campus, with single-family residential uses as the predominant use on the western side of the street south of MLK and commercial uses north of MLK.

5. 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 (Regents) is the Lead Agency under CEQA The Regents or its delegate is responsible for complying with the California Environmental Quality Act and determining whether to approve the proposed project.

6. Consistency with the LRDP:

   No conflicts with the 2005 LRDP would occur as the proposed project would be consistent with the land use designations in the LRDP.

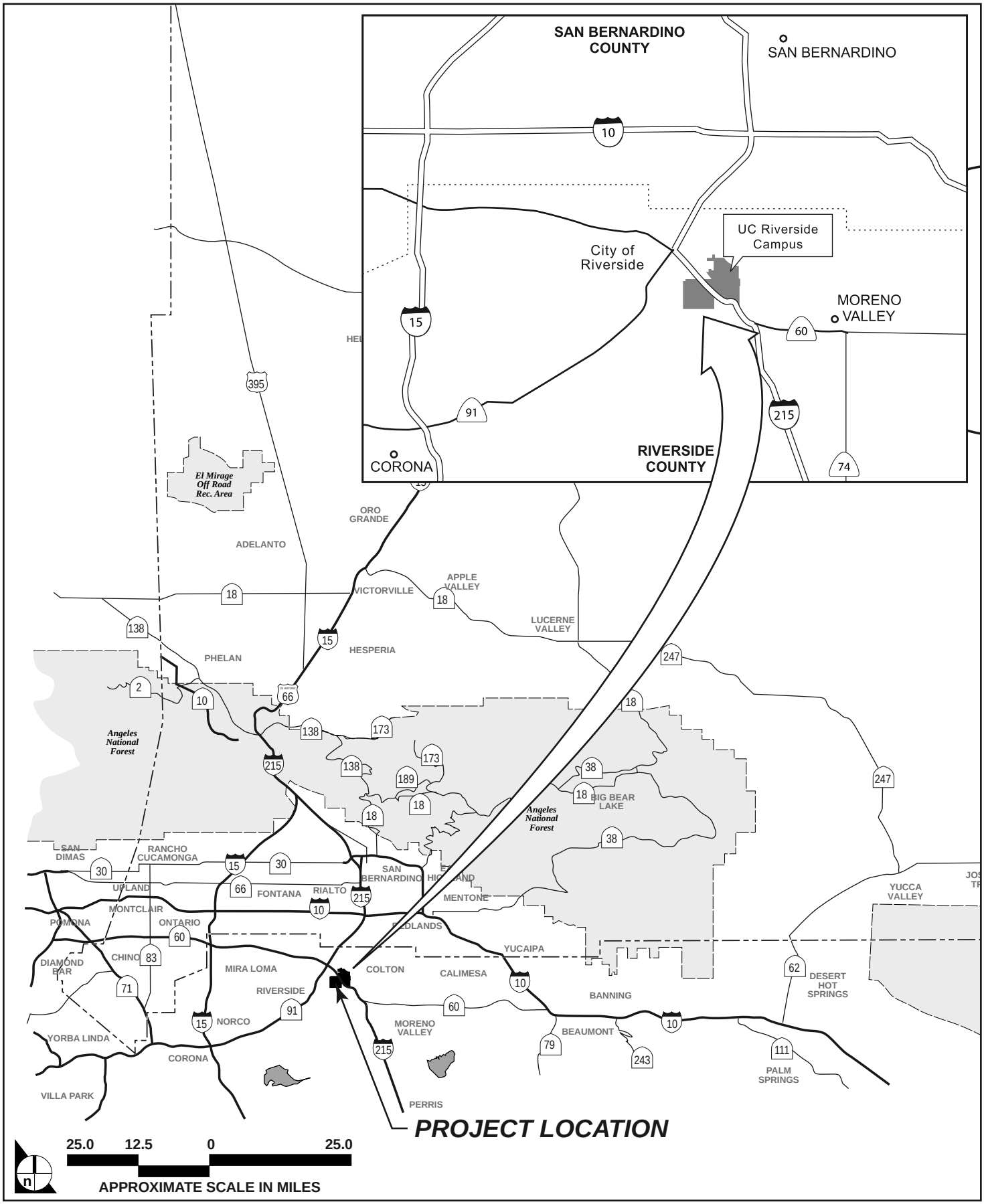
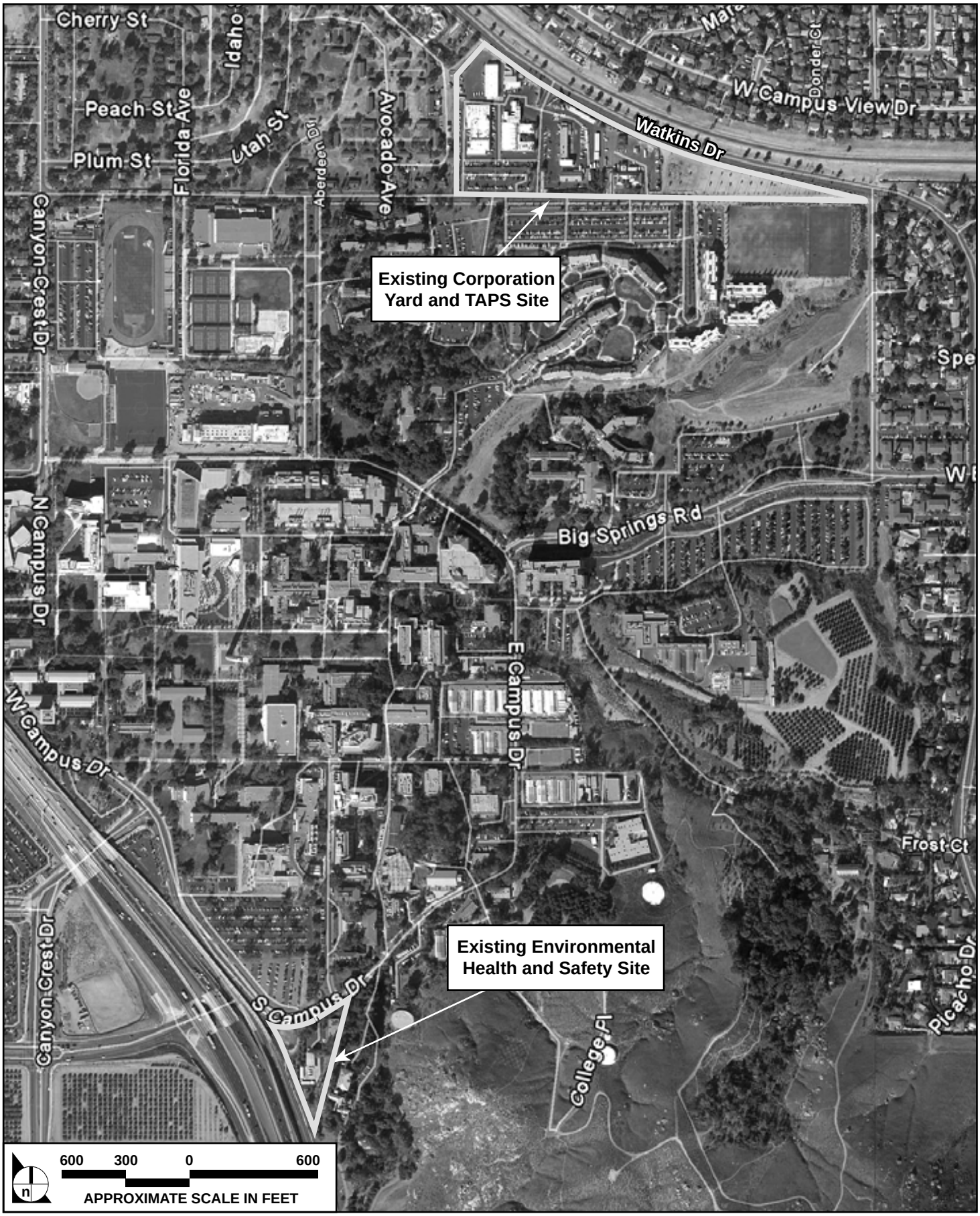


FIGURE **1**

Project Location

1031-002•05/11

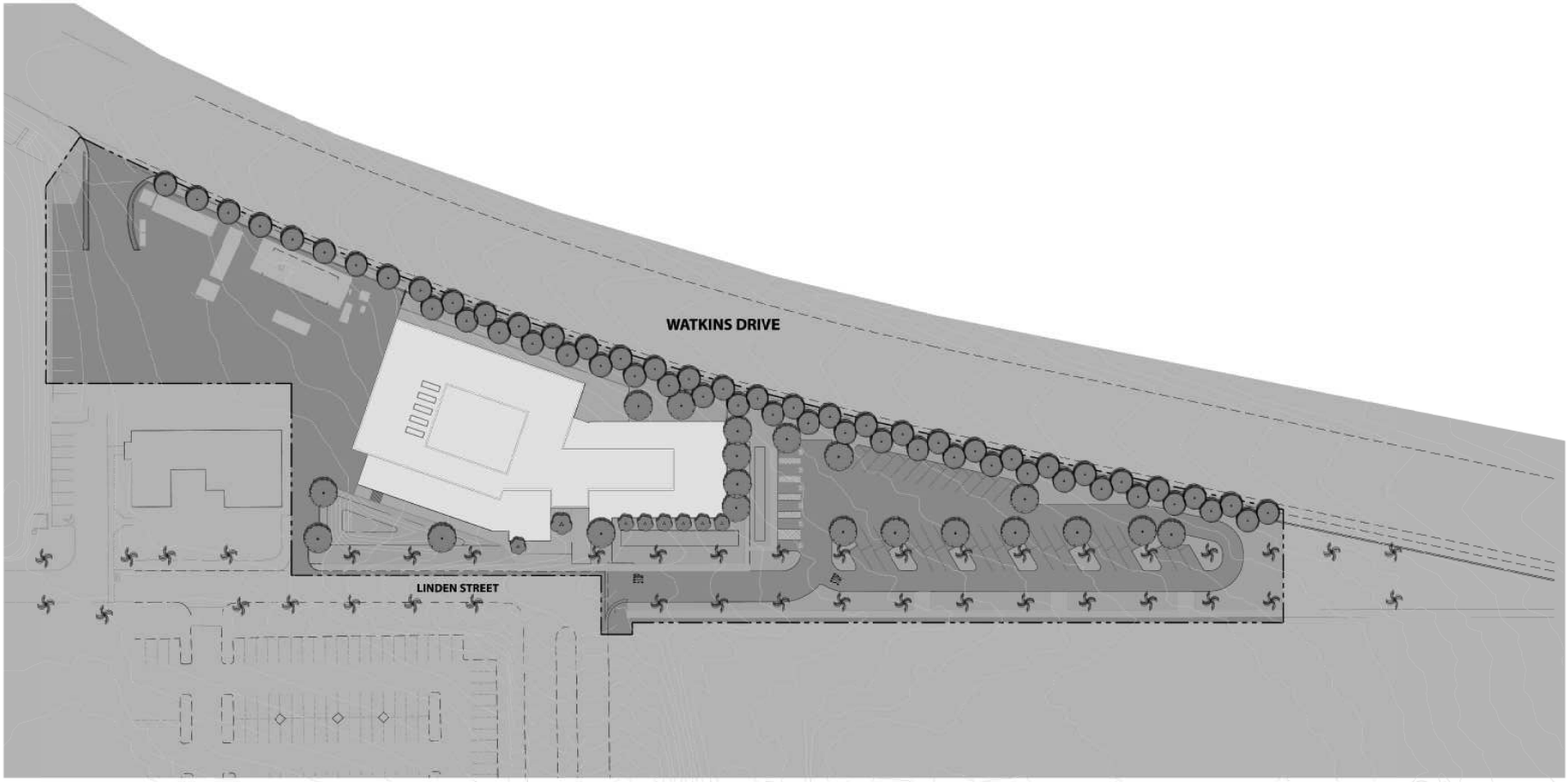


SOURCE: Google Earth – November 2009, Impact Sciences, Inc. – May 2011

FIGURE **2**

Existing EH&S and EH&S Expansion Project Location

1031-002•05/11



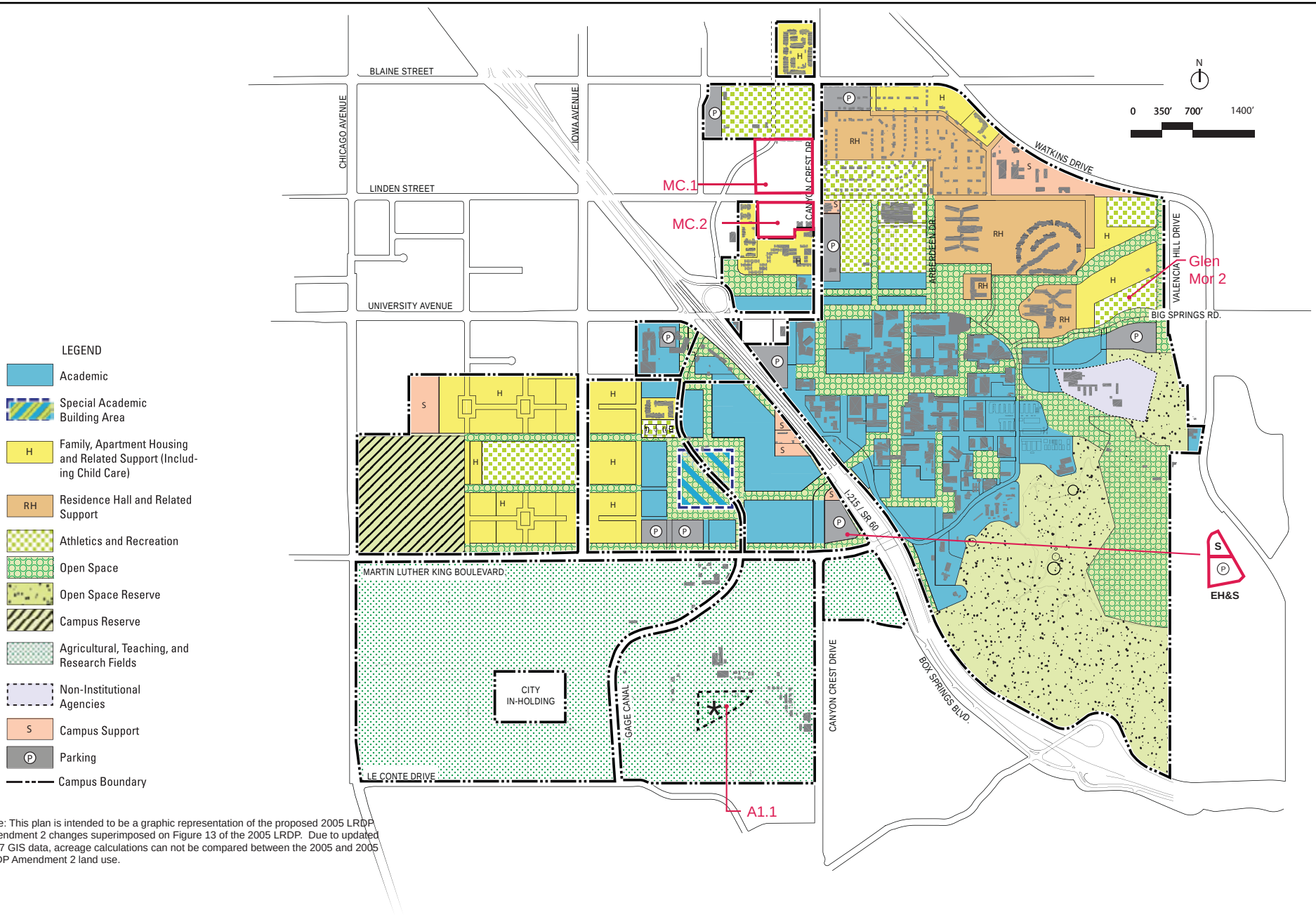
Not to Scale

SOURCE: UC Riverside - 2011

FIGURE **3**

Proposed EH&S Expansion Site Plan

1031-002•05/11



Note: This plan is intended to be a graphic representation of the proposed 2005 LRDP Amendment 2 changes superimposed on Figure 13 of the 2005 LRDP. Due to updated 2007 GIS data, acreage calculations can not be compared between the 2005 and 2005 LRDP Amendment 2 land use.

SOURCE: UC Riverside, 2008

FIGURE **4**

LRDP Land Use Designations

III. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below could be potentially affected by the implementation of the proposed project and/or by cumulative impacts resulting from implementation of the proposed project in conjunction with other expected developments. These factors will be evaluated in the EIR.

- ■ Aesthetics
- ■ Air Quality
- □ Cultural Resources
- ■ Greenhouse Gas Emissions
- ■ Hydrology/Water Quality
- □ Mineral Resources
- □ Population and Housing
- □ Recreation
- □ Utilities/Service Systems
- □ Agriculture and Forest Resources
- □ Biological Resources
- □ Geology and Soils
- ■ Hazards & Hazardous Materials
- ■ Land Use/Planning
- ■ Noise
- □ Public Services
- ■ Transportation/Circulation
- ■ 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.

□ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made that will 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.

Signature	Date
Tricia D. Thrasher	For

V. EVALUATION OF ENVIRONMENTAL IMPACTS

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.

The following Environmental Checklist uses the following response headings to identify potential environmental effects that will be addressed in the EH&S Expansion Project EIR:

Impact to be Analyzed in the EH&S Expansion and related projects EIR: An effect that may or may not be significant that will be addressed in the EH&S Expansion and related projects EIR. The effect may be a less than significant impact that will be addressed to provide a more comprehensive analysis, an impact for which further analysis is necessary or desirable before a determination about significance can be made, an impact that is potentially significant but may be reduced to a less than significant level with the adoption of mitigation measures, or an impact that may be significant and unavoidable. The EIR will address the effect in a project-level analysis for the proposed EH&S Expansion and related projects and in a cumulative-level analysis for potential effects associated with growth under the 2005 LRDP and other past, present, and reasonably foreseeable development in the region.

No Additional Analysis Required: Implementation of the proposed EH&S Expansion and related projects would clearly not result in an impact or would clearly result in a less than significant impact under CEQA criteria, or the impacts were sufficiently analyzed in the 2005 LRDP EIR and no new or additional impacts have been identified, and no additional analysis beyond that provided in the Initial Study is necessary.

Impact Questions and Responses

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	☐	■

Relevant Elements of Project

The proposed EH&S Expansion and related projects would develop new buildings on the East Campus at the proposed EH&S Expansion facility site and the Corporation Yard, create a new parking lot, and remove existing storage containers from the current EH&S site on the East Campus. The sites affected by the proposed project are all within developed areas of the campus.

The remaining elements of the proposed project would involve reuse of existing buildings and would not result in physical changes or new construction. As a result, they would not affect visual resources.

Discussion of Potential Project Impacts

a) The 2005 LRDP EIR defines a scenic vista as an expansive view of highly valued landscape as observable from a publicly accessible vantage point. In the vicinity of the UCR campus, the Box Spring Mountains are the most prominent visual feature from many locations, and sweeping panoramic views of the Box Springs Mountains were considered a scenic vista. Although panoramic views of the Box Springs Mountains are available in the vicinity of the campus, no specific objects, scenes, settings, or features of interest are visible within that portion of the Box Springs Mountains adjacent to the campus. No specific focal views of the Box Springs Mountains were identified 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. Implementation of future development on the campus would be guided by a range of LRDP planning strategies (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 the implementation of the 2005 LRDP would not have an adverse effect on a scenic vista, and the impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this criterion that could alter the conclusions of the previous analysis.

EH&S Expansion Project and Parking Lot 27: The proposed EH&S Expansion project would develop a 27,265-gsf, one-story building on the northeastern edge of the UCR campus, in an area surrounded by campus and off-campus residential development. The proposed EH&S Expansion building would not block any current views in the area surrounding the project site. The UCR campus, the hills to the south, and the Box Springs Mountains can be viewed from the project site itself. Although these views would be partially or entirely blocked from areas close to the proposed building, views of the Box Springs Mountains would continue to be widely available from publicly accessible areas around the project site. In addition, the Glen Mor 2 Student Housing project, approved to be built southeast of the project site, will be up to five stories and would limit future views south and southeast of the project site. Because of the limited publicly accessible viewpoints available on and around the project site, and the relatively small scale of the project compared to surrounding buildings and other man-made features, the project would not have an adverse effect on a scenic vista. Impacts would be less than significant, and no further analysis of this issue is required in the EIR.

Corporation Yard Reorganization: Project elements at the adjacent Corporation Yard would include demolition of a warehouse building and the Mail Services building in the central portion of the Corporation Yard and construction of a warehouse and storage/activity areas in the northeastern portion of the Corporation Yard adjacent to existing warehouses, and construction of new facilities for TAPS Special Events program in the south-central portion of the Corporation Yard. These features would be similar in scale and character to those already present on site, and would not significantly alter the availability or quality of a scenic vista. No further analysis of this issue is required in the EIR.

Renovation and Reuse of Existing EH&S Facility: This aspect of the project would involve interior renovations. These changes would not include construction of new buildings that could block views from site or its surroundings or otherwise affect scenic vistas. No further analysis of this issue is required in the EIR.

b) The campus is bisected by the I-215/SR-60 freeway, and is generally bounded by University Avenue, Canyon Crest Drive, Blaine Street, Watkins Drive, Valencia Hill Drive, Le Conte Drive, and Chicago Avenue. According the 2005 LRDP EIR, none of these roadways is officially designated or identified as eligible for designation as a state scenic highway. Although the southeast hills include rock outcroppings, the 2005 LRDP designates that area of the campus as *Open Space Reserve* and no impacts to existing rock outcroppings are anticipated. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP 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. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this criterion that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

The proposed EH&S Expansion would affect the East Campus in that it would allow for the development of new facilities and the reuse of existing facilities. Because there are no scenic highways in the vicinity of the campus, implementation of the proposed project would not adversely affect a scenic highway or rock outcroppings, and no impact would occur. No further analysis of this issue is required in the EIR.

c) The East Campus under existing conditions is primarily developed with academic and support buildings, student residences, landscaping, roadways, and parking areas. The 2005 LRDP EIR indicated that the introduction of new academic and residential structures on large parcels has the potential to degrade the visual character and quality of the campus. Implementation of future development on the

campus would be guided by a range of LRDP planning strategies, including Land Use 1 through 3, Open Space 1 through 7, Conservation 1 through 4, Campus and Community 1, and Development Strategy 1 through 3, all of which would preserve or enhance the visual character and quality of the campus. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.1-1, which is discussed above, and PP 4.1-2(a) and (b), which would require that buildings be designed to be consistent with the 2007 Campus Design Guidelines and that mature trees be relocated, whenever feasible. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not substantially degrade the existing visual character or quality of the site and its surroundings, and this impact would be less than significant.

Compliance with relevant 2005 LRDP PSs would preserve and enhance the visual character and quality of the campus. PS Land Use 1, PS Land Use 2, and PS Conservation 3 require that increased building densities (a target density of 1.0 FAR) be achieved in the academic core and that sites be infilled in the partially developed East Campus academic core, maintaining a compact and contiguous academic core. In addition, future development on the campus, including the proposed project, would continue existing campus programs and practices, such as PP 4.1-1, which specifies that the Campus would provide design architects with the 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.

The proposed EH&S Expansion site is visible from public viewpoints along Watkins Drive and from the rear yards of residences along the north side of Watkins Drive. The existing primarily bare and unlandscaped appearance of the proposed EH&S Expansion site would be replaced with the proposed building and landscaping and with pavement and landscaping for Parking Lot 27. Project elements at the adjacent Corporation Yard would include demolition of a warehouse building and the Mail Services building and construction of a warehouse and storage/activity areas similar in scale and character to those already present on site. Reuse of the existing EH&S facility would involve interior renovations and removal from the site of the existing storage containers. These changes would not alter the existing developed character of the site. Development of each of the elements of the proposed project would be substantially similar in appearance and scale to its surroundings, and would not substantially degrade the visual character of each site or its surroundings. Each portion of the project would be (or would continue to be) viewed against the backdrop of, and as an element of, surrounding urban development. The proposed changes would not alter the existing developed character of the sites. Development of each of the elements of the proposed project would be substantially similar in appearance and scale to its surroundings.

To preserve and enhance the visual character and quality of the area surrounding the project site (and the campus as a whole), the EH&S Expansion project complies with various 2005 LRDP PS (PS Land Use 1, PS Land Use 2, and PS Conservation 3). The project's proposed location is consistent with these strategies and the building would achieve the target density for the area. The proposed EH&S Expansion project would develop new facilities on and adjacent to existing campus development in the academic core and has been designed following Campus Design Guidelines. It would therefore be consistent with the applicable planning strategies and programs. Also, in compliance with PP 4.1-2 (a), the project landscape plan is consistent with the Campus Landscape Master Plan. With adherence to 2005 LRDP PSs and PPs, the visual character and quality of the campus and the area surrounding the project site would be preserved and enhanced. Project implementation would not degrade the existing visual character or quality of the site and its surroundings, and a less than significant impact would occur. However, in

order to provide complete information and discussion of this topic, further analysis of this issue will be included in the EIR.

d) According to the 2005 LRDP EIR, development in areas with few or no sources of illumination could result in the creation of new sources of substantial light or glare on the campus or the immediate vicinity that could adversely affect day or nighttime views in the area. However, the proposed project sites (including the EH&S Expansion site, Parking Lot 27, the Corporation Yard, and the existing EH&S facility) are located in areas where there is already development and associated light and glare sources. Implementation of future development on the campus, including the proposed EH&S Expansion and related projects, is guided by a range of LRDP planning strategies that are discussed above. In addition, future development on the campus, including the proposed project, would continue existing campus programs and practices, such as PP 4.1-1 and PP 4.1-2(a), which are discussed above. Finally, the proposed project, like all future development on the campus, would be required to implement LRDP mitigation measure MM 4.1-3(a), which would require incorporation of design features that would minimize glare, and LRDP mitigation measure MM 4.1-3(b), which would require that lighting be directed to the intended illumination site to reduce spill onto adjacent areas. For these reasons, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area, and this impact would be reduced to a less than significant level. As discussed above, the proposed EH&S Expansion site is visible from some public viewpoints and nearby residences located about 230 feet to the north, as well as residences east of the proposed Lot 27 across Valencia Hill Drive. In compliance with LRDP mitigation measures MM 4.1-3(a) and 4.1-3(b), the proposed EH&S Expansion building has been designed to minimize glare through the use of non-reflective materials, and the building exterior and parking lot lighting has been designed to minimize light spill onto adjacent areas. The EH&S Expansion and related projects' compliance with the relevant planning strategies and mitigation measures would maintain the proposed project's impacts at a less than significant level. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The 2005 LRDP EIR found that implementation of the 2005 LRDP would not result in significant impact on scenic vistas, including the availability or quality of panoramic views of natural landforms, such as the southeastern hills, Box Spring Mountains, Mount Rubidoux, or the San Bernardino Mountains. The contribution of the 2005 LRDP to cumulative impacts on scenic vistas was determined not to be cumulatively considerable. The proposed project would not result in development that could affect a scenic vista, and would not change the conclusion of the 2005 LRDP EIR with respect to a cumulative impact on scenic vistas. In addition, there are no changes in circumstances in the East Campus area since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous cumulative impact analysis. No further evaluation in the EIR is required.

The 2005 LRDP EIR stated that the anticipated development in the campus vicinity would not result in significant cumulative impacts related to scenic resources within a State scenic route. The proposed project would not result in development that would affect scenic resources within a state scenic route, and would not change the conclusion of the 2005 LRDP EIR with respect to a cumulative impact on scenic resources. In addition, there are no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous cumulative impact analysis. No further evaluation in the EIR is required.

The 2005 LRDP EIR concluded that impacts associated with visual character and/or quality would not to be cumulatively considerable on a regional scale, as reflected in both the City of Riverside and the County of Riverside General Plan EIRs. Development under the 2005 LRDP would be visually consistent with the surroundings and would not result in a cumulative impact to visual character and/or quality. Although the development under the proposed project would also be expected to be visually consistent with the surroundings and thus would not alter the conclusions of the previous cumulative impact analysis, this issue will be evaluated further in the EIR.

As stated in the 2005 LRDP EIR, related projects could result in the creation of new sources of substantial light or glare that could affect day or nighttime views. Consequently, a significant cumulative impact could occur. However, the contribution of campus development under the 2005 LRDP to a cumulative light and glare impact would not be cumulatively considerable with implementation of appropriate LRDP planning strategies, programs and practices, and mitigation measures. The proposed project would also add new sources of light and glare to the campus, but for the same reasons presented in the 2005 LRDP EIR, the contribution due to the proposed project would not be cumulatively considerable and would not change the conclusion of the 2005 LRDP EIR with respect to cumulative light and glare impacts. In addition, there are no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous cumulative impact analysis. No further evaluation in the EIR is required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
2. AGRICULTURAL AND FOREST 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 or conversion of forest land to non-forest use?	☐	■

Relevant Elements of Project

The proposed EH&S Expansion and related projects involve development of a new EH&S Expansion facility and other buildings, changes in the use of existing buildings, and construction of a parking lot. The sites that would be affected by the proposed project (the Corporation Yard, adjacent vacant land, and the existing EH&S facility) are located in developed areas of the East Campus.

According to UCR's Agricultural Operations Department (Ag Ops), the UCR campus currently has a total of 481.7 acres of Prime Farmland and Farmland of Statewide Importance, which are primarily located on the West Campus. The campus does not contain any forest land or timber land.

Discussion of Potential Project Impacts

a) As shown in Figure 4.2-1 of the 2005 LRDP EIR (Farmland on the UCR Campus), none of the sites that would be affected by the proposed projects are in an area designated as farmland. The project would not result in the loss of farmland, and there would be no impact.

b) Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are not zoned for agricultural use or under a Williamson contract.

c-d) The 2005 LRDP EIR did not address the loss of forest land or conversion of forest land to non-forest use. However, no part of the campus is under forests. Furthermore, the project sites and surrounding areas do not include any forest land or timber land. Therefore, the proposed project would not result in the loss of forest land or timber land. No impact would occur, and no further analysis of this issue is required in the EIR.

e) According to the 2005 LRDP EIR, implementation of the 2005 LRDP would not result in the conversion of off-campus agricultural lands. The Corporation Yard, adjacent vacant land, and the existing EH&S facility are located on the East Campus, and farmland and agricultural uses do not exist in the vicinity of these sites. The proposed projects would not result in changes in the existing environment that could result in conversion of Farmland to nonagricultural use. Therefore, no impact would occur.

Discussion of Potential Cumulative Impacts

As stated in the 2005 LRDP EIR, implementation of the 2005 LRDP would convert on-campus agricultural research fields to non-agricultural uses, which in conjunction with other reasonably foreseeable development that involves the conversion of farmland in the region to urban uses, would result in a significant cumulative impact associated with the loss of Prime Farmland. The 2005 LRDP EIR found that the contribution of the 2005 LRDP to cumulative impacts on Prime Farmland would be cumulatively considerable, and the cumulative impact would be significant and unavoidable. However, the proposed EH&S Expansion and related projects would not convert prime farmland to non-agricultural uses, and the proposed project thus would not contribute to or increase the severity of the cumulative impact.

According to the 2005 LRDP EIR, implementation of the 2005 LRDP would not result in a cumulatively considerable contribution to cumulative impacts regarding conflicts with existing agricultural zoning or Williamson Act contracts. In addition, the loss of farmland on the UCR campus associated with the 2005 LRDP would not put pressure on adjacent, off-campus lands to be converted to non-agricultural uses and the impact would not be cumulatively considerable. The proposed EH&S Expansion and related projects would also not result in conflicts with agricultural zoning or Williamson Act contracts nor put pressure on off-campus agricultural lands to convert to other uses as off-campus agricultural lands are not near the campus sites affected by the proposed project. The proposed project would not change the conclusion in the 2005 LRDP EIR with respect to these cumulative impacts. In addition, there are no changes in circumstances since the certification of the 2005 LRDP EIR related to conflicts with agricultural zoning, Williamson Act contracts, or agricultural lands near the campus that could affect the conclusions of the previous cumulative analysis. Further analysis of these cumulative impacts in the EIR is not required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	■	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (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?	☐	■

Relevant Elements of Project

The proposed EH&S Expansion and related projects involve construction of two new buildings and a parking lot, demolition of two existing buildings, and interior renovations of several buildings.

Construction-related and operational emissions associated with campus buildout, including the proposed projects, were estimated and reported in the 2005 LRDP EIR.

Discussion of Potential Project Impacts

a) The UCR campus is located within the South Coast Air Basin (Basin) and the agency principally responsible for comprehensive air pollution control in the Basin is the South Coast Air Quality Management District (SCAQMD). The SCAQMD is directly responsible for reducing emissions from stationary (area and point) and indirect sources. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs). The most recent of these was adopted by the Governing Board of the SCAQMD on June 1, 2007. This AQMP, referred to as the 2007 AQMP, was prepared to comply with the federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high levels of pollutants in the Basin, to meet federal and state air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. According to the

2005 LRDP EIR, development of the 2005 LRDP, which anticipated campus support uses on the proposed project sites, would not conflict or obstruct implementation of the 2003 AQMP, the adopted plan in place at the time the EIR was prepared.

The development of the proposed projects are subject to the provisions of the 2007 AQMP, and projects that are consistent with the projections of employment and population forecasts identified in the Growth Management Chapter of the Regional Comprehensive Plan prepared by the Southern California Association of Governments (SCAG) are considered consistent with the AQMP growth projections, since the Growth Management Chapter forms the basis of the land use and transportation control portions of the AQMP. As discussed in Section 12, Population and Housing, the projected growth in campus population is consistent with SCAG projections through 2015. Therefore, development of the proposed project would not conflict with or obstruct the implementation of the 2007 AQMP. The impact of the project would be less than significant, and no further analysis of this issue is required in the EIR.

b) The analysis in the 2005 LRDP EIR indicated that during development of land uses under the 2005 LRDP, daily emissions would exceed SCAQMD significance thresholds for oxides of nitrogen (NO_x) during the site excavation and grading phase and the peak construction phase. Future development on the campus, including the proposed project, would be required to implement existing programs and practices, such as PP 4.3-2(a) through (c), which list measures to be taken to reduce emissions during construction (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). In addition, LRDP mitigation measure MM 4.3-2 would require PP 4.3-2(a) through (c) to be included in construction contract specifications. However, the 2005 LRDP EIR concluded that even with implementation of programs and practices and mitigation, constructions emissions from some campus projects would still exceed the applicable threshold for NOx, and this impact would be significant and unavoidable.

The construction of new buildings, parking lot and demolition of existing buildings associated with the projects would result in construction–related emissions on the East Campus. Because of the relatively small scale of the projects, the emissions associated with construction activities would be unlikely to exceed SCAQMD significance thresholds for NOx during the site excavation and grading phase or the peak construction phase. In addition, development of the proposed project would continue to implement existing programs and practices, such as PP 4.3-2(a) through (c) and LRDP mitigation measure MM 4.3-2, which are discussed above. The proposed project elements represent land uses that were previously considered under the 2005 LRDP and would not generate increased construction-related emissions. However, in order to provide more comprehensive information and analysis, this topic will be addressed in the EIR.

The analysis in the 2005 LRDP EIR also indicated that during operation of land uses permitted by the 2005 LRDP, daily emissions of carbon monoxide (CO) would not exceed SCAQMD significance thresholds for CO. However, the net increase in daily campus emissions associated with the 2005 LRDP would exceed the thresholds of significance recommended by the SCAQMD for volatile organic compounds (VOC), NOx, and particulate matter 10 microns or less in diameter (PM_{10}). Future development on the campus, including the proposed project, would be required to implement existing programs and practices, such PP 4.3-1, which is discussed above. In addition, LRDP mitigation measure MM 4.3-3 would require that development reduce energy consumption and area-wide emission of criteria pollutants. However, the 2005 LRDP EIR concluded that even with implementation of programs and practices and mitigation, operational emissions would still exceed the applicable threshold for VOC, NOx, and PM_{10}, and this impact would be significant and unavoidable.

The construction of new buildings, and parking lot associated with the project would result in additional operational emissions on the East Campus. These emissions were accounted for in the 2005 LRDP EIR and would not exceed operational emissions identified for buildout of the 2005 LRDP. Development of the proposed project would be required to implement existing programs and practices, such as PP 4.3-2(a) through (c) and LRDP mitigation measure MM 4.3-3, which are discussed above. Given the implementation of PPs and LRDP MMs, daily emissions of criteria pollutants generated by the proposed project are unlikely to exceed the significance thresholds established by the SCAQMD. However, in order to provide more comprehensive information and analysis, this issue will be further analyzed in the EIR.

c) According to the 2005 LRDP EIR, construction-related or operational emissions that exceed the thresholds of significance for an individual project would also cause a cumulatively considerable net increase in pollutants in the South Coast Air Basin. As discussed above in item 3b), construction-related daily emissions due to the implementation of the 2005 LRDP would exceed SCAQMD significance thresholds for NOx during the site excavation and grading phase and the peak construction phase. Likewise, the net increase in daily campus operational emissions associated with the 2005 LRDP would exceed the thresholds of significance recommended by the SCAQMD for VOC, NOx, and PM_{10}. Implementation of PP 4.3-1, PP 4.3-2(a) through (c), and LRDP mitigation measures MM 4.3-2 and MM 4.3-3, would ensure that construction-related air quality impacts are minimized and the number of motor vehicle trips and area source emissions are reduced to the maximum extent feasible. They would not, however, reduce the net increase in daily construction-related and operational emissions to below the thresholds of significance recommended by the SCAQMD. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would generate a cumulatively considerable net increase in daily construction-related and operational campus emissions that would contribute to an existing or projected air quality exceedance.

As discussed above in item 3b), the construction and operational emissions associated with the proposed project are unlikely to exceed the significance thresholds established by the SCAQMD. However, given the nature of the proposed project, and in order to provide more comprehensive information and analysis, this issue will be further analyzed in the EIR.

d) The 2005 LRDP EIR indicated that future CO concentrations near study area intersections from project-related traffic would not exceed the national 35.0 parts per million (ppm) and state 20.0 ppm 1-hour ambient air quality standards or the national 9.5 ppm and State 9.1 ppm 8-hour ambient air quality standards when the 2005 LRDP is fully implemented. The 2005 LRDP EIR also indicated that implementation of the 2005 LRDP would not generate toxic air emissions from stationary sources that would result in excess human cancer risk. Therefore, the EIR concluded that implementation of the 2005 LRDP would not expose sensitive receptors to substantial pollutant concentrations, and this impact would be less than significant.

The construction of new buildings and parking lot associated with the projects would result in additional operational emissions on the East Campus. These emissions were accounted for in the 2005 LRDP EIR and would not exceed operational emissions identified for buildout of the 2005 LRDP. CO concentrations associated with the proposed projects would not cause a potentially significant impact due to the very limited number of additional trips that will be generated by the projects and because these trips are accounted for in the LRDP EIR estimates. The impact of the project would be less than significant, and no further analysis of this issue is required in the EIR.

The proposed EH&S Expansion would involve storage and handling of hazardous materials, including bulking operations that have the potential to release toxic air contaminants. Proper handling procedures would minimize the potential for such emissions and the risks associated with them, and the project is unlikely to have significant impacts related to this issue. However, given the nature of the proposed EH&S Expansion, and in order to provide more comprehensive information and analysis, the EIR will analyze the human health risk to nearby receptors from exposure to the emissions of toxic air contaminants associated with the proposed EH&S Expansion facility.

e) The analysis in the 2005 LRDP EIR indicated that the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings could result in potential airborne odors. However, these emissions would occur during daytime hours only and would occur in the immediate vicinity of the construction site and activity. Therefore, they would not affect a substantial number of people. In addition, the analysis found that cooking activities associated with the new residential buildings could result in potential airborne odors. However, these odors would be similar to existing housing and food services uses on the campus and would be confined to the immediate vicinity of the new buildings. Finally, another source of potential odors would be new trash receptacles within the campus. The receptacles would have lids and would be emptied on a regular basis, before potentially substantial odors have a chance to develop. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not create objectionable odors affecting a substantial number of people.

Development of the proposed project elements would also result in the operation of construction vehicles (i.e., diesel exhaust) and the application of architectural coatings, both of which would emit airborne odors. As with construction odors generally associated with LRDP buildout, these emissions would occur during daytime hours only and would be isolated to the immediate vicinity of the construction site and activity. They would therefore not affect a substantial number of people. No new odor sources would be associated with the proposed EH&S Expansion, Corporation Yard Reorganization, and Renovation and Reuse of the existing EH&S Building that were not previously evaluated in the 2005 LRDP EIR. Finally, trash receptacles associated with the proposed project could result in new odors. However, the receptacles would have lids and would be emptied on a regular basis, before potentially substantial odors have a chance to develop. Therefore, the proposed projects would not create objectionable odors affecting a substantial number of people. The impact of the projects would be less than significant.

In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this criterion that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The 2005 LRDP EIR concluded that the 2005 LRDP would not have a significant cumulative impact related to, conflicting with, or obstructing implementation of, the AQMP and Amendment for ozone. The proposed project would also not conflict with the 2007 AQMP and would therefore not change the conclusion in the 2005 LRDP EIR with respect to this impact. In addition, there are no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. No further evaluation in the EIR is required.

The 2005 LRDP EIR found that construction activities occurring within the campus could cause a net increase in daily construction-related emissions of VOC and NOx that exceed the thresholds of significance recommended by the SCAQMD during peak construction scenarios. While the Basin is currently in attainment for nitrogen dioxide (NO_2) levels (NO_2 is a pure form of NOx), because VOC and

NOx are precursors of ozone, for which the Basin is in nonattainment, construction under the 2005 LRDP would make a cumulatively considerable contribution to this impact. Although the proposed projects would not result in increased emissions of nonattainment pollutants above the levels considered in the 2005 LRDP EIR, changes in background conditions may have occurred since 2005 that could increase the severity of the cumulative impact. This issue will be further evaluated in the EIR.

The 2005 LRDP EIR noted that with regard to daily operational emissions and the cumulative net increase of any criteria pollutant for which the region is in nonattainment, there is a significant cumulative impact, due to nonattainment of ozone, CO, and PM_{10} standards in the Basin. With regard to the contribution of the 2005 LRDP, the net increase in daily campus operational emissions associated with the 2005 LRDP would exceed the thresholds of significance recommended by the SCAQMD for VOC, NOx, and PM_{10}. Therefore, implementation of the 2005 LRDP would generate a cumulatively considerable net increase in daily construction-related and operational campus emissions that contribute to an existing or projected air quality exceedance. Although the proposed projects would not result in increased emissions of nonattainment pollutants above the levels considered in the 2005 LRDP EIR, changes in background conditions may have occurred since 2005 that could increase the severity of the cumulative impact. This issue will be further evaluated in the EIR.

The 2005 LRDP EIR concluded that future growth in the campus vicinity would not expose sensitive receptors to substantial pollutant concentrations of CO. The 2005 LRDP contribution to this impact would not be cumulatively considerable. The proposed projects would not result in increases in CO emissions at congested intersections, and thus would not result in a significant cumulative impact. No further evaluation in the EIR is required.

With regard to operations of future development resulting in the exposure of sensitive receptors to substantial toxic pollutant concentrations, the 2005 LRDP EIR concluded that there would not be significant cumulative impact. Operation and construction under the 2005 LRDP would not result in a cumulatively considerable contribution. Because the proposed projects include potential new or relocated sources of toxic air contaminants, this issue will be further evaluated in the EIR.

The 2005 LRDP EIR found that related projects would not have a significant cumulative impact in terms of the creation of objectionable odors affecting a substantial number of people. Development under the 2005 LRDP would not result in a cumulatively considerable contribution to odor impacts. As noted above, the proposed projects do not include any major sources of odors and would therefore not alter the conclusion in the 2005 LRDP with respect to this cumulative impact. In addition, there are no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. No further evaluation in the EIR is required.

Issues	Impact to be Analyzed in the EH&S **Expansion** Project EIR	No Additional Analysis Required
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 Game or U.S. 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 Game 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?	☐	■

Relevant Elements of Project

The proposed EH&S Expansion and related projects involve development of a new EH&S Expansion facility and other buildings, construction of a parking lot, and changes in the use of existing buildings. All of the areas affected by the proposed projects were previously considered for future development under the 2005 LRDP and the impacts on biological resources from the development of those lands were evaluated in the 2005 LRDP EIR.

According to the 2005 LRDP EIR, on-campus biological resources can be described in the following manner: natural, naturalistic, landscaped, and agricultural areas. Natural areas are defined as undeveloped open space areas that are composed of native and naturally occurring plant species while

naturalistic areas are defined as mostly undeveloped areas that have been subject to modification and/or the introduction of ornamental trees and shrubs. Landscaped areas on the campus are considered open spaces that have been developed with turf-covered lawn areas or groundcover, mature trees, and shrubs. Agricultural areas on the campus are used for agricultural teaching and research and are dominated by row crops and orchards.

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, a search of the California Natural Diversity Data Base (and other sources) revealed that both rare and endangered plants and animals designated by the California Department of Fish and Game might occur within natural and naturalistic areas of the campus. Development within landscaped and agricultural areas, however, is unlikely to affect any candidate, sensitive, or special-status plant and wildlife species, although removal of mature trees and native and non-native grasslands, which provide roosting and foraging opportunities for special status avian species, could adversely impact protected bird species within these areas. Implementation of future development on the campus, including the proposed project, would be guided by a range of LRDP planning strategies, including Open Space 1 through 4 and Conservation 1 through 3, all of which are relevant to the protection of candidate, sensitive, or special-status plant and wildlife species (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). In addition, future development on the campus would continue existing campus programs and procedures, such as PP 4.4-1(a), which lists measures to protect sensitive biological resources in Natural Open Space Reserve areas, and PP 4.4-1(b), which lists measures to protect sensitive biological resources in Natural and Naturalistic Open Space Reserve areas. However, even with implementation of these planning strategies and continued implementation of existing programs and practices, implementation of the 2005 LRDP could result in substantial adverse effects to candidate, sensitive, or special status plant and wildlife species, depending on the extent and location of development. To reduce potential impacts, future development would be required to implement LRDP mitigation measures MM 4.4-1(a) and (b), which require pre-construction surveys for special status species where warranted and methods to follow if special status species are discovered. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service, and this impact would be reduced to a less than significant level. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

The sites that would be affected by the proposed project (the Corporation Yard, adjacent vacant land, and the existing EH&S facility) are located in developed areas of the East Campus. Development on these sites is unlikely to affect any candidate, sensitive, or special-status plant and wildlife species. The proposed EH&S Expansion site consists of vacant land; vegetation on site is controlled through regular application of herbicides, and is limited to a small community garden and the double row of non-native palm trees along the alignment of Linden Street. These areas do not provide wildlife habitat, and a site visit by a biologist found no wildlife habitat and no indication of the presence of any plant or animal species of concern. The areas of the Corporation Yard that would be affected by demolition and construction are entirely covered with buildings and pavement. Construction at the existing EH&S facility would be limited to interior renovations, and relocation of the existing EH&S storage containers would affect only paved areas. In addition, a search of the California Natural Diversity Database (CNDDB) did not identify any species that would be expected occur in the habitat type (i.e., landscaped area) found on the project sites. Therefore, implementation of the proposed projects would not have a

substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service, and this impact would be less than significant level. No further analysis of this issue is required in the EIR.

b) According to the 2005 LRDP EIR, development associated with the 2005 LRDP could result in adverse effects to California gnatcatcher habitat in the southeast hills as a result of limited development within that area. The Corporation Yard and adjacent vacant land (the proposed EH&S Expansion site) are not located within this area. The existing EH&S facility is located within the Western Riverside County Multiple-Species Habitat Conservation Plan (MSHCP) area (see LRDP EIR Figure 4.4-3, MSHCP Subunit Cells within UCR), but no critical gnatcatcher habitat is located within the campus boundaries. Implementation of future development on the campus would be guided by a range of LRDP planning strategies, including Open Space 1 through 4 and Conservation 1 through 3, all of which are relevant to the protection of candidate, sensitive, or special-status plant and wildlife species. In addition, future development on the campus, including the proposed project, would continue existing campus programs and procedures, such as PP 4.4-1(a) and (b), which are discussed above.

Development associated with the 2005 LRDP could result in adverse impacts to riparian habitat in arroyos. In addition to implementing the above mentioned planning strategies and continuing the above mentioned programs and practices, the project would also be required to implement existing campus programs and practices, such as and PP 4.4-2(b), which would continue the implementation of Best Management Practices as identified in the Draft UCR Stormwater Management Plan.

For the reasons given above, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not 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 Game or US Fish and Wildlife Service. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could change the conclusions of the previous analysis.

Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are currently developed or are vacant. The lands that are vacant are also disturbed because they are routinely sprayed with herbicides by the campus for fire control. No riparian habitat or other sensitive natural community exists on these sites. Therefore, the proposed projects would not have any direct effect on any riparian habitat or other sensitive natural communities. No impact would occur. No further analysis of this issue is required in the EIR.

c) Future development on the campus would require the implementation of LRDP mitigation measures MM 4.4-3(a) through (c), which would require a delineation of potentially jurisdictional areas, and if jurisdictional wetlands are present would require a 1:1 replacement of removed wetland habitat, and implementation of measures to ensure that wetland-dependent species are introduced into the replacement habitat.

Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are currently developed or are vacant. No wetlands, as defined by the Clean Water Act or the Fish and Game Code of California, exist on the sites. No impact to wetlands would occur. No further analysis of this issue is required in the EIR.

d) According to the 2005 LRDP EIR, future development on the campus would not construct physical barriers to movement along wildlife corridors that exist on campus. However, future development on the campus would result in the removal of mature trees, which may serve as perching or nesting sites of migratory birds or raptors. Implementation of future development on the campus would be guided by a range of LRDP planning strategies relevant to the protection of mature trees, including Conservation 1 and 2, and Open Space 3 and 5. While implementation of these LRDP planning strategies would reduce potential impacts to mature trees; the 2005 LRDP could still result in the removal of mature trees. However, implementation of LRDP mitigation measures MM 4.4-4(a) and (b), which requires pre-construction surveys for migratory avian species of special concern or raptors and methods to follow if migratory avian species of special concern or raptors are discovered, would ensure that migratory birds or raptors are protected. Thus, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not 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, and this impact would be reduced to a less than significant level. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are already developed or are vacant. Development and redevelopment of the Corporation Yard and proposed EH&S Expansion sites would not affect trees that may serve as perching or nesting sites of migratory birds or raptors. Furthermore, the Corporation Yard, adjacent vacant land, and the existing EH&S facility are adjacent to or surrounded by existing development, and thus they are not part of any wildlife corridors. Therefore, the proposed projects would not 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, and there would be no impact to nesting birds. No further analysis of this issue is required in the EIR.

e) The University is not subject to municipal plans, policies, and regulations, such as the County and City General Plans or local ordinances. As indicated in the 2005 LRDP EIR, while not subject to local jurisdiction, UCR does value biological resources such as mature trees and native habitat, and the 2005 LRDP includes a range of LRDP planning strategies, such as Open Space 1 and 2, which would ensure that the designated Open Space area in the southeast part of the campus be preserved as a Natural Open Space Reserve, with no major facilities allowed (except for sensitively sited utility projects), limited vehicular and pedestrian access, and use of native plant materials for erosion, screening, and restoration; Open Space 3, which would ensure that existing landforms, native plant materials, and trees are preserved when feasible and where appropriate, that habitat values be restored; and Conservation 1, which specifies that native habitat, remnant arroyos, and mature trees be preserved to the extent feasible. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would meet the intent of local policies protecting biological resources, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this criterion that could alter the conclusions of the previous analysis

Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are already developed or are vacant. As noted above, the lands that are vacant are also disturbed because they are routinely subject to herbicide application by the campus for fire control. Some biological resources, such as mature trees, do exist on the sites. However, development of the project would be guided by LRDP planning strategies, including Open Space 3 and Conservation 1, which are discussed above, and would not involve tree removal. Therefore, construction of the proposed

projects would meet the intent of local policies protecting biological resources. This impact would be less than significant. No further analysis of this issue is required in the EIR.

f) A portion of the campus is located within the boundaries of the Western Riverside County MSHCP. The MSHCP is a comprehensive, multi-jurisdictional plan focusing on conservation of both species and associated habitats to address biological and ecological diversity conservation needs in western Riverside County. According to the 2005 LRDP EIR, implementation of the 2005 LRDP would not conflict with the MSHCP. In addition, implementation of future development on the campus, including the proposed project, would be guided by a range of LRDP planning strategies, including Open Space 1 through 4 and Conservation 1 through 3, which would ensure the preservation of the coastal sage habitat in the southeast hills as an *Open Space Reserve* and protect the Naturalistic open space areas on the campus, which include riparian habitat in on-campus arroyos. Thus, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan, and no impact would occur. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

Lands affected by the proposed projects, including the Corporation Yard and adjacent vacant land, are not located within the boundaries of the western Riverside County MSCHP. Therefore, development of these sites would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan. No impact would occur on these sites. As discussed above, the existing EH&S facility lies within one of the subunits of the MSCHP. This site is already developed and in use, and project-related activity on this site would be limited to removal of the existing storage containers and interior renovation of the buildings. Daily operations at the existing EH&S site following project completion would be similar to or less intensive than those currently taking place. Impacts related to project operation would therefore be less than significant. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The 2005 LRDP EIR concluded the 2005 LRDP would contribute to the significant unavoidable cumulative impacts to special status species and habitats in the County. Because the proposed EH&S Expansion and related projects would not result in impacts on special status species or their habitat, it would not contribute to this impact nor alter the conclusion in the 2005 LRDP EIR with respect to this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. No further evaluation in the EIR is required.

As stated in the 2005 LRDP EIR, the 2005 LRDP would not contribute to significant cumulative impacts related to wildlife movement. The proposed project would also not affect wildlife movement and therefore would not alter the conclusion in the 2005 LRDP EIR with respect to this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. No further evaluation in the EIR is required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	☐	■

Relevant Elements of Project

The proposed EH&S Expansion and related projects would develop new buildings, landscaping, and parking on vacant or previously developed land. All of the areas affected by the proposed project are developed or were previously considered for future development under the 2005 LRDP, and the impacts on cultural resources from the development of those lands were evaluated in the 2005 LRDP EIR.

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, several structures on the East Campus have been identified as historic or potentially historic, and the development of new structures and facilities could result in a substantial adverse change in the significance of these historical resources on the UCR campus. During the planning horizon of the 2005 LRDP, seismic, life safety or utility system retrofits or upgrades could result in modification of potentially historic structures. These modifications could adversely affect the historical significance of a structure by altering the character or setting of the structure. Implementation of future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 4, which would require future development to preserve historic buildings to the extent feasible (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). In addition, the implementation of LRDP mitigation measure MM 4.5-1(a) would ensure that structures that could qualify as historic would be identified prior to modification, and LRDP mitigation measure MM 4.5-1(b) would require that any modification to a historic structure be undertaken in compliance with the Secretary of the Interior's Standards for Treatment of Historic Properties or the State Historical Building Code, as appropriate. Therefore, the 2005 LRDP EIR concluded that with mitigation the implementation of the 2005 LRDP would not cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

As described in the 2005 LRDP EIR, the identified or potential historic resources located on the East Campus are associated with the Citrus Experiment Station present on the campus site prior to establishment of UCR. These structures are located in the central and southern portions of the East Campus. The EH&S Expansion and Corporation Yard sites are not located in the vicinity of the historic area of the campus. The existing EH&S facility is located adjacent to three buildings (the Director's Residence and Superintendent's Residence with adjacent garage) that were identified in the 2005 LRDP EIR as potential historic resources, although they have not been recorded in official registers or inventories. Archaeological resources located on the East Campus include Site CA-RIV-495, a prehistoric grinding slick, and another site containing two grinding slicks. Both sites are located in the southeast hills area, and are not in the vicinity of the sites that would be affected by the EH&S Expansion project.

The 2005 LRDP EIR also identifies other types of potential cultural resources, including historic landscapes, which should be considered in the planning process. The EIR cites the palm trees along Linden Street, on and adjacent to the EH&S Expansion and Parking Lot 27 site, as an example of such landscapes. These trees are reportedly relics of an early ranch in the area and may have some historic interest. The proposed project would retain and protect these trees.

The 2005 LRDP EIR concluded that even with the implementation of planning strategies, existing campus programs and practices, and mitigation measures, demolition, or relocation of historic structures would still result in adverse effects, and this impact would be significant and unavoidable. The proposed project would not, however, demolish or relocate any historic or potentially historic structures, nor alter their existing context. According to the 2005 LRDP EIR and based on a site visit in 2010, there are no historical structures present on the sites that would be affected by the proposed EH&S Expansion project. Warehouse #2 and Mail Services building that would be demolished as part of the proposed project are recent structures and are not considered historic. The proposed renovation and reuse of the existing EH&S facility would involve the removal of storage containers presently located near three potential historic resources, as described above. The containers are of recent origin and are temporary storage units that do not contribute to the historic context of the adjacent buildings. Their removal would not affect the historic context or significance of the potential resources, and no physical changes to the resources themselves are proposed. Therefore, the proposed projects would not cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. No impact would occur. No further analysis of this issue is required in the EIR.

b) The 2005 LRDP EIR indicated that several recorded archaeological sites are located on the UCR campus. The development of new buildings and facilities involving excavation activities (for building foundations, utility improvements, etc.) could result in potential damage or destruction of unknown archaeological resources. However, implementation of future development on the campus would be guided by a range of LRDP planning strategies, including Land Use 2 and 3 and Open Space 1 through 3, and 5, and Conservation 1 through 3, all of which would minimize the area of campus subject to disturbance. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.5-3, which would also require the preparation of site-specific analysis and provisional measures in the event that archeological resources are identified. Thus, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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), creating substantial risks to life or property?	☐	■
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	■

Relevant Elements of Project

EH&S Expansion and related projects would develop new buildings, landscaping, and parking on vacant or previously developed land. All of the areas affected by the proposed projects were previously considered for future development under the 2005 LRDP and the impacts related to geology and soils from the development of those lands were evaluated in the 2005 LRDP EIR.

The portion of the East Campus in which the EH&S Expansion and Parking Lot 27 site and Corporation Yard site are located is relatively flat. According to the 2005 LRDP EIR, soils on the eastern portion of the campus consist of older alluvium of the Arlington, Hanford, Buren, and Monserate soil series. These soils consist of silty fine to coarse sands, with deeper layers of silt and relatively clean sand. These soils have low shrink-swell potential and slight to moderate erosion potential, with relatively higher erosion hazard

on higher slopes. Soils found on the southeastern portion of the campus, which have relatively steeper slopes than other parts of the campus, are predominately of the Cieneba and Vista series. These soils consist of coarse sandy loam above granitic rock. Although the shrink-swell characteristics for both soils are low, their erosion hazard ranges from moderate to high.

Discussion of Potential Project Impacts

a) 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. However, 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. As a result, people and structures on the campus could be subject to seismically induced ground shaking, which could result in damage to structures and risk to building occupants. Future development on the campus would continue existing campus programs and practices, such as PP 4.6-1(a) through (c), which would require preparation of site-specific geotechnical studies, continued implementation of the campus' seismic upgrade program, and compliance with the University of California's Policy for Seismic Safety (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 would not expose people or structures to potential substantial adverse effects involving the rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure, including liquefaction, and landslides and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

Lands affected by the proposed EH&S Expansion and related projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are not located within an Earthquake Fault Zone and no active or potentially active faults are known on the campus. However, because these lands could be subject to seismically induced ground shaking, the development of land uses associated with elements of the proposed project would be required to implement existing campus programs and practices, such as PP 4.6-1(a) through (c), which are discussed above. Therefore, development of the proposed projects would not expose people or structures to potential substantial adverse effects involving the rupture of a known earthquake fault, strong seismic ground shaking, seismic related ground failure, including liquefaction, and landslides, and this impact would be less than significant. No further analysis of this issue is required in the EIR.

b) The 2005 LRDP EIR indicated that the development of new facilities would involve site clearance, grading, and other earthmoving activities, which could subject exposed soils to erosion by water or wind. Future development on the campus would be guided by a range of LRDP planning strategies, including Land Use 2 and 3, Open Space 1 through 5, and Conservation 1 through 3, which would minimize the area of the campus subject to disturbance. In addition, future development on the campus, including the proposed project, would continue existing campus programs and practices, such as PP 4.6-2(a), which establishes procedures to be followed in order to reduce erosion at construction sites, and PP 4.6-2(b), which states that, in compliance with the National Pollutant Discharge Elimination System, the Campus would continue to implement Best Management Practices, as identified in the UCR Stormwater Management Plan (UCR 2003), to control erosion. Thus, implementation of the 2005 LRDP would not result in substantial soil erosion or the loss of topsoil, and this impact would be less than significant. Although new regulations related to stormwater runoff control have been adopted since 2005, there have

been no changes in the physical environment since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

Lands affected by the proposed EH&S Expansion and related projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, would require site clearance, grading, and other earthmoving activities, which could subject exposed soils to erosion by water or wind. However, with the implementation of LRDP planning strategies, such as Land Use 2 and 3 and Conservation 1 through 3, as well as of existing campus programs and practices, such as PP 4.6-2(a) and (b), which are discussed above, development of the proposed projects would not result in substantial soil erosion or the loss of topsoil. This impact would be less than significant. No further analysis of this issue is required in the EIR.

c) According to the 2005 LRDP EIR, future development on the campus could be located in areas of varying soil and slope stability. To address slope instability, future development on the campus would be guided by a range of LRDP planning strategies, including Open Space 1 and 2, which limits development on the steep and natural hillsides on the southeast campus and within the Natural Open Space Reserve, and Conservation 2, which specifies that buildings and site development be planned to minimize site disturbance and to reduce erosion and sedimentation. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.6-1(a), which is discussed above. Therefore, the 2005 LRDP EIR concluded that future development under the 2005 LRDP would not 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, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

Development of the proposed projects would be guided by a range of LRDP planning strategies, including Conservation 2, and would continue existing campus programs and practices, such as PP 4.6-1(a), which are discussed above. The soils on the project sites are Quaternary-age alluvium. The proposed EH&S Expansion and Lot 27 site, as well as the adjacent Corporation Yard, are located on relatively flat land. Based on the known subsurface conditions and site geology, it is anticipated that building foundations on these sites would experience total and differential settlement. The Geotechnical Investigation report prepared for the EH&S Expansion project site recommended that all foundations bearing into the engineered fill be designed to accommodate a total settlement of at least 0.5-inch with a differential settlement of 0.25 inch over a horizontal distance of 50 feet. The proposed EH&S Expansion project would be required to implement the recommendations of the Geotechnical Investigation regarding the seismic design and construction of the proposed structure. Likewise, new construction at the Corporation Yard would be required to comply with the requirement for preparation of a site-specific geotechnical study and would be required to implement the recommendations of this study. Therefore, the proposed projects would not result in structures that are 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, and this impact would be less than significant. No new structures are proposed at the existing EH&S facility and no impacts would occur at that location. No further analysis of this issue is required in the EIR.

d) The 2005 LRDP EIR indicated that as most of the soils on the campus have low to moderate shrink-swell characteristics, the potential for water uptake after rainfall to cause soils to expand and damage building foundations is considered low. Future development on the campus would continue existing campus programs and practices, such as PP 4.6-1(a), which is discussed above. In addition, all development would be required to comply with applicable provisions of Chapter 19 (applies to concrete

construction) and Chapter 22 (applies to steel construction) of the California Building Code (CBC) or construction standards of Zone 4 of the CBC. Thus, implementation of the 2005 LRDP would not result in structures that are located on expansive soil, as defined in the building code, creating substantial risks to life or property, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

Soils on the East Campus generally have low shrink-swell potential. Development of the proposed projects would be required to implement existing campus programs and practices, such as PP 4.6-1(a), which is discussed above. In addition, the projects would be required to comply with applicable provisions of Chapter 19 and Chapter 22 of the CBC or construction standards of Zone 4 of the CBC. Thus, development of the proposed projects 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 in the EIR.

e) According to the 2005 LRDP EIR, future development on the campus would not include the use of septic tanks or alternative wastewater systems. Therefore, implementation of the 2005 LRDP would not place septic systems in soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, and no impact would occur.

The proposed EH&S Expansion and related projects do not propose to use septic tanks or alternative wastewater systems. Therefore, development of the proposed projects would not place septic systems in soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, and no impact would occur. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The 2005 LRDP EIR found that the contribution of the 2005 LRDP to the cumulative impacts 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. The proposed projects would not alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further analysis in the EIR is required.

According to the 2005 LRDP EIR, the contribution of campus development under the 2005 LRDP to cumulative erosion impacts would not be cumulatively considerable due to the implementation of measures to reduce erosion and safeguard water quality. Because the proposed projects would also be required to implement the same programs and measures, its development would not alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation in the EIR is required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	■	□

Relevant Elements of Project

The proposed EH&S Expansion project involves development of a new EH&S Expansion facility and other buildings, changes in the use of existing buildings, and construction of a parking lot.

Discussion of Potential Project and Cumulative Impacts

a-b) The 2005 LRDP EIR did not address greenhouse gas (GHG) emissions. Development of the proposed projects would generate GHG emissions associated with construction, mobile, and area sources. All development on the campus would incorporate all of the goals contained in the UC Policy on Sustainable Practices. However, this impact is still considered potentially significant, and this issue will be further analyzed in the EIR. In addition, the EIR will evaluate the potential for the proposed projects to conflict with any applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	□	■
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?	□	■

Relevant Elements of Project

The proposed project includes construction of a new EH&S Expansion facility that would relocate the existing EH&S functions, including handling of hazardous materials and waste generated on campus, to the new facility. Hazardous materials and waste would be transported to and from the facility and would be stored, processed, and packaged on site.

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, while the amount and type of hazardous materials may vary over time with the evolution of instruction and research activities and changes or additions to hazardous materials lists, the general range and type of hazardous materials used on the campus is not expected to substantially change with implementation of the 2005 LRDP. UCR will continue to use materials, some of which are considered hazardous, during the course of daily operations. These hazardous materials may include inorganic and organic chemicals, chemical reagents and reaction products, solvents, mercury, radioisotopes, biohazards, fuels, oils, paints, cleansers, and pesticides that are currently used in laboratory research, building and grounds maintenance, vehicle maintenance, and fine arts. Future development on the campus would continue existing campus programs and practices, such as PP 4.7-1, which would continue the implementation of current (or equivalent) health and safety plans, programs, and practices related to the use, storage, disposal, or transportation of hazardous materials (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 the implementation of the 2005 LRDP would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and this impact would be less than significant.

In addition, the 2005 LRDP EIR indicated that implementation of the 2005 LRDP could result in the demolition of structures and the extension and/or relocation of underground utility systems. In addition, existing buildings on the UCR campus would continue to be subject to maintenance, renovation, or expansion. Renovation or demolition of existing buildings and relocation or modification of underground utility systems could expose construction workers and campus occupants to hazardous materials and wastes, such as lead-based paints and asbestos-containing materials that may be present in existing buildings or in underground utilities. Future development on the campus would be required to implement existing campus programs and practices, such as PP 4.7-1 (or equivalent measures), discussed above, and PP 4.7-2, which requires the campus to perform hazardous materials surveys on buildings and soils, if applicable, prior to demolition, and if hazardous materials are present, identify handling and disposal practices.

UCR produces approximately 86,000 pounds (43 tons) per year of hazardous wastes, with the following characteristics:

- Radioactive Waste: 2,500 lbs/year
- Chemical Waste: 65,000 lbs/year
- Electronic Waste: 11,000 lbs/year
- Universal Waste: 7,500 lbs/year

In addition, the campus produces approximately 2,760 lbs/year of medical waste, of which the existing EH&S facility handles about 280 lbs/year (primarily sharps). The majority of medical waste from campus is collected directly from the on-campus facilities where it is produced and transported off-campus for disposal elsewhere. Other campus-generated biohazardous waste is not handled by EH&S; it is generally

autoclaved to render it non-hazardous before collection directly from laboratories and other facilities (such as animal-handling facilities) on campus and then transported off-campus for disposal.

The campus' Environmental Health and Safety Department estimates that the total amount of hazardous wastes of all types generated on campus would increase to approximately 172 tons by 2020-2021.[1] This estimate includes the projected increase in School of Medicine-related medical waste that would be handled by EH&S.

The proposed project would construct a new EH&S Expansion facility that would relocate the existing EH&S functions, including handling of hazardous materials and waste generated on campus, to the new facility. The proposed EH&S Expansion facility would handle hazardous wastes generated through laboratory and other academic uses and building and grounds maintenance. These hazardous materials may include inorganic and organic chemicals, chemical reagents and reaction products, solvents, mercury, radioisotopes, biohazardous materials, fuels, oils, paints, cleansers, and pesticides. The new EH&S Expansion facility would be designed to handle current and future UCR hazardous materials handling needs safely. Chemical, radiation, and biomedical waste areas would provide for secondary containment of chemicals in the event of spills, and would be equipped with fume hoods, chemical handling snorkels, compressed air systems, autoclaves, and other sterilization equipment. All hazardous materials would be handled and stored in accordance with UC policy and applicable regulations.

Maintenance of the proposed EH&S Expansion facilities, as well as the new facilities resulting from the Corporation Yard Reorganization could also involve use of hazardous materials, but to a lesser degree. With proper use and disposal, building maintenance chemicals are not expected to result in hazardous or unhealthful conditions for building occupants. The proposed projects would relocate existing on-campus and off-campus operations (Mail Services and Printing & Reprographics) that use small quantities of hazardous materials. These materials would be stored, handled, and transported in compliance with existing campus policies and state and federal regulations; compliance with these policies and regulations would reduce or avoid the potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, and this impact would be less than significant.

Hazardous materials are transported on the UCR campus in break-resistant containers with secondary containment such as buckets or carts, and these practices would be continued at the proposed EH&S Expansion facility. To reduce the likelihood and severity of accidents during on-campus transit, all applicable federal and State laws and campus Programs and Practices would be implemented. These laws, regulations, programs and practices, and procedures include training regarding the handling of hazardous wastes, as well as fully developed emergency response programs as articulated in the Business Plan and Campus Emergency Response Plan. All EH&S materials management vehicles are supplied with cleanup materials to handle spills and EH&S is not permitted to transport off campus or on City streets.

UCR contracts with licensed hazardous waste transporters to remove all hazardous wastes generated by the campus for treatment or disposal at licensed, off-site hazardous waste facilities. Transportation of hazardous materials along any City or state roadway or rail line is subject to all Department of

[1] Although the LRDP horizon year is 2015-2016, 2020-2021 estimates were used to provide a higher and therefore more conservative estimate of project impacts and to account for waste from the proposed School of Medicine.

Transportation, California Highway Patrol, and California Department of Health Services hazardous materials transportation regulations. State and federal agencies including the California Highway Patrol, Caltrans, and the U.S. Department of Transportation conduct regular inspections of licensed waste transporters to ensure that they comply with regulatory requirements that range from the design of vehicles used to transport wastes to the procedures to be followed in case of spills or leaks during transit.

Construction of the proposed projects would not require extensive use of materials that would create a significant hazard. Some examples of hazardous materials handling include fueling and servicing construction equipment on-site and the transport of fuels, lubricating fluids, and solvents. These materials are generally disposed of at non-hazardous Class II and III landfills (along with municipal solid waste).

Development of the proposed projects would include implementation of existing campus programs and practices, such as PP 4.7-1, which is discussed above, to avoid and reduce impacts from hazardous materials use. While development of the proposed projects are not expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, given the uses associated with the proposed EH&S Expansion facility, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

b) The 2005 LRDP EIR indicated that future development on the campus would result in an increase in the amount of hazardous materials that are used, stored, transported and disposed of by the Campus, and could increase the potential for an accident or accidental release of hazardous materials or wastes. Future development on the campus would continue existing campus programs and practices, such as PP 4.7-3, which would 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, as well as PP 4.7-1 (or equivalent measures) which is discussed above.

The operation of the proposed EH&S Expansion facility would involve the transport, use, and storage of hazardous materials during the course of daily operations, thus resulting in the possibility of an accident or accidental release of hazardous materials or wastes. Operation of the other project elements would involve the use of hazardous materials, but to a lesser degree. The proposed projects would continue existing campus programs and practices, such as PP 4.7-1 (or equivalent measures) and PP 4.7-3, which are discussed above, which would minimize the potential for impacts related to accidental release of hazardous materials or wastes.

According to the 2005 LRDP EIR, construction activities could occur in areas that contain contaminated soil or groundwater, which could expose construction workers or campus occupants to hazardous substances. However, future development on the campus would continue existing campus programs and practices, such as PP 4.7-1 (or equivalent measures), which is discussed above, and PP 4.7-4, which would require the Campus to complete a Phase I environmental site assessment to determine the potential for soil or groundwater contamination prior to the demolition of structures on campus or new construction on former agricultural fields, and provide remediation if necessary. Because the presence of any such agricultural chemical residues may not result in discolored soil (which might be readily detected by visual inspection) or may not result in a detectable odor, continued implementation of PP 4.7-4 may not result in detection of these residues, nor the development of remediation plans for any such contamination. Therefore, future development on the campus, including the proposed projects, would require the implementation of LRDP mitigation measure MM 4.7-4, which would require the Campus to perform appropriate soil testing prior to development on former agricultural lands to determine whether

contaminants are present at concentrations that would pose health hazards to campus occupants and construction workers.

Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are already developed or are vacant, and it is possible that these lands could contain previously unidentified contaminated soil or groundwater, which when disturbed during construction, could expose construction workers or campus occupants to hazardous substances. The proposed project would be subject to existing campus programs and practices, such as PP 4.7-1 (or equivalent measures) and PP 4.7-4, which are discussed above. In addition, the projects would be required to adhere to LRDP mitigation measure MM 4.7-4, which would avoid or reduce potential impacts from exposure to contaminated soil or groundwater.

While development of the proposed projects are not expected to 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, given the specialized uses associated with the proposed EH&S Expansion facility, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

c) The 2005 LRDP EIR indicated that while some hazardous materials and waste generated by future development on the campus could be handled within 0.25 mile of an existing or proposed school, these materials would not exist in quantities significant enough to pose a risk to occupants of the school or the campus community, as established by Items 8(a) and 8(b) above. Compliance with federal, state, and local regulations pertaining to hazardous wastes, as well as with existing campus programs and practices, such as PP 4.7-1, which is discussed above, would ensure that risks associated with hazardous emissions or materials to existing or proposed schools located within 0.25 mile of the campus would be eliminated or reduced through proper handling techniques, disposal practices, and/or clean-up procedures. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would result in a less than significant impact associated with hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

The UCR Child Development Center is located approximately 900 feet northwest of the proposed EH&S Expansion and Parking Lot 27 site. Although the proposed EH&S Expansion facility would handle hazardous materials and wastes, as described above, operations would comply with federal, State, and local regulations pertaining to hazardous wastes, as well as the procedures required by PP 4.7-1. Adherence to these regulations and policies, which require proper handling techniques, disposal practices, and/or clean-up procedures, would ensure that risks associated with hazardous emissions or materials to the UCR Child Development Center would be eliminated or reduced. Potential impacts related to toxic air emissions will be discussed in the EIR as part of the Air Quality analysis.

Reorganization and construction on the Corporation Yard site would also comply with federal, state, and local regulations pertaining to hazardous wastes, as well as with existing campus programs and practices, such as PP 4.7-1, which is discussed above. The remaining elements of the proposed project (relocation of Mail Services and Printing & Reprographics to the existing EH&S facility) would not involve handling of hazardous materials and generation of hazardous waste within 0.25 mile of an existing or proposed school. Therefore, implementation of these aspects of the proposed 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 this impact would be less than significant. However, in order to provide additional information and analysis, this impact will be further addressed in the EIR.

d) According to the 2005 LRDP EIR, the campus is on a list of hazardous materials sites, due to former pesticide disposal pits located in the agricultural teaching and research fields on the West Campus south of MLK. Remediation for these pits was completed over an approximately 1-acre area. Since remediation has been completed and no construction is planned in this area, it would not present a risk of exposure to hazardous materials. Contamination associated with areas of oil storage has also occurred on the campus in the past. All of these storage sites have been remediated. Thus, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not create a significant hazard to the public or the environment, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this issue that could alter the conclusions of the previous analysis.

Sites affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are not identified as hazardous materials sites in agency databases, and do not have known or suspected contamination of site soil or groundwater. Thus, implementation of the proposed project would not create a significant hazard to the public or the environment, and this impact would be less than significant. No further analysis of this issue is required in the EIR.

e-f) According to the 2005 LRDP EIR, the UCR campus is not located within 2 miles of a public airport or public use airport, and is not included in an airport land use plan. In addition, the UCR campus is not located in the vicinity of a private airstrip. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not result in a safety hazard for people residing or working in the project area, and no impact would occur.

The closest airports to the UCR campus are Flabob Airport, which is located approximately 4 miles to the west, and March Air Reserve Base, which is located approximately 6 miles to the southeast. Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are not located within 2 miles of a public airport, public use airport, or a private airstrip and are not included within the airport land use plan for either the Flabob Airport or the March Air Reserve Base. As a result, development of the proposed projects would not result in a safety hazard for people residing or working in the project area. No impact would occur. No further analysis of this issue is required in the EIR.

g) As indicated in the 2005 LRDP EIR, construction of future development on the campus could result in lane or roadway closures. In addition, future development could occur within areas that are currently identified as emergency assembly areas. Implementation of future development on the campus would be guided by a range of LRDP planning strategies, including Land Use 3, Open Space 1, 4 through 7, and Transportation 4, which would limit areas of the campus subject to development, preserve and/or create open space, and preserve emergency access. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.7-7(a) and (b), which require the Campus to maintain at least one unobstructed lane in both directions on campus roadways and maintain adequate access for emergency vehicles when construction projects would result in roadway closures. MM 4.7-7(a) also requires the avoidance of evacuation assembly areas, as designated under the Emergency Operations Plan, for the siting of construction staging areas. MM 4.7-7(b) also requires an annual review of the Campus Emergency Operations Plan to determine whether an update of the plan is needed to accommodate new on-campus development. The 2005 LRDP EIR therefore concluded that

implementation of the 2005 LRDP would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and the impact would be reduced to a less than significant level. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this issue that could alter the conclusions of the previous analysis.

Construction associated with the proposed projects could result in temporary lane or roadway closures and could temporarily affect areas that are currently identified as emergency assembly areas. Development activities associated with the proposed project would be required to implement existing campus programs and practices, such as PP 4.7-7(a) and (b), which are discussed above. In addition, the project would require the implementation of LRDP mitigation measure MM 4.7-7(a), which is also discussed above. Thus, the proposed projects would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and the impact would be reduced to a less than significant level with the implementation of mitigation measures previously adopted by the University in conjunction with its adoption of the 2005 LRDP. No further analysis of this issue is required in the EIR.

h) The 2005 LRDP EIR indicated that future development on the campus could expose people or structures to a risk of loss, injury, or death involving wildland fires. However, future development on the campus would require the implementation of LRDP mitigation measure MM 4.7-8(a), which would require landscaping with appropriate plant materials, and LRDP mitigation measure MM 4.7-8(b), which would require implementation of annual fuel management procedures. Therefore, the 2005 LRDP EIR concluded that with mitigation, the implementation of the 2005 LRDP would not 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. The impact would be reduced to a less than significant level.

Lands affected by the proposed projects, including the Corporation Yard, adjacent vacant land, and the existing EH&S facility, are not located in a Fire Hazard Zone on the maps prepared by Cal Fire. Therefore, development of the proposed projects would not 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, and no impact would occur. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

As stated in the 2005 LRDP EIR, cumulative impacts from campus development under the 2005 LRDP resulting from the use, transport, and disposal of hazardous materials, or risk of upset from a release of hazardous materials, would not be significant. According to the 2005 LRDP EIR, implementation of the 2005 LRDP would not result in a significant cumulative impact as a result of hazardous materials use, transport, or disposal, or as a result of accidental release of hazardous materials. The EH&S Expansion facility proposed as part of the project would result in an increase in the amount of hazardous materials used and transported on campus. Because of the potential increase in hazardous materials handling and transport due to the proposed project, this issue will be further evaluated in the EIR.

The 2005 LRDP EIR found that the 2005 LRDP's contribution to cumulative impacts associated with potential exposure of construction workers to hazardous materials would not be cumulatively considerable. The proposed projects would not increase worker exposure to contamination and therefore would not alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR

that could alter the conclusions of the previous analysis. Therefore, no further evaluation of this issue in the EIR is required.

The 2005 LRDP EIR found that the 2005 LRDP's contribution to cumulative impacts associated with public exposure to contaminated soil or groundwater would not be cumulatively considerable. The proposed projects could increase public exposure to previously unidentified soil or groundwater contamination and could therefore alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. This issue will be further evaluated in the EIR.

The 2005 LRDP EIR found that the 2005 LRDP's contribution to cumulative impacts on schools associated with hazardous emissions or handling of hazardous materials within a quarter mile of an existing or proposed school would not be cumulatively considerable. The potential for the proposed projects to generate emissions of toxic air contaminants within a quarter mile of an existing or proposed school will be evaluated in the Air Quality section of the EIR.

The 2005 LRDP EIR found that the 2005 LRDP's contribution to cumulative impacts associated with development on or near hazardous material sites would not be cumulatively considerable. The proposed projects would not involve development on or near hazardous materials sites and would therefore not alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation of this issue in the EIR is required.

The 2005 LRDP EIR determined that the 2005 LRDP's contribution to cumulative impacts associated with inference with adopted emergency response or evacuation plans would not be cumulatively considerable. The proposed projects would not involve development that would interfere with emergency response plans and would therefore not alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation of this issue in the EIR is required.

The 2005 LRDP EIR determined that the 2005 LRDP's contribution to cumulative impacts related to wildland fires would not be cumulatively considerable. The proposed projects would not involve development in areas susceptible to wildland fire and would therefore not alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation of this issue in the EIR is required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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) Inundation by seiche, tsunami, or mudflow?	☐	■

Relevant Elements of Project

The proposed projects would involve demolition of existing buildings and construction of new buildings and a parking lot on land that is currently vacant or currently developed.

The City of Riverside is located within the Upper Santa Ana River Watershed. The campus is located within two sub-watersheds, generally divided by the I-215/SR-60 freeway. Most of the East Campus drains to the University Arroyo Watershed, while portions of the West Campus drain to the Box Springs Arroyo Watershed. Campus arroyos within the two sub-watersheds are subject to 100-year flooding (UCR 2005). The sites that would be affected by the proposed projects are located on the East Campus.

The Riverside area is located within the Upper Santa Ana Valley Groundwater Basin. The UCR campus is located near the southeastern edge of the Riverside-Arlington sub-basin, which is bound by impermeable rocks of Box Springs Mountains on the southeast, Arlington Mountain on the south, La Sierra Heights and Mount Rubidoux on the northwest, and the Jurupa Mountains on the north (UCR 2005).

The Soil Conservation Service classifies soils into four hydrological groupings, based on their relative permeability. Class A soil types represent the most permeable soil types, Class B and C are intermediate, and Class D soils are the least permeable. In general, the East Campus is underlain with Class C and D soils, which have intermediate to low permeability, and the West Campus is underlain with Class C soils, with intermediate permeability. Therefore, the campus is not considered a significant regional groundwater recharge area (UCR 2005).

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, future development on the campus would result in an increase of impermeable surface area associated with new buildings and additional pavement, which would result in additional runoff (e.g., stormwater) that may contain contaminants that are typical of urbanized areas. Future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 2, which would site buildings and plan site development to minimize site disturbance, reduce erosion and sedimentation, reduce stormwater runoff, and maintain existing landscapes, including healthy mature trees whenever possible (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.8-1, which would require the Campus to continue to comply with all applicable water quality requirements established by the Santa Ana Regional Water Quality Control Board. The constituent pollutants entering the campus and City storm drain systems during the planning horizon of the 2005 LRDP would not change in character as

a result of implementation of the 2005 LRDP. In addition, the Campus complies with National Pollutant Discharge Elimination System (NPDES) Phase I requirements (general construction permit) and Phase II requirements through preparation and implementation of a campus stormwater management plan. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not violate any water quality standards or waste discharge requirements, and this impact would be less than significant.

Construction: Runoff during construction activities associated with the proposed EH&S Expansion project and Corporation Yard Reorganization demolition/construction could carry pollutants into the storm drain system. Common types of pollutants from construction sites include sediments from soil erosion, construction materials and waste, fertilizers and pesticides from landscaping, and spilled oil, fuel, and other fluids from construction vehicles and heavy equipment. The proposed projects would be required to comply with NPDES Phase I construction requirements. Compliance with these requirements would reduce impacts to a less than significant level.

Operation: Development of the sites of the EH&S Expansion, Parking Lot 27, and the Corporation Yard Reorganization improvements, would not increase the extent of impervious surfaces on the campus beyond that considered in the 2005 LRDP EIR, as these sites were previously designated for development in the 2005 LRDP. The projects thus would not increase stormwater runoff on campus compared to the amount analyzed in the 2005 LRDP EIR. In addition, development under the proposed projects would be guided by a range of LRDP planning strategies, including Conservation 2, and would continue existing campus programs and practices, such as PP 4.8-1, which is discussed above. The proposed projects would also be incorporated into the campus stormwater management plan as required by Phase II requirements. Therefore, implementation of the proposed projects would not violate any water quality standards or waste discharge requirements, and this impact would be less than significant.

Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this criterion that could alter the conclusions of the previous analysis. Although a new NPDES construction general permit, which contains more stringent storm water control and monitoring requirements than before, has become effective in the State of California as of June 2010, all construction projects on the campus are required by law to comply with the new permit. Compliance with the construction general permit would ensure that water quality is not adversely affected by the construction of campus projects. However, given the uses associated with the proposed EH&S Expansion, and in order to provide additional information and analysis, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

b) As indicated in the 2005 LRDP EIR, future development on the campus would increase demand for potable water and increase the land area covered by impervious surfaces on the campus. The increase in occupied building space would increase demand for potable water that could indirectly increase demand for groundwater, as the campus is supplied domestic water by the City of Riverside, which utilizes groundwater wells for potable water. The analysis in the 2005 LRDP EIR showed that the provision of additional water to the UCR campus, which could include groundwater, would not require water supplies in excess of existing entitlements and resources, or result in the need for new or expanded entitlements, as existing and future water supply sources would exceed demand. In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 5, which would continue adherence to the conservation requirements of Title 24 of the California Code of Regulations and would comply with any future conservation goals or programs enacted by the University of California. Future development on the campus would also continue existing

campus programs and practices, such as PP 4.8-2 (a) through (c), which include measures promoting water conservation.

As discussed above, the UCR campus is located near the southeastern edge of the Riverside-Arlington groundwater sub-basin. The campus is not designated as a groundwater recharge area, nor does the campus serve as a primary source of groundwater recharge within the sub-basin. The soils underlying the West Campus are Class C, which have intermediate permeability. Therefore, the 2005 LRDP EIR concluded that the addition of impervious surfaces as a result of the 2005 LRDP would not substantially interfere with groundwater recharge.

For the reasons presented above, implementation of the 2005 LRDP would not 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, and this impact would be less than significant.

Development associated with the proposed projects would increase demand for potable water, which in turn would increase demand for groundwater. This demand was anticipated in and included in the analysis of the 2005 LRDP EIR. The proposed projects would be guided by a range of LRDP planning strategies, including Conservation 5, and would continue existing campus programs and practices, such as PP 4.8-2 (a) through (c), which are discussed above. For the reasons discussed in the 2005 LRDP EIR, the provision of water to land uses associated with the proposed projects, which could include groundwater, would not require water supplies in excess of existing entitlements and resources or result in the need for new or expanded entitlements.

The proposed EH&S Expansion, Parking Lot 27, and Corporation Yard Reorganization would cause a small increase the land area covered by impervious surfaces. As discussed above, the UCR campus is located near the southeastern edge of the Riverside-Arlington groundwater sub-basin. The campus is not designated as a groundwater recharge area, nor does the campus serve as a primary source of groundwater recharge within the sub-basin. The soils underlying the East Campus are Class C and D, with low to intermediate permeability. Therefore, the addition of impervious surfaces as a result of the proposed project would not substantially interfere with groundwater recharge.

For the reasons presented above, development of the proposed projects would not substantially deplete groundwater supplies such that there could be a net deficit in aquifer volume or a lowering of the local groundwater table level. This is considered a less than significant impact, and no further analysis in the EIR is necessary.

c) According to the 2005 LRDP EIR, future development on the campus could alter drainage patterns and expose soils to erosion during construction, which could result in siltation on or off site. However, new development would be served by the existing or a new drainage system and all construction activities would comply with Chapter 29 of the CBC, which regulates excavation activities and the construction of foundations and retaining walls, and Chapter 70 of the CBC, which regulates grading activities, including drainage and erosion control. Future development on the campus would be guided by a range of LRDP planning strategies, including Land Use 2 and 3, Open Space 1 through 5, and Conservation 1 through 3, which would preserve and protect Natural and Naturalistic open spaces areas, and reduce the potential changes in drainage patterns in these areas. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.8-3 (a) through (e), which, while initially designed to address biological resources, hydrology, and air quality, would also limit development in

potentially erosive areas and reduce dust, thereby minimizing site erosion. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on or off site, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this issue that could alter the conclusions of the previous analysis.

Some elements of the proposed project, including the EH&S Expansion, Parking Lot 27, and Corporation Yard Reorganization, could locally alter drainage patterns and expose soils to erosion during construction, which could result in siltation on or off site. However, all construction activities would comply with Chapters 29 and 70 of the CBC, which are discussed above. In addition, the proposed projects would be required to implement existing campus programs and practices, such as PP 4.8-3 (c) through (e), which are discussed above. Therefore, the proposed project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on or off site, and this impact would be less than significant. Project-related work at the existing EH&S site would be limited to removal of existing storage containers, and would not alter the existing drainage patterns; there would be no impacts at this location. No further analysis of this issue is required in the EIR.

d) The 2005 LRDP EIR indicated that future development on the campus would increase the extent of impervious surfaces on the campus and thus increase stormwater runoff. However, a substantial increase in runoff is not anticipated, as existing soil conditions (intermediate permeability) currently result in runoff from undeveloped sites. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.8-3(e), which would evaluate each specific project to determine if the project runoff would exceed the capacity of the existing storm drain system, and if capacity is exceeded, take measures to minimize local flooding. Therefore, implementation of the 2005 LRDP would not substantially alter the existing drainage pattern of the campus or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this issue that could alter the conclusions of the previous analysis.

Development of the sites of the EH&S Expansion, Parking Lot 27, and Corporation Yard Reorganization would not increase the extent of impervious surfaces on the campus compared to the amount analyzed in the 2005 LRDP EIR, as these sites were previously designated for development in the 2005 LRDP and thus included in calculations and analysis of stormwater runoff on campus. Reuse of the existing EH&S site would not increase the amount of impervious surface on campus. A substantial increase in runoff from the EH&S Expansion site, Lot 27, and Corporation Yard Reorganization is not anticipated, as existing soil conditions (intermediate permeability) currently result in runoff from the site. Furthermore, according to the 2005 LRDP EIR, flooding is not an issue with the development in this area of the East Campus. Therefore, the proposed projects would not substantially alter the existing drainage pattern of the campus or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on or off site, and this impact would be less than significant. No further analysis of this issue is required in the EIR.

e) According to the 2005 LRDP EIR, future development on the campus would increase the extent of impervious surfaces and increase stormwater runoff on the campus. To handle the increase in storm water runoff, future development would continue to be guided by PP 4.8-3(e), which is discussed above.

In addition, the 2005 LRDP identifies design criteria to retain the flows from a 10-year storm event (greater than 287 cubic feet per second) in drainage swales.

Concerning stormwater pollution, the 2005 LRDP EIR noted that the development of new impervious surfaces associated with the 2005 LRDP would contribute runoff that contains urban stormwater contaminants, including grease, oils, heavy metals, fertilizers, and pesticides. To reduce the amount of pollutants in the runoff, future development on campus would be guided by PP 4.8-3(c), which would require continued compliance with SCAQMD Rule 403—Fugitive Dust during construction, and PP 4.8-3(d), which would require compliance with the UCR Stormwater Management Plan. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and this impact would be less than significant.

Development of the sites of the EH&S Expansion, Parking Lot 27, and Corporation Yard Reorganization would not increase the extent of impervious surfaces on the campus compared to the amount analyzed in the 2005 LRDP EIR, as these sites were previously designated for development in the 2005 LRDP and thus included in calculations and analysis of stormwater runoff on campus. To handle the anticipated increase in storm water runoff, the proposed project would continue to be guided by PP 4.8-3(e), which is discussed above, and adhere to design criteria to retain the flows from a 10-year storm event, as discussed above. Reuse of the existing EH&S site would not increase the amount of impervious surface on campus.

Concerning stormwater pollution, the development of new impervious surfaces associated with the project would contribute runoff that contains urban stormwater contaminants, including grease, oils, heavy metals, fertilizers, and pesticides. However, to reduce the amount of pollutants in the runoff, project development would also be guided by PP 4.8-3(c) and (d), which are discussed above.

Therefore, the proposed projects would not create or contribute stormwater runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and this impact would be less than significant. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this criterion that could alter the conclusions of the previous analysis. However, given the uses associated with the proposed EH&S Expansion, and in order to provide additional information and analysis, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

f) See items 9(a) through (d) above. No other potential impacts to water quality were identified.

g) According to the 2005 LRDP EIR, portions of the campus are currently located within a 100-year flood hazard zone. However, none of the areas proposed for the development of new housing or redevelopment of existing housing sites under the 2005 LRDP are located within a 100-year flood hazard zone. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not place housing within a 100-year flood hazard area, and no impact would occur.

The 2005 LRDP EIR assumed that the sites affected by the EH&S Expansion project, including Parking Lot 27, the Corporation Yard, and the existing EH&S facility, would be developed with or remain in *Campus Support* uses, and did not consider these sites for housing. However, according to the 2005 LRDP EIR, the project sites are not located within the area of a 100-year flood hazard zone. Therefore the proposed project would not place housing units within a 100-year flood hazard, and no impact would occur. No further analysis of this issue is required in the EIR.

h) See item 9(g) above. As discussed above, portions of the campus are currently located within a 100-year flood hazard zone. The 2005 LRDP EIR indicated that without future control improvements, structures planned for these areas could be exposed to flooding during 100-year or greater storm events. Future development on the campus would continue existing campus programs and practices, such as PP 4.8-3(e), which is discussed above. In addition, future development on the campus would require the implementation of LRDP mitigation measure MM 4.7-9(a) and (b), which would place requirements on structures within the 100-year flood hazard zone if flood control improvements have not been implemented. Thus, the 2005 LRDP EIR concluded that while implementation of the 2005 LRDP would place structures within a 100-year flood hazard area, measures have been designed to reduce the effects of structures with regards to impeding or redirecting flood flows, and this impact would be reduced to a less than significant level. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this criterion that could alter the conclusions of the previous analysis.

Lands affected by the proposed projects, including the sites of the proposed EH&S Expansion facility, Parking Lot 27, the Corporation Yard Reorganization, and the existing EH&S facility, are not located within a 100-year flood hazard zone. Thus, the proposed projects would not place structures within a 100-year flood hazard area, and no impact would occur. No further analysis of this issue is required in the EIR.

i) See item 9(g) above. According to the 2005 LRDP EIR, the potential for flooding to occur on the UCR campus as the result of a catastrophic dam failure is remote. In addition, the potential for catastrophic failure of the Santa Ana Pipeline, which is operated by the California State Department of Water Resources and is located north and east of the campus along Watkins Drive at the base of the Box Springs Mountains, is also considered remote. Future development on the campus would continue existing campus programs and practices, such as PP 4.8-10, which requires the implementation of the Emergency Operations Plan in the event of an emergency, including catastrophic failure of the Santa Ana Pipeline. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not 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, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this issue that could alter the conclusions of the previous analysis.

The potential for lands affected by the proposed project, including the sites of the proposed EH&S Expansion facility, Parking Lot 27, the Corporation Yard Reorganization, and the existing EH&S facility, to be affected by a catastrophic dam failure is remote. The proposed project would continue existing campus programs and practices, such as PP 4.8-10, which is discussed above. Therefore, the proposed projects would not 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, and no impact would occur. No further analysis of this issue is required in the EIR.

j) The 2005 LRDP EIR indicated that the potential for on-campus development to be affected by a seiche or tsunami is considered extremely remote, given the inland location of the campus and distance to any open water bodies. The campus is relatively flat and therefore would not be susceptible to mudflows. Implementation of future development on campus would be guided by a range of LRDP planning strategies, including Open Space 1 and 2, which would require that the southeast hills be preserved, no major facilities be allowed (except for sensitively sited utility projects), vehicular and pedestrian access be limited, and that native plant materials be used for erosion, screening, and restoration, and Conservation

1, which specifies that native habitat, remnant arroyos, and mature trees be preserved to the extent feasible. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.8-3(a) and (b), which would further protect and reduce disturbance of Natural and Naturalistic open space areas, including the southeast hills and arroyos. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not result in land uses being inundated by a seiche, tsunami, or mudflow, and this impact would be less than significant.

The potential for lands affected by the proposed project, including the sites of the proposed EH&S Expansion facility, Parking Lot 27, the Corporation Yard Reorganization, and the existing EH&S facility, to be affected by a seiche or tsunami is considered extremely remote. In addition, proposed EH&S Expansion facility, Parking Lot 27, and Corporation Yard Reorganization sites are relatively flat and therefore would not be susceptible to mudflows. No change in drainage conditions, excavation, or other earthwork would occur at the existing EH&S facility that could increase susceptibility to mudflows. Therefore, the proposed projects would not result in land uses being inundated by a seiche, tsunami, or mudflow, and no impact would occur. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

As stated in the 2005 LRDP EIR, the construction of new development in the vicinity of the campus could cause soil erosion, thereby cumulatively degrading water quality within the watershed. The 2005 LRDP EIR determined that campus development under the 2005 LRDP would not make a cumulatively considerable contribution to the cumulative effect related to water quality degradation. Development of the proposed project would also comply with campus programs and practices as well as State and federal laws concerning water quality. Therefore the proposed projects would not change the conclusion of the 2005 LRDP EIR regarding this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. However, given the uses associated with the proposed EH&S Expansion facility, and in order to provide additional information and analysis, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

The 2005 LRDP EIR concluded that development under the 2005 LRDP would not result in a substantial interference with groundwater recharge in an area (the campus) that does not substantially recharge the groundwater basin it overlies and that the 2005 LRDP's contribution to groundwater impacts would not be cumulatively considerable. Development of the proposed projects would also not interfere with groundwater recharge. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation in the EIR is required.

The 2005 LRDP EIR concluded that development under the 2005 LRDP would not make a cumulatively considerable contribution to cumulative effects from changes to drainage patterns that could result in substantial erosion, siltation, or flooding. Development of the proposed projects would also not substantially change drainage patterns. Therefore the proposed projects would not change the conclusion of the 2005 LRDP EIR regarding this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation in the EIR is required.

The 2005 LRDP EIR stated that implementation of the 2005 LRDP would not result in a cumulatively considerable contribution to stormwater drainage system capacity. Development of the proposed projects would not substantially increase storm water runoff from the campus site compared to the runoff

evaluated in the 2005 LRDP EIR. Therefore, the proposed projects would not change the conclusion of the 2005 LRDP EIR regarding this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. However, given the uses associated with the proposed projects, and in order to provide additional information and analysis, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

The 2005 LRDP EIR found that implementation of the 2005 LRDP would not make a cumulatively considerable contribution to cumulative environmental effects related to construction of new stormwater drainage facilities or the expansion of existing facilities. Development of the proposed projects would not substantially increase storm water runoff from the campus site compared to the runoff evaluated in the 2005 LRDP EIR. Therefore the proposed projects would not change the conclusion of the 2005 LRDP EIR regarding this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation in the EIR is required.

The 2005 LRDP EIR found that cumulative impacts related to flooding would not be significant, and the 2005 LRDP would not result in a cumulatively considerable contribution to this impact. Development of the proposed projects would not substantially increase the amount of storm water runoff from the campus site compared to the runoff evaluated in the 2005 LRDP EIR, thereby not substantially increase flows that could result in flooding. Therefore the proposed projects would not change the conclusion of the 2005 LRDP EIR regarding this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation in the EIR is required.

According to the 2005 LRDP EIR, the cumulative impacts associated with a failure of the Seven Oaks Dam or the Santa Ana Valley Pipeline would not be significant and implementation of the 2005 LRDP would not make a considerable contribution to these effects. As noted above, development of the proposed projects would not 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, and no impact would occur. Therefore the proposed projects would not change the conclusion of the 2005 LRDP EIR regarding this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation in the EIR is required.

The 2005 LRDP EIR concluded that cumulative impacts related to exposure of people to seiche, tsunami or mudflow would not be significant and the 2005 LRDP would not make a cumulatively considerable contribution to these effects. As noted above, development of the proposed projects would not result in land uses being inundated by a seiche, tsunami, or mudflow, and no impact would occur. Therefore the proposed projects would not change the conclusion of the 2005 LRDP EIR regarding this cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis. Therefore, no further evaluation in the EIR is required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
10. LAND USE AND PLANNING - Would the project:		
a) Physically divide an established community?	☐	■
b) Result in the development of land uses that are substantially incompatible with existing adjacent land uses or planned land uses?	■	☐
c) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the LRDP, general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	■	☐
d) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	■
e) Create other land use impacts?	☐	■

Relevant Elements of Project

The proposed project would develop a new EH&S Expansion facility and parking lot, reorganize the portions of the existing Corporation Yard (including demolition and reconstruction of warehouse buildings), and move the existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility.

Land uses on the East Campus are governed by the 2005 LRDP, which designates the Corporation Yard and the adjacent proposed EH&S Expansion/Lot 27 site for *Campus Support* and the existing EH&S facility and the area around it for *Academic* land uses. Other regional plans that have bearing on the UCR campus include the Regional Comprehensive Plan (SCAG 2008a), the Regional Transportation Plan (SCAG 2008b), the Water Quality Control Plan for the Santa Ana River Basin (RWQCB-SA 1995 and 2008), and the Air Quality Management Plan (SCAQMD 2007).

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, future development on the campus would not include any development outside of established campus boundaries, and no incursion into, or division of, the surrounding residential communities would occur. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not physically divide an established community, and no impact would occur.

As development associated with the proposed projects would also occur within established campus boundaries, and no incursion into, or division of, the surrounding residential communities would occur,

development of the proposed projects would not physically divide an established community. Therefore, no impact would occur, and no further analysis of this issue is required in the EIR.

b) The 2005 LRDP EIR indicated that change in on-campus land uses associated with the 2005 LRDP could be substantially incompatible with existing adjacent land uses. However, implementation of future development on the campus would be guided by a range of LRDP Planning Strategies (PS), including Land Use 1 through 7, Open Space 1 through 7, Campus and Community 1 through 3, Transportation 1 through 6, Conservation 1 through 4, and Development Strategy 1 through 3, all of which would influence land use decisions throughout the campus (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). In addition, implementation of the 2005 LRDP would result in the continued implementation of several programs and practices, such as PP 4.9-1(a) through (c), which would reduce potential land use incompatibilities. Thus, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not result in the development of land uses that are substantially incompatible with existing adjacent land uses or planned land uses, and this impact would be less than significant.

The proposed EH&S Expansion facility would be located in the northeastern portion of the East Campus near existing on-campus and off-campus residential uses. Due to intervening distance and with the implementation of relevant campus PSs and PPs, the proposed EH&S Expansion facility would not result in potential conflicts with existing or planned adjacent land uses. However, given the uses associated with the proposed project, and in order to provide additional information and analysis, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

c) The University of California is not subject to municipal land use plans, policies, or regulations including, the County and City General Plans. However, UCR is required by Section 15125(d) of the *State CEQA Guidelines* to address inconsistencies between its plans and the applicable regional plans. As indicated in the 2005 LRDP EIR, future development of the East and West Campus would not conflict with the applicable plans. Thus, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect and this impact would be less than significant.

The 2005 LRDP is the land use plan that is applicable to the proposed project. The construction of the proposed EH&S Expansion facility in the northeastern portion of the campus would be consistent with the 2005 LRDP, as the project site is designated *Campus Support* on the UCR 2005 LRDP Land Use Diagram and, under the 2005 LRDP, an EH&S Expansion is an allowable use on lands designated *Campus Support* or *Academic*. The relocation of campus Mail Services and Printing & Reprographic operations to the existing EH&S facility site would also be consistent with the 2005 LRDP as the site is designated *Academic* and these support services are an allowable use under this designation. Therefore, the proposed projects would not conflict with the applicable land use plan. Given that it would be consistent with the 2005 LRDP, the proposed projects would also not conflict with other regional plans. However, in order to provide additional information and analysis, this impact will be further addressed in the EIR to provide a more comprehensive analysis.

d) As discussed in Item 4 f), the 2005 LRDP EIR indicated that implementation of the 2005 LRDP would not conflict with any applicable habitat conservation plan or natural community conservation plan, and no impact would occur.

No new HCP or NCCP have been adopted for the area of the campus since 2005. Furthermore, as discussed in Item 4 e), above, the project would not conflict with any applicable habitat conservation plan or natural community conservation plan, and no impact would occur. No further analysis of this issue is required in the EIR.

e) No other land use impacts were identified.

Discussion of Potential Cumulative Impacts

The 2005 LRDP EIR stated that cumulative impacts related to land use compatibility could occur with respect to cumulative growth in the campus vicinity. The 2005 LRDP EIR found that the land use impact associated with development under the 2005 LRDP would not result in a cumulatively considerable contribution to the cumulative impact. Although the proposed project is not anticipated to result in land use conflicts and thereby alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact, to provide additional information and analysis, this issue will be further analyzed in the EIR.

The 2005 LRDP EIR stated that future off-campus development would be reviewed for consistency with adopted land use plans and policies by the City of Riverside. As a result, the 2005 LRDP EIR found that impacts associated with inconsistency of future development with adopted plans and policies would not be significant. Even if the cumulative land use impact of these projects would be significant, the 2005 LRDP EIR states that the contribution of the 2005 LRDP to such impacts would not be cumulatively considerable as development under the 2005 LRDP would be compatible with land uses that surround it. Although the proposed projects are not anticipated to result in land use conflicts and thereby alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact, to provide additional information and analysis, this issue will be further analyzed in the EIR.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	☐	■

Relevant Elements of Project

The proposed projects would develop a new EH&S Expansion facility and parking lot, reorganize a portion of the existing Corporation Yard (including demolition and reconstruction of warehouse buildings), and move the existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility. All project elements would be located in developed areas of the East Campus.

The state has designated a majority of the land within the City of Riverside, including the UCR campus, as mineral classification MRZ-4, which is defined as an area that has available geologic information that indicates that mineral deposits exist or are likely to exist, but the significance of the deposits is undetermined (Riverside 2007).

Discussion of Potential Project and Cumulative Impacts

a) According to the initial study prepared for the 2005 LRDP EIR, no mineral resources of regional or State-wide importance are known to exist on the UCR campus. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not 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, and no impact would occur. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this issue that could alter the conclusions of the previous analysis.

As no mineral resources of regional or statewide importance are known to exist on the campus, development of the proposed projects would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. No impacts would occur. No further analysis of this issue is required in the EIR.

b) According to the initial study prepared for the 2005 LRDP EIR, no mineral resource recovery activities occur on the UCR campus, and no such sites are delineated in the General Plan for the County and City of Riverside, or the University Community Plan, which covers the area around the campus. Refer to Item 11(a) above. Thus, implementation of the 2005 LRDP would not 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, and no impact would occur. There have been no changes in circumstances since the certification of the 2005 LRDP EIR that could alter the conclusions of the previous analysis.

As no mineral resource recovery activities occur on the UCR campus, and no such sites are delineated in the General Plans for the County and City of Riverside, or the University Community Plan, which covers the area around the campus, development of the proposed projects would not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. No impact would occur. No further analysis of this issue is required in the EIR.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	□	■

Relevant Elements of Project

The proposed projects would include construction of a new EH&S Expansion facility and parking lot, demolition and reconstruction of a warehouse building at the existing Corporation Yard and development of facilities for the TAPS Special Events program and relocate the existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility. These land use changes would result in some redistribution of campus-related vehicle trips on the local street system.

Vehicular traffic is the primary source of noise within and around the campus. The greatest source of groundborne vibration at the UCR campus and its immediate vicinity is construction traffic and roadway truck traffic.

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, the increase in population and development associated with the 2005 LRDP would result in additional vehicular traffic on and around the campus, which in turn would generate increased noise levels. Other sources of noise would include new stationary sources (such as rooftop heating, ventilation, and air conditioning equipment) and increased human activity throughout the campus. The analysis in the 2005 LRDP EIR determined that these sources of noise would not result in

the exposure of persons to or generation of noise levels in excess of established standards. In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Open Space 4, which provides landscaped buffers along area roadways, and by existing programs and practices, such as PP 4.10-1(a) and (b), which would reduce potential impacts associated with construction and building design (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 the implementation of the 2005 LRDP would not result in the 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, and this impact would be less than significant.

The construction of the proposed EH&S Expansion facility would increase the square footage of the facility by about 20,000 gsf compared to the existing facility and would result in an increase of about 8 FTE employees compared to existing levels. The increase in the amount of waste handled, stored and off-hauled from the proposed EH&S Expansion facility, as well as the increase in employees at the new facility, would result in a minor increase in vehicular traffic on and around the campus, which in turn would generate increased noise levels. However, this increase in traffic and associated noise was included in the analysis in the 2005 LRDP EIR. The construction of Parking Lot 27, as well as the Corporation Yard Reorganization and relocation of the Mail Services and Printing & Reprographic operations, would also cause redistribution of existing vehicle trips, but would not in themselves generate new trips. In addition to new and redistributed traffic, other sources of noise would include new stationary sources (such as rooftop heating, ventilation, and air conditioning equipment) and increased human activity in the immediate vicinity of the proposed EH&S Expansion facility, Parking Lot 27, and Corporation Yard Reorganization. All of these elements of the proposed projects were previously considered under the 2005 LRDP and would not generate increased traffic and traffic-related noise levels above levels analyzed in the 2005 LRDP EIR. Development of the proposed projects would be guided by a range of LRDP planning strategies and existing programs and practices, such as PP 4.10-1(a) and (b), which are discussed above. With implementation of these programs and practices, the proposed projects would not result in the exposure of persons to or generation of noise levels in excess of established standards, and impacts would be less than significant. However, in order to provide additional information and more comprehensive analysis, this impact will be further addressed in the EIR.

b) The 2005 LRDP EIR indicated that construction equipment would be the primary sources of vibration and vibration levels on the campus would primarily affect campus buildings located in close proximity of construction sites. The EIR concluded that as long as construction occurs more than 50 feet from campus classroom buildings, office buildings, and student housing, the impact would be less than significant. In order for vibration resulting from construction activities to not potentially impact sensitive research buildings, the activities would need to occur at least 300 feet from the sensitive research building. Future development on the campus would continue to implement existing programs and practices, such PP 4.10-2, which limits the hours of exterior construction from 7:00 AM to 9:00 PM Monday through Friday and 8:00 AM to 6:00 PM on Saturday when necessary. In an effort to reduce vibration during construction, future development would also be required to implement LRDP mitigation measure MM 4.10-2(a), which would require the notification of all academic and residential facilities within 300 feet of approved construction of the pending construction schedule. While LRDP mitigation measure MM 4.10-2(a) represents the best management practice to minimize the impact of groundborne vibration near on-campus facilities during construction, it would not ensure that groundborne vibration does not exceed the identified thresholds of significance for sensitive buildings located in close proximity of the construction sites. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would

expose persons to or generate excessive groundborne vibration or groundborne noise levels, and this impact would be significant and unavoidable.

The locations of the proposed EH&S Expansion facility, Parking Lot 27, and Corporation Yard Reorganization were previously considered under the 2005 LRDP and would not result in vibration levels during construction that were not previously considered. The relocation of Mail Services and Printing & Reprographic operations would only involve interior renovations and would not result in increased vibration levels. Development of the proposed projects would be required to implement existing programs and practices, such PP 4.10-2, which is discussed above. In addition, the proposed project would also be required to implement mitigation measure MM 4.10-2(a), which is discussed above. However, construction of the projects would be phased over time, and construction could occur within 300 feet of residential buildings on campus. An increase in vibration affecting these on-campus uses during construction is considered a potentially significant impact, and this issue will be further analyzed in the EIR.

According to the 2005 LRDP EIR, vibration levels from on-campus sources could affect nearby off-campus residential uses during construction. In addition, heavy trucks transporting material to and from campus during construction could also generate vibration levels that could affect nearby off-campus residential uses. However, in both instances, the resulting groundborne vibration velocity levels would be less than the Federal Railway Administration's vibration impact threshold for residences. Therefore, the 2005 LRDP EIR concluded that construction projects implementing the 2005 LRDP would not expose off-campus persons to excessive groundborne vibration or groundborne noise levels, and this impact would be less than significant.

Lands that would be affected by the proposed projects are located near existing off-campus residential uses. The nearest residences to the proposed EH&S Expansion facility site and the Corporation Yard Reorganization are single-family dwellings located along the north side of Watkins Drive and the north end of Valencia Hill Drive. Construction of the proposed projects could generate vibration levels that could affect these off-site uses. This is considered a potentially significant impact, and this issue will be further analyzed in the EIR. There would be no new construction associated with relocation of Mail Services and Printing & Reprographic operations, and thus no construction-related noise or vibration impacts associated with this element of the proposed project.

Concerning operational vibration, the 2005 LRDP EIR indicated that campus operational activities under the 2005 LRDP would not expose on- or off-campus persons to excessive groundborne vibration or groundborne noise levels, and this impact would be less than significant.

Operation of the proposed projects would not involve heavy machinery that could create groundborne vibration and thus expose on- or off-campus persons to excessive groundborne vibration or groundborne noise levels. The proposed EH&S Expansion facility and Corporation Yard Reorganization represent land uses that were previously considered under the 2005 LRDP and would not result in increased vibration levels during operation. For these reasons, this impact would be less than significant during project operation. No further analysis of this issue is required in the EIR.

c) According to the 2005 LRDP EIR, the increase in population generated by the 2005 LRDP would result in additional vehicular traffic on and around the campus, which in turn would generate increased noise levels. The analysis in the 2005 LRDP EIR determined that these sources of noise would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing

without the 2005 LRDP. In addition, implementation of the 2005 LRDP would continue existing programs and practices, such as PP 4.10-5(a) and (b), which would continue the campus' policy of providing on-campus housing in an effort to reduce trips and continue to implement an Alternative Transportation program that facilitates the use of alternative modes of transportation. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, and this impact would be less than significant.

The proposed EH&S Expansion facility would result in a minor increase in vehicular traffic on and around the campus, which in turn would generate increased noise levels. This project element, as well as the Corporation Yard Reorganization, and the reuse of the existing EH&S facility, represent land uses that were previously considered under the 2005 LRDP and would not generate noise levels in excess of those evaluated in the 2005 LRDP EIR. Relocation of Mail Services and Printing & Reprographic operations would result in minor redistribution of existing traffic and would not generate increased noise levels. The relatively small amount of additional building space and associated traffic would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. However, in order to provide additional information and more comprehensive analysis, this impact will be further addressed in the EIR.

Concerning stationary sources of noise (such as rooftop heating, ventilation, and air conditioning equipment) and increased human activity throughout the campus, according to the 2005 LRDP EIR, noise levels generated by these types of equipment are not expected to cause a substantial permanent noise increase. In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Campus and Community 1, which would provide sensitive land use transitions and landscaped buffers where off-campus residential neighborhoods might experience noise or light from UCR activities. Finally, implementation of the 2005 LRDP would continue existing programs and practices, such as PP 4.10-6, which would shield all new stationary sources of noise. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, and this impact would be less than significant.

Buildings associated with the proposed projects would include stationary sources of noise. The proposed parking lot and the reuse of the existing EH&S facility would also represent noise sources. The land uses associated with the proposed project were previously considered under the 2005 LRDP and would not generate increased noise levels from stationary sources. Development of the proposed projects would be guided by a range of LRDP planning strategies, including Campus and Community 1, and would continue existing programs and practices, such as PP 4.10-6, which are discussed above. With implementation of these planning strategies and existing programs and practices, additional building space associated with the proposed EH&S Expansion facility would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project as a result of new stationary sources of noise. However, in order to provide additional information and more comprehensive analysis, this impact will be further addressed in the EIR.

d) The 2005 LRDP EIR indicated that construction activities associated with on-campus construction projects under the 2005 LRDP could result in substantial increases in ambient noise levels experienced by both on-campus and off-campus sensitive receptors. Future development on the campus would continue to implement existing programs and practices, such as PP 4.10-7(a) through (d), which would minimize construction noise impacts to on-campus locations, and PP 4.10-8, which requires the Campus to conduct

meetings with off-campus constituents that could be affected by campus construction. However, even the continued implementation of these programs and practices would not ensure that construction noise levels would be substantially reduced at noise-sensitive land uses located in close proximity of the construction sites. Therefore, the 2005 LRDP concluded that implementation of the 2005 LRDP would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project during construction of campus projects, and this impact would be significant and unavoidable.

The land that would be affected by the proposed project were considered for development in the 2005 LRDP evaluation, and development at these sites would not result in an increase in ambient noise levels that were previously not considered. As an element of the growth under the 2005 LRDP, the proposed project would be required to implement existing programs and practices, such as PP 4.10-7(a) through (d) and PP 4.10-8, which are discussed above. However, as noted above, even the continued implementation of these programs and practices would not ensure that construction noise levels would be substantially reduced at noise-sensitive land uses located close to the proposed project site. Construction of the proposed EH&S Expansion facility and the demolition and reconstruction of the Corporation Yard warehouse could result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. A substantial temporary increase in noise is considered a potentially significant impact, and this issue will be further analyzed in the EIR.

According to the 2005 LRDP EIR, noise would continue to be generated by occasional special events at the UCR campus, such as athletic meets at the campus track and outdoor concerts within the center and recreational areas of the campus. The loudest of these would continue to be the outdoor concerts. These special events would be no different than those that occur under the existing baseline conditions. Implementation of the 2005 LRDP would increase the number of students living on the campus and, therefore, could increase the annual number of these events. However, the actual noise levels generated by these events would be similar to existing conditions. Noise generated by additional numbers of persons assembled at an event would typically not be the primary source of noise, in particular when compared to noise from amplified systems. In addition, special events on interior portions of the campus would be screened from adjacent locations by campus buildings. As such, these events would not result in substantial temporary or periodic increases in ambient noise levels, although events could occur on more days per year. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project; however, this impact would be less than significant.

The facilities associated with the proposed projects would not be used for special events. They would not alter the noise levels discussed in the 2005 LRDP EIR. Therefore, development of the proposed project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity related to special events; this impact would be less than significant. No further analysis of this issue is required in the EIR.

e-f) The closest airports to the campus are Flabob Airport, which is located approximately 4 miles to the west, and March Air Reserve Base, which is located approximately 6 miles to the southeast. The UCR campus is not located within 2 miles of a public airport, public use airport, or private airstrip or within the airport land use plan study area for either the Flabob Airport or the March Air Reserve Base. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not expose people residing or working in the project area to excessive noise levels resulting from aircraft overflights, and no

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

As lands affected by the proposed projects are not located within an airport land use plan study area, or within 2 miles of a public airport, public use airport, or private airstrip, the proposed project would not expose people to excessive noise from airports. No impact would occur. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The 2005 LRDP found that implementation of the 2005 LRDP would not make a cumulatively considerable contribution to the impact associated with exposure of persons to noise levels in excess of applicable standards. Development of the proposed project would involve additional traffic and stationary sources of noise. Furthermore, ambient noise conditions on and around the campus may have changed since 2005. Therefore the proposed project has the potential to increase the cumulative noise levels in the project area compared to the levels estimated and analyzed in the 2005 LRDP EIR and potentially increase the severity of the previously analyzed cumulative impact. This issue will be further evaluated in the EIR.

The 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not result in a cumulatively considerable contribution with respect to groundborne vibration from construction. With regard to cumulative groundborne vibration due to operations, the 2005 LRDP EIR also concluded that 2005 LRDP contribution to the cumulative effect would not be cumulatively considerable. Development of the proposed projects would involve additional construction vibration sources. As a result, the proposed projects have the potential to increase the cumulative vibration levels in the project areas compared to the levels estimated and analyzed in the 2005 LRDP EIR and potentially increase the severity of the previously analyzed cumulative impact. This issue will be further evaluated in the EIR.

The 2005 LRDP EIR concluded that the study area roadway segments for the 2005 LRDP would result in significant cumulative impacts related to a substantial permanent increase in ambient noise levels. Although development of the proposed project would not add additional traffic to study area roadways beyond that projected in the 2005 LRDP EIR, ambient noise conditions on and around the campus may have changed since 2005. As a result, the proposed projects have the potential to contribute to increased cumulative noise levels along study area roadways compared to the levels estimated and analyzed in the 2005 LRDP EIR and potentially increase the severity of the previously analyzed cumulative impact. This issue will be further evaluated in the EIR.

The 2005 LRDP EIR concluded that the 2005 LRDP would not result in a cumulatively considerable contribution to a substantial permanent increase in ambient noise levels from stationary sources. Development of the proposed projects would involve additional stationary sources of noise, and ambient noise conditions on and around the campus may have changed since 2005. As a result, the proposed projects have the potential to increase the cumulative noise levels in the project area compared to the levels estimated and analyzed in the 2005 LRDP EIR and potentially increase the severity of the previously analyzed cumulative impact. This issue will be further evaluated in the EIR.

The 2005 LRDP EIR concluded that construction activities associated with the 2005 LRDP would not result in a significant cumulative impact from substantial temporary or periodic increases in ambient noise levels at locations both on and off campus. Development of the proposed projects would involve additional sources of temporary or periodic noise associated with the construction of the EH&S Expansion and Corporation Yard facilities in the vicinity of off-campus sensitive receptors. As a result, the proposed projects have the potential to change the cumulative noise levels in the project area compared to the levels estimated and analyzed in the 2005 LRDP EIR. This issue will be further evaluated in the EIR.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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) Would the project create a demand for housing that could not be accommodated by the local jurisdiction?	☐	■
c) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	■
d) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	■

Relevant Elements of Project

The proposed project would develop a new EH&S Expansion facility and parking lot, reorganize the existing Corporation Yard (including demolition and reconstruction of warehouse buildings, and relocation of the TAPS yard/special events program), and relocate the existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility location. The proposed changes would not increase the student and faculty and staff population above the enrollment and employment numbers analyzed in the 2005 LRDP EIR.

The current population on campus is 27,080. This population consists of 19,439 students (three-quarter average headcount), 928 faculty and academic staff, 4,877 non-academic staff, and 1,836 other individuals. A total of 6,314 students are housed in University-owned housing (not including a future Glen Mor 2 housing complex under design development in 2010/11).

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, while implementation of the 2005 LRDP would induce substantial population growth within the City of Riverside, this growth has been anticipated by the local and regional planning agencies, and would not result in population or housing effects that would lead to a significant impact on the environment. In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Land Use 4, which states that the Campus will pursue a goal of housing 50 percent of student enrollment in on-campus or Campus-controlled housing (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 would not induce substantial population growth in the area, either directly or indirectly, and this impact would be less than significant. There have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to this issue that could alter the conclusions of the previous analysis.

The projects would not induce direct population growth in the area because it does not propose the construction of new homes or businesses. The proposed EH&S Expansion facility would not generate an increase in student population. The number of EH&S employees is projected to increase by about 8 employees, from 22 FTE employees at the present time to approximately 30 FTE. However, this growth in campus employees has already been accounted for in the 2005 LRDP EIR. The project would not induce population growth through the extension of utilities because the project is located within the developed area of the campus and would connect to existing utilities on the campus, and would not provide connections to previously undeveloped areas. The proposed project is consistent with the planned use of the property and would not create or exceed growth that was anticipated in the 2005 LRDP EIR. Other elements of the project consist of reorganization or relocation of existing functions and would not increase the number of students, faculty, or staff. They would thus not induce population growth directly or indirectly. This is considered a less than significant impact. No further analysis of this issue is required in the EIR.

b) According to the 2005 LRDP EIR, the increase in student enrollment and corresponding increase in on-campus employment and campus population associated with the 2005 LRDP would result in an increased demand for housing in the City of Riverside and the surrounding three-County area of Los Angeles, Orange, and San Bernardino counties. The 2005 EIR indicated that enough future housing supply would exist in the City of Riverside and the surrounding area to accommodate growth through the planning horizon. In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Land Use 4, which is described above. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not create a demand for housing that could not be accommodated by the local jurisdictions, and this impact would be less than significant.

Development of the proposed projects would increase the overall population on campus by approximately 8 employees. This very small increase in campus-affiliated population would not create a significant demand for housing in the City of Riverside and the surrounding areas. In addition, the increase in housing demand associated with the proposed project was included in the population growth assumptions evaluated in the 2005 LRDP EIR. This is considered a less than significant impact. No further analysis of this issue is required in the EIR.

c-d) The 2005 LRDP EIR indicated that implementation of the 2005 LRDP would result in the removal of family housing on the East Campus and provision of replacement family housing on the West Campus. However, prior to demolition replacement housing would be constructed. As a result, no student families would be displaced. In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Land Use 5, which states that the Campus would remove existing family housing units on the East Campus, and provide replacement and additional units of family housing on the West Campus. Thus, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere, and this impact would be less than significant.

The proposed EH&S Expansion facility project site is an vacant land with little or no vegetation, except a small community garden at the western edge. No housing exists on this site or on the Corporation Yard and existing EH&S sites. Therefore, no housing displacement would occur as a result of project implementation. Implementation of the proposed projects would not displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere, and no impact would occur. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The 2005 LRDP EIR stated that cumulative impacts related to demand for housing would not be significant, and the 2005 LRDP would not make a cumulatively considerable contribution to this demand. The proposed projects would not increase campus-affiliated population compared to the population analyzed in the 2005 LRDP EIR. Therefore, the proposed projects would not alter the conclusion in the 2005 LRDP EIR with respect to this impact. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR concluded that the 2005 LRDP would not contribute to any cumulative effects related to the displacement of housing or people. As stated above, the proposed projects would also not result in displacement of housing or people and therefore would not alter the conclusion of the 2005 LRDP EIR with respect to this cumulative impact. No further analysis in the EIR is required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	☐	■
f) Create other public service impacts?	☐	■

Relevant Elements of Project

The proposed projects would develop a new EH&S Expansion facility and parking lot, reorganize the existing Corporation Yard (including demolition and reconstruction of warehouse buildings, and relocation of the TAPS yard/special events program), and relocate the existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility location. The projects would not increase affiliated employee and visitor population on the campus compared to the numbers in the 2005 LRDP, and thus would not increase the demand for public services required at the campus compared to the demand projected in the 2005 LRDP EIR.

The City of Riverside Fire Department (RFD) in conjunction with the campus EH&S Department provides fire protection service for the UCR campus, based on an unwritten agreement between these departments. This agreement identifies the City of Riverside Fire Department as responsible for fire suppression, while EH&S is responsible for inspection, fire protection engineering, and fire prevention. The UC Police Department is responsible for providing police services to the UCR campus. The Riverside Unified School District (RUSD) is responsible for providing public elementary, middle and high school education within the City of Riverside. UCR currently has four libraries distributed among the academic centers of the central campus, which serve students, faculty, staff, and the general public while the City of Riverside maintains six libraries (UCR 2005).

Discussion of Potential Project Impacts

a) The 2005 LRDP EIR indicated that all fire stations serving the campus currently meet the City's response time standard of an engine company arriving on scene within 5 minutes, 90 percent of the time. As the development and other changes proposed under the project would occur within the campus boundaries, there would be no increase in distance between the existing fire stations and the campus. The RFD provides fire protection service, mainly fire suppression, on the UCR campus. The RFD provides fire protection and emergency services to the City of Riverside from 14 stations strategically located throughout the City. Emergency responders can come from any of the 14 stations depending on the closest and available unit. For a typical fire response, firefighters would respond to the campus from a number of different fire stations. The distance and expected response time to campus from each of the fire stations that serve the campus is provided in **Table 2, Fire Stations Serving the UCR Campus**.

Table 2
Fire Stations Serving the UCR Campus

Station Number	Location	Distance From Site	Response Time
4	3510 Cranford Drive	1 mile	4 to 5 minutes
14	725 Central Avenue	2.6 miles	6 to 7 minutes
1	3420 Mission Inn Avenue	3.2 miles	6 to 7 minutes
6	1077 Orange Street	3.2 miles	6 to 7 minutes
3	6395 Riverside Drive	5.6	9 to 10 minutes

Source: Riverside Fire Department, March 2011.

The desirable response time for the first arriving RFD engine company is 5 minutes, 90 percent of the time. Multiple unit responses to incidents such as structure fires require the entire response arrival within 10 minutes of being dispatched. Statistics from 2008-10 indicate that the RFD met the desirable response time goal only 45 percent of the time for the first arriving unit (Esparza 2011). In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Transportation 4, which would limit vehicular circulation in the central campus, but allow transit, service and emergency vehicle access, thus giving priority to emergency responders (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures).

The RFD station closest to the proposed EH&S Expansion facility is Station 4, which has an acceptable average response time of 4 to 5 minutes. The existing EH&S facility generates few or no emergency calls requiring RFD response; no RFD response has been required during the past 12 years. The proposed EH&S Expansion facility would involve essentially the same types of operations, but would include improved materials handling and safety facilities and is therefore expected to reduce the potential for emergency situations that could require a response from the RFD. It would therefore not create any adverse change in emergency response times compared to existing conditions, and impacts would be less than significant. No further analysis in the EIR is required.

The 2005 LRDP EIR also indicated that the development of land uses permitted by the 2005 LRDP would also increase demands on fire prevention programs provided by EH&S, including design consultation

services, formal plan review and approval, testing and inspection of new construction and renovations, periodic fire safety inspections, and service, maintenance, and testing of fire and life safety equipment.

According to the 2005 LRDP EIR, current water storage on campus is adequate to provide the required fire flows for existing development on campus. Increases in fire water supply will be required to maintain adequate water pressure and volume for firefighting purposes. For example, the 2005 LRDP proposes an additional 7 million gallon (MG) storage tank adjacent to the existing 1 MG and 50,000 gallon reservoir on the East Campus. Other improvements include, but are not limited to, the establishment of a higher capacity for the current 5 MG City reservoir and additional linkages between the campus and City water distribution system. The potential environmental effects associated with these improvements were evaluated in the 2005 LRDP EIR at a program level.

The proposed EH&S Expansion facility would represent an increase in occupied building area, and thus would increase the fire flow demands that would be required to maintain adequate water pressure. The effect on fire services, including the potential to result in substantial adverse physical impacts associated with the provision of new or physically altered fire facilities, was evaluated at a program level in the 2005 LRDP EIR.

To ensure that adequate fire protection services are provided to the proposed new buildings, including both the new EH&S Expansion facility and new Corporation Yard warehouse, the provisions of PP 4.12-1(a) and PP 4.12-1(b) would apply. These policies require that various fire and accident preventive measures be incorporated as new development occurs. The proposed EH&S Expansion facility would be equipped with an automatic sprinkler system supplied from the campus fire main distribution system. A fire flow evaluation of this main line performed as part of project design determined that adequate static and residual pressures exist to serve the proposed EH&S Expansion project. In addition, all fire protection systems and equipment would be designed in accordance with the California Building Code, recommendations of the National Fire Protection Association (NFPA), National Electrical Code (NEC), UCR Guidelines, and the Owner's insurance underwriter. The fire alarm system would be linked with the Campus Central System, which is directly connected to the UCR Police Department, who would then notify the City Fire Department. The same requirements would apply to the new Corporation Yard warehouse. The proposed projects would be required to implement these policies, and thus is not anticipated to result in impacts to fire protection services beyond those expected and analyzed in the 2005 LRDP EIR. No further analysis in the EIR is required.

Potential impacts associated with emergency access to the project sites are discussed in Items 8 g) and 15 e).

b) The 2005 LRDP EIR indicated that the incremental increase in the campus population as a result of the 2005 LRDP may result in increased response times by the UC Police Department, which in turn would require additional officers and support staff. To maintain the current ratio of 1.4 sworn officers per 1,000 persons, the 2005 LRDP EIR estimated that 21 additional sworn officers would be needed. However, estimated staffing to population ratios for 2001 at all University of California campuses ranged from 0.7 to 1.6 sworn officers per 1,000 persons. Thus, adequate service could be provided to the campus with a lower ratio of officers to population with the addition of more Community Service Officers (CSOs) and parking patrol officers and other measures. While increased patrols may be necessary due to the increased number of students residing on the campus, the 2005 LRDP does not include any features that would make it inherently susceptible to criminal activity. Persons on the campus would not be exposed to increased risks as a result of the additional demands on the UC Police Department. In addition,

continued implementation of existing programs and practices, such as PP 4.12-2(a), would assure the hiring of additional officers as needed to maintain adequate service levels.

The 2005 LRDP EIR also indicated that the provision of additional space to accommodate the additional staff would be required. The potential environmental effects associated with expanding the existing police facility or providing a satellite facility were evaluated in the 2005 LRDP EIR at a program level. The 2005 LRDP EIR indicated that LRDP planning strategies, existing programs and practices, mitigation measures provided in the EIR would address impacts to the extent feasible. With the incorporation of mitigation discussed in other sections of the 2005 LRDP EIR and due to the relatively small amount of space that might be constructed or small areas that could be disturbed, the construction of an expanded UC police facility would not individually result in significant environmental impacts.

The 2005 LRDP EIR also stated that an increase in the on-campus population would increase activity along University Avenue, such as use of restaurants, and other retail services in the campus vicinity. This could result in an increase in calls for police services in the community surrounding UCR.

Finally, the 2005 LRDP EIR indicated that no increase in off-campus student residential population is anticipated to result and all 2005 LRDP development would occur with campus boundaries. Therefore, implementation of the 2005 LRDP would not directly increase the need for patrols in off-campus residential areas. In addition, the 2005 LRDP EIR indicated that the increase in campus-affiliated population within the City that would be served by the Riverside Police Department would be nominal.

Development of the proposed projects would not increase the overall population on campus beyond that considered in the 2005 LRDP. As the proposed projects would add only 8 new employees to the campus, an increase in staffing of the UCR Police Department would not be required to maintain an adequate ratio of sworn officers per 1,000 persons and no new police facilities would be required as a result of the proposed project. In addition, the proposed projects would not substantially increase the overall population on campus, and no increase in calls for service to the Riverside Police Department would occur.

For the reasons presented above, development of the proposed projects would not result in substantial adverse physical impacts associated with the provision of new or physically altered police facilities. This impact is considered less than significant, and no further analysis in the EIR is required.

c) According to the 2005 LRDP EIR, the RUSD had plans to increase capacity in anticipation of planned growth, and this expansion would occur independently from the 2005 LRDP. The Campus is exempt from payment of school impact fees in connection with campus-controlled residential facilities constructed pursuant to the 2005 LRDP, and impact fees associated with the development of residential uses on the campus would not be available to local school districts. However, it is assumed that new development of private residential and commercial projects off campus resulting from increased housing demand from overall growth in the Riverside area would be subject to school impact fees. Payment of these fees would partially reduce impacts on local schools. In addition, school districts have a variety of options available to respond to the issue of University projects contributing more students to them. These options include opening a previously closed school, providing new or temporary classrooms, building a new school, modifying school district boundaries or enrollment areas (thereby freeing up capacity), and modifying which grade levels attend elementary, middle, and high schools. Therefore, because building a new school is only one of several options available for addressing the contribution of more school-age children to the local school districts, it would be unduly speculative to assume that a new building would

be necessary. Based on the above, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, and this impact would be less than significant.

The proposed projects would not increase the overall population on campus compared to 2005 LRDP projections, as all EH&S employees were considered in the 2005 LRDP. In addition, as discussed above, the RUSD and neighboring school districts have a number of options available to accommodate new students. Therefore, development of the proposed projects would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, and this impact would be less than significant. No further analysis of this issue is required in the EIR.

d) See Section 15, Recreation, below regarding parks.

e) The 2005 LRDP EIR indicated that the implementation of the 2005 LRDP would increase the demand on each of the four existing libraries on campus. In addition, satellite libraries may also be developed as part of professional school development. The potential environmental effects associated with the development of satellite libraries were evaluated in the 2005 LRDP EIR at a program level. With the incorporation of mitigation discussed in other sections of the EIR and due to the relatively small amounts of library space that might be constructed or small areas that could be disturbed to construct library facilities, the 2005 LRDP EIR concluded that the construction of these facilities would not individually result in significant environmental impacts.

In addition, the 2005 LRDP EIR stated that the increase in campus-affiliated population in the City of Riverside would contribute to demand for library services within the City of Riverside. According to the 2005 LRDP EIR, the City of Riverside provides library services from the Main Library, three branch libraries, one learning center and two "cybrary" satellite facilities that serve the existing population of approximately 259,738 persons. The 2005 LRDP EIR indicated that the increased service population due to implementation of the 2005 LRDP is not anticipated to require new or altered library facilities to meet the relatively small increase in service demand.

The proposed EH&S Expansion project would not increase the overall population on campus compared to 2005 LRDP projections, as all EH&S employees were considered in the 2005 LRDP. The other elements of the proposed project would not increase the need for additional library space. The campus-affiliated population that would live in the City would not increase as a result of the proposed projects sufficiently to affect the conclusion in the 2005 LRDP EIR with respect to the effect of campus-affiliated population in the City of Riverside on public libraries.

Therefore, for the reasons provided above, the proposed projects would not result in substantial adverse physical impacts associated with the provision of new or physically altered library facilities, and this impact would be less than significant. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

f) No other public service impacts were identified.

Discussion of Potential Cumulative Impacts

The 2005 LRDP EIR determined that the 2005 LRDP's proposed project's contribution to cumulative impacts on police and fire protection services would not be significant. As discussed under items 14 a) and b) above, the proposed projects would not result in an increase in demand for police and/or fire services which could require the construction of new facilities and associated environmental impacts. As discussed above, although current overall RFD response times do not consistently meet the desirable response time goal, the proposed EH&S Expansion facility would not increase and may decrease the potential for emergencies requiring an RFD response. The Corporation Yard Reorganization would involve essentially the same types and intensity of activities and would therefore not increase the need for RFD response. Therefore, the proposed projects would not increase the severity of the previously evaluated cumulative impact, nor would they contribute to a deficiency in RFD response times under existing conditions. No further analysis of this issue is required in the EIR.

The 2005 LRDP concluded that the cumulative impacts to demand for public school classroom seating capacity would not be significant, and the 2005 LRDP would not make a cumulatively considerable contribution to this impact. The proposed projects would not substantially increase the number of campus-affiliated school-age children in the study area, and for the same reasons that are presented in the 2005 LRDP EIR, the proposed projects would not make a cumulatively considerable contribution to the impact nor increase the severity of the previously evaluated cumulative impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis. No further evaluation in the EIR is required.

The 2005 LRDP EIR concluded that the cumulative impact related to the demand for library services would not be significant and that the 2005 LRDP would not result in a cumulatively considerable contribution to this impact. For the same reasons that are presented in the 2005 LRDP EIR, the proposed projects would not make a cumulatively considerable contribution to the impact. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis. No further evaluation in the EIR is required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
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?	☐	■
c) Would the project affect existing recreational opportunities?	☐	■

Relevant Elements of Project

The proposed project would develop a new EH&S Expansion facility and parking lot, reorganize the existing Corporation Yard (including demolition and reconstruction of warehouse buildings, and relocation of the TAPS yard/special events program), and relocate the existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility location. The projects would not increase affiliated employee and visitor population on the campus compared to the numbers in the 2005 LRDP, and thus would not increase the demand for recreational facilities required at the campus compared to the demand projected in the 2005 LRDP EIR.

The UCR campus currently provides approximately 46.1 acres of active recreational space and approximately 98,269 gsf of developed recreational facilities (e.g., recreation buildings) that are used for physical education, intercollegiate athletics, intramural sports, sports clubs, and general recreation. There are also 18 public parks maintained by the City of Riverside within approximately 2 miles of the campus. The total combined area of these parks is about 1,000 acres. The 2,389-acre Box Springs Mountain Park, which is maintained by the County of Riverside Open Space and Recreation Department, is the closest regional park to the campus (UCR 2005).

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, recreational facilities developed on the campus under the 2005 LRDP 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 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 projects 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 projects compared to overall population on campus considered in the 2005 LRDP EIR. Therefore, the proposed projects 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. No further analysis of this issue is required in the EIR.

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 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 projects do 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. No further analysis of this issue is required in the EIR.

c) According to the 2005 EIR, implementation of the 2005 LRDP would result in displacement of existing recreational facilities on the lower intramural fields to provide sites for academic and support facilities but the fields would be replaced at other locations over time. In addition, future development would be guided by a range of LRDP planning strategies, including Open Space 7, which is discussed above. Therefore, as implementation of the 2005 LRDP would compensate for the loss of existing recreational fields on campus by replacing these recreational opportunities elsewhere on the campus, 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.

Lands affected by the proposed projects are currently developed or vacant. No recreational facilities exist on these sites and no impact would occur. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The 2005 LRDP found that implementation of the 2005 LRDP would not increase demand for parkland and recreational facilities in the City or County of Riverside, and thus the contribution of the 2005 LRDP to cumulative impacts on parkland would not be cumulatively considerable. For the same reasons that are presented in the 2005 LRDP EIR, the proposed projects 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. Further evaluation in the EIR is not required.

In addition, the 2005 LRDP concluded that the cumulative impacts from construction of park and recreational facilities associated with the 2005 LRDP and elsewhere in the City or County of Riverside would not be significant. For the same reasons that are presented in the 2005 LRDP EIR, the proposed projects would not alter the significance of this cumulative 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. Further evaluation in the EIR is not required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
16. TRANSPORTATION/TRAFFIC - Would the project:		
a) Exceed the capacity of the existing circulation system, based on an applicable measure of effectiveness (as designated in a general plan policy, ordinance, etc.), taking into account all 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 result 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 applicable policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	□	■

Relevant Elements of Project

The proposed projects would develop a new EH&S Expansion facility and parking lot, reorganize the existing Corporation Yard (including demolition and reconstruction of warehouse buildings, and relocation of the TAPS yard/special events program), and relocate the existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility location. As the small number of new EH&S employees and land uses associated with the proposed projects were anticipated in the 2005 LRDP, the projects would not increase vehicle trip generation on the campus compared to the trips analyzed in the 2005 LRDP EIR. It would cause a small number of trips associated with affected facilities to be redistributed along campus and off-campus roadways.

Major east-west roadways that serve the campus include Blaine Street/3rd Street, Linden Street, University Avenue, Big Springs Road, and Martin Luther King Boulevard, and Central Avenue. Major north-south roadways that serve the campus include Chicago Avenue, Iowa Avenue, Canyon Crest Drive, and Watkins Drive. Major freeways in the area include Interstate 215/State Route 60, and State Route 91. Public transportation to and from the campus is provided by the Riverside Transit Authority.

Discussion of Potential Project Impacts

a) The traffic impact analysis for the 2005 LRDP evaluated traffic impacts at 35 intersections under two scenarios: the configuration of Iowa Avenue as a two-lane roadway between University Avenue and MLK and the configuration of Iowa Avenue as a four-lane roadway between University Avenue and MLK. Under both scenarios, the 2005 LRDP EIR indicated that implementation of the 2005 LRDP would result in additional vehicular trips, which would increase traffic volumes and degrade intersection levels of service. However, future development on campus would require the implementation of LRDP mitigation measures MM 4.14-1(a) through (g) under the two-lane Iowa Avenue scenario and implementation of LRDP mitigation measures MM 4.14-1(h) through (l) under the four-lane Iowa Avenue scenario, which would result in all study intersections operating at an acceptable level of service, although these service levels after mitigation are conditioned on the City of Riverside making improvements to local roadways independent of the 2005 LRDP (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). Development on the campus would also be guided by a range of LRDP planning strategies, including Land Use 4 and 7, and Transportation 1 through 3, 5, and 6, which would reduce the number of trips generated by new development. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.14-1, which would result in the continued implementation of the Transportation Demand Management program. However, even with the implementation of mitigation measures, relevant planning strategies, and the programs and practices, the 2005 LRDP EIR determined that the impacts to intersections would be significant and unavoidable as the Campus has no control over when the City of Riverside will make the required improvements.

Development of the proposed projects would result in a small number of additional vehicular trips, which would not significantly increase traffic volumes or degrade intersection levels of service. As shown in **Table 1** above, the proposed projects would cause a minimal increase in truck trips for waste collection on campus and removal for off-site disposal. The increase in daily truck trips could be from approximately 16 per day under current conditions to about 20 per day by 2015-2016. In addition, the projects would add approximately 8 FTE employees over the long term, generating an increase of approximately 16 trips daily. Both the truck trips and employee trips were accounted for in the 2005 LRDP EIR projections. Development of the proposed projects would be required to implement a range of LRDP planning strategies, including Transportation 5 and 6, and would continue existing campus programs and practices, such as PP 4.14-1, which are described above. With implementation of relevant planning strategies and existing programs and procedures, trips generated by elements of the proposed project would not exceed the capacity of the existing circulation system. However, in order to provide additional information and analysis, this issue will be further analyzed in the EIR.

The 2005 LRDP EIR also indicated that the generation of construction-related vehicle trips could temporarily impact traffic conditions along area roadway segments and at individual intersections. However, future construction projects on the campus, including the proposed projects, would be required to implement existing campus programs and practices, such as PP 4.14-2, which would reduce potential impacts by requiring coordination of construction activities, in particular to avoid overlap of activities with heavy truck traffic such as excavation or demolition of large structures. However, because of the imprecise nature of construction schedules, and the need to accommodate the anticipated enrollment increases and program growth identified in the 2005 LRDP, the LRDP EIR noted that construction vehicle traffic may still result in localized impacts. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system during construction, and this impact would be significant and unavoidable.

The proposed projects would not generate additional construction-related vehicle trips that could temporarily impact traffic conditions along area roadway segments and at individual intersections beyond those evaluated in the 2005 LRDP EIR. The projects would generate construction traffic that would use on- and off-campus roads on a temporary basis.

EH&S Expansion Facility: Demolition is estimated to take approximately 5 working days. Haul traffic is estimated at 270 truckloads, which would occur later in the demolition phase. Demolition waste would be removed by way of Watkins Drive to I-215/SR-60. After the demolition is complete, construction hauling would use a designated haul route, which would traverse on- and off-campus areas, following Linden Street, Iowa Avenue, Martin Luther King Boulevard, and Canyon Crest Drive. This route would be used for delivering equipment and materials to the project sites. The heaviest construction traffic is anticipated during the Demolition/Site Grubbing phase, with approximately 40 daily truck trips. These trips would be spaced out throughout the 8-hour workday, averaging 5 trips per hour.

Existing EH&S Facility Interior Demolition and Renovation: Demolition is estimated to take approximately 15 working days. Haul traffic is estimated at 10 truckloads, which would occur later in the demolition phase. Demolition waste would be removed by way of Canyon Crest Drive to Martin Luther King Blvd. After the demolition is complete, construction hauling would use a designated haul route, which would traverse on- and off-campus areas, following Linden Street, Iowa Avenue, Martin Luther King Boulevard, and Canyon Crest Drive. This route would be used for delivering equipment and materials to the project site. The heaviest construction traffic is anticipated during the Construction phase, with approximately 4 daily truck trips. These trips would be spaced out throughout the 8-hour workday, averaging 0.5 trips per hour.

Demolition of Existing Mail Services Building and Construction of New Warehouse 2: Demolition is estimated to take approximately 14 working days. Haul traffic is estimated at 28 truckloads, which would occur later in the demolition phase. Demolition waste would be removed by way of Watkins Drive to I-215/SR-60. After the demolition is complete, construction hauling would use a designated haul route, which would traverse on- and off-campus areas, following Linden Street, Iowa Avenue, Martin Luther King Boulevard, and Canyon Crest Drive. This route would be used for delivering equipment and materials to the project site. The heaviest construction traffic is anticipated during the Demolition phase, with approximately 2 daily truck trips. These trips would be spaced out throughout the 8-hour workday, averaging 0.25 trips per hour.

Demolition of Existing Warehouse 2 and Construction of New Event Services Building: Demolition is estimated to take approximately 15 working days. Haul traffic is estimated at 35 truckloads, which would occur later in the demolition phase. Demolition waste would be removed by way of Watkins Drive to I-215/SR-60. After the demolition is complete, construction hauling would use a designated haul route, which would traverse on- and off-campus areas, following Linden Street, Iowa Avenue, Martin Luther King Boulevard, and Canyon Crest Drive. This route would be used for delivering equipment and materials to the project site. The heaviest construction traffic is anticipated during the Demolition phase, with approximately 3 daily truck trips. These trips would be spaced out throughout the 8-hour workday, averaging 0.375 trips per hour.

For each element of the project, it is expected that there would be one peak day during concrete pouring activities, with 10-12 trucks in one day.

One of the intersections along the construction traffic route, Linden Street/Aberdeen Drive, was included in the study area for the recent quantified analysis of the Glen Mor 2 project operational impacts. This intersection is currently operating at either LOS A or LOS B during the morning and evening peak hours. Development of the proposed projects would continue existing campus programs and practices, such as PP 4.14-2, which is discussed above, and construction traffic and related effects would be limited to the immediate area of the Corporation Yard and EH&S facility site. The projects construction schedules, as indicated in the Project Description above, calls for staggered demolition/construction of the various project elements so that the amount of construction underway at any given time would be limited. Therefore, construction vehicle trips generated by the proposed projects would not exceed the capacity of the existing circulation system during construction. While the temporary addition of construction-related trips may cause some inconvenience along the designated route, the added volumes would not cause the affected intersection to degrade to an unacceptable LOS or significantly affect traffic along the affected road segments. This impact would be less than significant. No further analysis in the EIR is necessary.

b) The 2005 LRDP EIR indicated that implementation of the 2005 LRDP would result in additional vehicular traffic volumes, which would exceed established service levels on roadways (I-215/SR-60) designated by the Riverside County Congestion Management Program. This impact was determined to be significant and unavoidable.

The proposed projects would not result in additional vehicular traffic volumes above those anticipated in the 2005 LRDP EIR, and would not increase impacts above those identified in that EIR. As shown in **Table 1** and discussed above, depending on waste handling efficiency at the new EH&S Expansion facility, there may be no increase in trips over current conditions, and at most the projects may add up to 4 new trips per day and 6 to 8 additional annual trips. This increase would not be noticeable against the background of projected trip generation levels on campus. There would be no new project-specific impacts, and no further analysis of this issue is required in the EIR.

c) According to the 2005 LRDP EIR, implementation of the 2005 LRDP would not result in a change in air traffic patterns or an increase in air traffic levels, and no impact would occur. The closest airports to the campus are Flabob Airport, which is located approximately 4 miles to the west, and March Air Reserve Base, which is located approximately 6 miles to the southeast. The proposed projects would also not result in a change in air traffic patterns or an increase in air traffic levels, as the campus is not located within 2 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. No further analysis of this issue is required in the EIR.

d) According to the 2005 LRDP EIR, it is anticipated that any new roadway segments associated with the implementation of the 2005 LRDP would employ the use of standard engineering practices (e.g., use of standard road and driveway widths, provision of adequate sight lines, and avoidance of sharp turning radii) and traffic mitigation strategies (e.g., installation of control devices such as stop signs or signal lights as needed) to avoid design elements that could result in hazards due to features such as sharp curves or dangerous intersections. In addition, as discussed in Item 10 b) Land Use, the 2005 LRDP EIR indicated that implementation of the 2005 LRDP would not result in any land use incompatibilities with either on-campus or off-campus uses as future development on the campus would be guided by a number of LRDP planning strategies and existing programs and practices that are designed to reduce potential land use incompatibilities. Finally, future development on the campus would continue existing campus programs and practices, such as PP 4.14-4, which would result in the consideration of Campus Design Guidelines in the design of roadways. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not substantially increase hazards due to a design feature or incompatible uses during operation, and this impact would be less than significant.

New roadways (internal roadways and driveways) associated with the proposed projects have been designed using standard engineering practices to avoid design elements that could result in hazards due to features such as sharp curves or dangerous intersections. The proposed projects would also be required to implement existing campus programs and practices, such as PP 4.14-4, which is discussed above. In addition, relocation of the EH&S Expansion facility from its current location would reduce the risks associated with its steep, narrow driveway under current conditions. Therefore, the proposed EH&S Expansion project would not substantially increase hazards due to a design feature or incompatible uses during operation, and this impact would be less than significant. This project element will involve transport of hazardous materials and will reroute a small amount of truck traffic to roadways near residential areas, and the potential upset and accident impacts related to this transport will be discussed in the Hazards and Hazardous Materials section of the EIR.

The analysis in the 2005 LRDP EIR also determined that short-term closure of traffic lanes or roadway segments during construction associated with the 2005 LRDP could result in short-term traffic hazards. Furthermore, the 2005 LRDP EIR indicated that construction activities associated with the 2005 LRDP could result in temporary closure of on-campus pedestrian sidewalks and paths. However, future development on the campus would continue existing campus programs and practices, such as PP 4.14-4, which is discussed above, PP 4.14-5, which would preserve at least one traffic lane in each direction on campus roadways whenever feasible, and PP 4.14-6, which would provide alternative routes for pedestrians, that would reduce the potential for hazards. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not substantially increase hazards during construction, and this impact would be less than significant.

Construction associated with the proposed projects could also result in short-term closure of traffic lanes or roadway segments that could pose hazards on the campus. In addition, construction could result in the temporary closure of on-campus sidewalks and paths, which could pose hazards to pedestrians. However, the proposed projects would be required to implement existing campus programs and practices, such as PP 4.14-4, PP 4.14-5, and PP 4.14-6, which are described above. Therefore, construction of the proposed projects would not substantially increase hazards during construction, and this impact would be less than significant. No further analysis of this issue is required in the EIR.

e) According to the 2005 LRDP EIR, emergency vehicles are not anticipated to experience any substantial delays as a result of the significant traffic impacts that could occur at some intersections as a result of the implementation of the 2005 LRDP in the long-term. Implementation of future development on campus would be guided by a range of LRDP planning strategies, including Transportation 4, which would limit general vehicular circulation in the central campus, but allow transit, service, and emergency vehicle access. In the short-term, the 2005 LRDP EIR indicated that construction activity could require the closure of traffic lanes or roadway segments, which could result in impaired emergency access. To address this, future development on the campus would continue existing campus programs and practices, such as PP 4.14-5, which is discussed above, and PP 4.14-8, which would require consultation with emergency service providers regarding roadway closures. Therefore, the 2005 LRDP EIR concluded that the implementation of the 2005 LRDP would not impair emergency access, in the long- or short-term, and this impact would be less than significant.

In the short-term, construction activity associated with the proposed projects could require the closure of traffic lanes or roadway segments, which could result in impaired emergency access. Development of the proposed project would be required to implement existing campus programs and practices, such as PP 4.14-5 and PP 4.14-8, which are discussed above. Therefore, development of the proposed projects would not impair emergency access, and this impact would be less than significant. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

f) According to the 2005 LRDP EIR, implementation of the 2005 LRDP would result in the generation of additional vehicle trips. In addition, the 2005 LRDP EIR also indicated that the 2005 LRDP would increase demand for public transit. Implementation of future development on campus would be guided by a range of LRDP planning strategies, including Land Use 4, and Transportation 1 through 3, 5, and 6, which are discussed above. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.14-1, which is discussed above. Finally, the implementation of LRDP mitigation measure MM 4.14-13 would ensure that the Campus work with service providers to provide adequate public transit service to the campus. Thus, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not conflict with applicable policies, plans, or programs supporting alternative transportation, and this impact would be reduced to a less than significant level.

For reasons presented earlier, the proposed projects would not result in additional vehicle trips beyond those evaluated in the 2005 LRDP EIR. Development of the proposed projects would be guided by a range of LRDP planning strategies, including Transportation 5 and 6, and would continue existing campus programs and practices, such as PP 4.14-1, which are discussed above. In addition, development of the proposed projects would be required to implement LRDP mitigation measure MM 4.14-13, which is discussed above. Thus, the proposed projects would not conflict with applicable policies, plans, or programs supporting public transit, bicycles, and pedestrians, and this impact would be reduced to a less than significant level with implementation of the mitigation measures previously adopted by the University in conjunction with its adoption of the 2005 LRDP. Furthermore, there have been no changes in circumstances since the certification of the 2005 LRDP EIR that would alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

The analysis in the 2005 LRDP EIR concluded that cumulative traffic growth, including campus growth under the 2005 LRDP, 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 to the cumulative traffic impacts would be cumulatively considerable. The proposed projects would not increase the number of daily and peak hour vehicle trips associated with the campus beyond that anticipated in the 2005 LRDP EIR. Therefore, the proposed projects would not increase the severity of the previously analyzed cumulative traffic impacts. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR concluded that the impact of the 2005 LRDP on the Riverside County Congestion Management Program (CMP) roadways would be cumulatively considerable. The proposed projects would not increase the number of daily and peak hour vehicle trips associated with the campus beyond that anticipated in the 2005 LRDP EIR. Therefore, the proposed projects would not increase the severity of the previously analyzed cumulative traffic impacts on CMP facilities. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR 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 found that the contribution of campus growth under the 2005 LRDP to the cumulative impacts would be cumulatively considerable. The proposed projects 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.

Other campus projects are anticipated to overlap or occur simultaneously with construction of the various elements of the EH&S Expansion and Lot 27 during the period from 2011 to 2014 and related projects between 2011 and 2014. These include the Glen Mor 2 Student Apartments, Boyce Hall and Webber Hall Renovations, Health Sciences Teaching Center, and Student Recreation Center Expansion, as well as several landscaping, renovation, and infrastructure projects. These projects and their construction traffic were considered in the 2005 LRDP EIR. As discussed above, the proposed projects would be required to implement existing campus programs and practices, such as PP 4.14-2, which would reduce potential impacts by requiring coordination of construction activities to avoid overlap of activities with heavy truck traffic such as excavation or demolition of large structures. These measures would reduce the projects' contribution to cumulative construction traffic impacts. The LRDP EIR identified a significant and unavoidable impact related to construction traffic; however, the proposed projects would not increase the severity of the previously analyzed cumulative traffic impacts related to delivery of construction materials. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR determined that the 2005 LRDP would not result in hazards due to design features or land use incompatibilities and the contribution of campus growth under the 2005 LRDP 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, 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. Impacts related to upset and accident conditions, including cumulative impacts, will be further examined in the Hazards and Hazardous Materials section of the EIR.

The 2005 LRDP EIR found that the contribution of campus growth under the 2005 LRDP to the cumulative construction impacts related to localized pedestrian hazards would not be considerable and that the contribution of the 2005 LRDP 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, the proposed projects would not result in significant cumulative impacts related to pedestrian hazards and emergency access. The proposed projects 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 that would alter the conclusions of the previous analysis. Further evaluation in the EIR is not required.

The 2005 LRDP EIR concluded that the contribution of campus growth under the 2005 LRDP 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, the proposed projects would not result in impacts related to public transit, bicycle and pedestrian facilities. The proposed projects 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 that would alter the conclusions of the previous analysis. Further evaluation in the EIR is not required.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
17. 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) Create other utility and service system impacts?	☐	■

Relevant Elements of Project

The proposed projects would develop a new EH&S Expansion facility and parking lot, reorganize the existing Corporation Yard (including demolition and reconstruction of warehouse buildings, and relocation of the TAPS yard/special events program) and relocate the existing campus Mail Services and Printing & Reprographics Services to the site of the existing EH&S facility. The proposed new EH&S Expansion facility would be connected to existing Campus utility systems, including water, wastewater, natural gas, electricity, and telecommunications, which are present in Linden Street or on the adjacent Corporation Yard. All of the utility infrastructure, including pipelines and cables, would be located underground.

The City of Riverside supplies domestic water to UCR. The City receives approximately 99 percent of its water from groundwater resources, while receiving less than 1 percent from imported water sources. Wastewater generated on campus is treated at the City of Riverside wastewater treatment plant. The Campus operates its own on-site wastewater collection system that connects to the City's wastewater collection system. The Campus collects its own solid waste and hauls it to a central location for sorting and off-haul. Once the recyclables are removed, solid waste is hauled by Athens Services for landfill disposal. The City of Riverside Public Utilities Department (PUD) currently provides electricity to the UCR campus while natural gas is provided by the Southern California Gas Company.

Discussion of Potential Project Impacts

a) According to the 2005 LRDP EIR, the City of Riverside Regional Water Quality Control Plant (RRWQCP), which serves land uses on campus, has adequate capacity to treat wastewater generated by campus growth under the 2005 LRDP, and thus is anticipated to continue to comply with all wastewater treatment requirements of the Santa Ana Regional Water Quality Control Board (SARWQB). The RRWQCP currently treats 33 mgd and has a capacity of 40 mgd; it is undergoing an upgrade to increase treatment capacity to 46 mgd (Kemp 2011). Future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 5, which would require continued adherence to the conservation requirements of Title 24 of the California Code of Regulations and comply with any future conservation goals or programs enacted by the University of California (see **Appendix A** for a complete list of 2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures). In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.15-5, which requires the Campus to comply with all applicable water quality requirements established by the SARWQB. Therefore, implementation of the 2005 LRDP would not cause an exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board, and this impact would be less than significant.

As discussed in the 2005 LRDP EIR, the campus is not considered a point-source of water pollution for regulatory purposes and is not currently subject to any Waste Discharge Requirements established by the Santa Ana Regional Water Quality Control Board (SARWQCB). Additionally, no hazardous wastes are discharged into the sewer or storm drainage system on campus. Although there are no wastewater treatment requirements of the SARWQCB directly applicable to the UCR campus, PP 4.8-1 states that the Campus would be required to comply with all applicable water quality requirements established by the Santa Ana Regional Water Quality Control Board.

The construction of the new EH&S Expansion facility would result in a minor increase in wastewater generation; this increase was previously considered in the 2005 LRDP EIR. The demolition and replacement of Corporation Yard warehouse #2 and the relocation of the TAPS yard, which would include a bus wash, would result in a small increase in wastewater generation; this use was also previously considered under the 2005 LRDP and would not result in an increase in wastewater flows that were not previously considered. The relocation of existing uses to the current EH&S facility would not substantially increase the total amount of wastewater generated on the campus. The proposed projects would be guided by a range of LRDP planning strategies, including Conservation 5, and would continue existing campus programs and practices, such as PP 4.15-5, which are discussed above. With implementation of these measures, the small increase in building space associated with the projects would not increase discharge of wastewater from the campus such that wastewater treatment requirements of the applicable Regional Water Quality Control Board for the City's treatment plant could potentially be exceeded. This would be a less than significant impact, and no further analysis of this issue is required in the EIR.

b) The 2005 LRDP EIR indicated that the City of Riverside would have enough water treatment capacity to serve development proposed in the 2005 LRDP. In addition, the 2005 LRDP EIR indicated that the City of Riverside Regional Water Quality Control Plant has adequate capacity to treat wastewater generated by campus growth under the 2005 LRDP. Future development on campus would be guided by a range of LRDP planning strategies, including Conservation 5, which is discussed above. In addition, future development on campus would continue existing campus programs and procedures, such as PP 4.15-1(a) and (d), which are designed to conserve water.

Concerning wastewater conveyance, while the Campus routinely monitors the capacity of sewer lines on campus in order to ensure that they are capable of supporting new development, City-maintained sewer lines outside the campus boundaries may not have enough capacity in the future to handle both City-generated and campus-generated wastewater from new development. Future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 5, which is discussed above. In addition, implementation of LRDP mitigation measures MM 4.15-6(a) and (b) would reduce potential impacts on City-maintained wastewater conveyance systems by ensuring that upgrades are identified and implemented as required. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not 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, and this impact would be reduced to a less than significant level.

The construction of the proposed EH&S Expansion facility would result in a minor increase in demand for water and a small increase in wastewater generation. These increases were previously considered in the 2005 LRDP EIR. The other elements of the proposed projects also would not result in an increase demand for water and an increase in wastewater generation above the amount that was considered in the 2005 LRDP EIR. Development of the proposed project would be guided by a range of LRDP planning strategies, including Conservation 5, and would continue existing campus programs and procedures, such as PP 4.15-1(a) and (d), which are discussed above. With implementation of these measures, the relatively small increase in building space would not require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. The potential environmental effects associated with the construction of the new water and wastewater conveyance systems would be less than significant, and no further analysis of this issue is required in the EIR

c) According to the 2005 LRDP EIR, future development on campus would require upgrades to the storm drain system. The potential environmental effects associated with construction and operation of the expanded and new storm drain facilities were evaluated in the 2005 LRDP EIR at a program level. The 2005 LRDP EIR concluded that with the incorporation of existing campus programs and practices and mitigation measures discussed in the EIR, and due to the relatively small amount of physical improvements that would be constructed or small areas that could be disturbed, the construction of these facilities would not individually result in significant environmental impacts. Therefore, the 2005 LRDP EIR concluded that while implementation of the 2005 LRDP would require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of these facilities would not cause significant environmental effects, and this impact would be less than significant.

The construction of the proposed EH&S Expansion facility and the demolition and replacement of Corporation Yard warehouse #2 would require the installation of additional storm drain improvements on the project site. The new infrastructure would be installed in portions of the project site that are already disturbed, and connections to existing stormwater lines would be located on campus. The

physical effects of this infrastructure are considered elsewhere in this Initial Study or will be considered in the relevant sections of the EIR. The remaining elements of the projects represent land uses that were previously considered under the 2005 LRDP and would not result in the installation of new storm drains. The potential environmental effects associated with the construction of the new storm drain systems would be less than significant; no further evaluation of this issue in the EIR is necessary.

d) According to the 2005 LRDP EIR, the City of Riverside's total projected water supplies (including groundwater) available during normal, single dry, and multiple dry years during a 20-year period, would be adequate to meet the projected water demand resulting from implementation of the 2005 LRDP. Future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 5, which is discussed above. In addition, future development on the campus would continue existing campus programs and practices, such as PP 4.15-1(a) and (d), which are discussed above. Therefore, the 2005 LRDP EIR concluded that the City would have sufficient water supplies available to serve campus growth under 2005 LRDP from existing entitlements and resources, and this impact would be less than significant.

As noted above, the construction of the proposed projects would result in a small increase in the demand for water; this increase was previously considered in the 2005 LRDP EIR. Development of the proposed projects would be guided by a range of LRDP planning strategies, including Conservation 5, and would continue existing campus programs and practices, such as PP 4.15-1(a) (d), which are discussed above. With implementation of these measures, sufficient water supplies would be available to serve the additional building space associated with the project from existing entitlements and resources. This is considered a less than significant impact, and no further analysis of this issue is required in the EIR.

e) According to the 2005 LRDP EIR, the City of Riverside Regional Water Quality Control Plant has adequate capacity to treat wastewater generated by the implementation of the 2005 LRDP. Implementation of future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 5, which is discussed above. Thus, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would not result in a determination by the wastewater treatment provider, which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments, and this impact would be less than significant.

As noted above, the construction of the proposed projects would result in a relatively small increase in wastewater generation; this increase was previously considered in the 2005 LRDP EIR. Development of the proposed project would be guided by a range of LRDP planning strategies, including Conservation 5, which is discussed above. With implementation of these measures, additional building space associated with the projects would not result in a determination by the wastewater treatment provider that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments. This is considered a less than significant impact, and no further analysis of this issue is required in the EIR.

f) According to the 2005 LRDP EIR, solid waste generated by the implementation of the 2005 LRDP could be accommodated within the remaining capacity of the Badlands Landfill, which currently serves land uses on campus. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs, and this impact would be less than significant. At the end of 2010, the Badlands landfill had a total remaining disposal capacity of about 9.0 million tons. The Badlands landfill is permitted to

receive a maximum daily tonnage of 4,000 tons, and in 2010, the landfill accepted a daily average volume of 1,667 tons. The Badlands landfill is estimated to close in 2024 (Ross 2011).

The construction of the proposed EH&S Expansion facility, the demolition and replacement of Corporation Yard Warehouse #2, and relocation of Printing & Reprographics Services to the campus from an off-site location would result in a relatively small increase in solid waste generated on campus; this increase was previously considered in the 2005 LRDP EIR. The other elements of the proposed projects would not increase the total amount of solid waste generated on the campus above the amount that was considered in the 2005 LRDP EIR. Solid waste generated on campus is currently deposited in the Badlands Landfill, which has enough capacity to serve additional waste associated with buildout of the 2005 LRDP, including the proposed projects, as well as other land uses in Riverside County through 2024. This is considered a less than significant impact, and no further analysis of this issue is required in the EIR.

g) The University of California is not subject to AB 939 but voluntarily applies its standards as a goal. According to the 2005 LRDP EIR, the Campus met the AB 939 solid waste reduction goal of 50 percent in 2002-03 with a 51 percent diversion rate from the solid waste stream through recycling, diverting, composting, or reuse on the campus. Therefore, the 2005 LRDP EIR concluded that implementation of the 2005 LRDP would comply with applicable federal, State, and local statutes and regulations related to solid waste, and this impact would be less than significant.

As noted above, the construction of the proposed projects would result in a relatively small increase in solid waste generated on campus, which was previously considered in the 2005 LRDP EIR. In 2008-09, the campus failed to meet the AB 939 solid waste reduction goal of 50 percent by only achieving a 46 percent diversion rate (UC 2009). However, the new and expanded facilities associated with the projects would comply with applicable federal, State, and local statutes and regulations related to solid waste. This is considered a less than significant impact, and no further analysis of this issue in the EIR is necessary.

h) According to the 2005 LRDP EIR, the existing transformers at the electrical substation serving the campus have enough capacity to serve campus growth under the 2005 LRDP and additional electrical improvements would not be needed. However, modifications and extensions of existing natural gas distribution infrastructure would be required to serve new development, particularly on the West Campus. The environmental impacts of constructing these improvements were addressed on a programmatic basis in the 2005 LRDP EIR. With the incorporation of existing programs and practices and mitigation measures listed in the 2005 LRDP and due to the relatively small amount of physical improvements that would be constructed or small areas that could be disturbed, the construction of these facilities would not individually result in significant environmental impacts. In addition, future development on the campus would be guided by a range of LRDP planning strategies, including Conservation 5, which is discussed above. Therefore, implementation of the 2005 LRDP would not require or result in the construction or expansion of electrical and natural gas facilities, the construction of which could cause significant environmental effects, and this impact would be less than significant.

The proposed projects would result in an increase in energy demand and would require local extension of existing electrical and natural gas distribution infrastructure; this extension would occur in areas that were designated for development in the 2005 LRDP, and would not result in an increase in energy use or require the extension of new electrical and natural gas infrastructure that was not previously considered in the 2005 LRDP EIR. Other elements of the proposed projects would not increase on-campus energy demand. Development of the proposed projects would be guided by a range of LRDP planning strategies,

including Conservation 5, which is discussed above. With implementation of these planning strategies, the potential environmental effects associated with the construction of the extension of new electrical and natural gas infrastructure would be less than significant. No further analysis of this issue is required in the EIR.

Discussion of Potential Cumulative Impacts

Water Supply

The 2005 LRDP EIR concluded that cumulative water supply impacts for the City of Riverside service area would not be significant, and the contribution of the 2005 LRDP development would not be cumulatively considerable. Development of the proposed projects would not result in an increased demand for water that was not previously considered in the 2005 LRDP EIR. Therefore, the proposed projects would not increase cumulative demand for water in the City compared to the cumulative water demand estimated and analyzed in the 2005 LRDP EIR, and would not increase the severity of the previously analyzed cumulative impact. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR concluded that the cumulative impact to water treatment facilities would not be significant, and the contribution of the 2005 LRDP would not be cumulatively considerable. Development of the proposed projects would not require or result in the construction of new water treatment facilities or expansion of existing facilities for land uses that were not previously considered for development in the 2005 LRDP EIR. Therefore, the proposed projects would not result in an increase in cumulative environmental effects associated with the construction of new water treatment facilities compared to the environmental effects estimated and analyzed in the 2005 LRDP EIR. The proposed projects therefore would not potentially increase the severity of the previously analyzed cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to water supply that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

Wastewater

As stated in the 2005 LRDP EIR, cumulative projects would not exceed the capacity of the wastewater treatment system and the cumulative impact would not be significant. Additionally, under the 2005 LRDP, the Campus would continue to implement water conservation measures that would result in a concomitant decrease in wastewater generation. Therefore, as the RRWQCP retains excess capacity, the individual contribution of the campus development under the 2005 LRDP to wastewater generation on a regional basis would not be cumulatively considerable. Development of the proposed projects would not result in an increase in wastewater generation from additional building space that was not previously considered in the 2005 LRDP EIR. Therefore, the proposed projects would not increase cumulative wastewater generation in the City compared to the wastewater generation estimated and analyzed in the 2005 LRDP EIR and would not increase the severity of the previously analyzed cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to wastewater treatment capacity that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR found that impacts related to the need for additional conveyance infrastructure would not result in significant cumulative effects. Development of the proposed projects would not

require or result in the construction of new wastewater conveyance facilities or expansion of existing facilities which was not previously considered in the 2005 LRDP EIR. Therefore, the proposed projects would not result in an increase in cumulative environmental effects associated with the construction of new wastewater conveyance facilities compared to the cumulative environmental effects analyzed in the 2005 LRDP EIR, and would not increase the severity of the previously analyzed cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to wastewater conveyance capacity that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR stated that the cumulative impact related to exceedance of RWQCB wastewater treatment requirements would not be significant. The contribution of the 2005 LRDP would not be cumulatively considerable. Development of the proposed projects would not result in an increase in wastewater generation that was not previously considered in the 2005 LRDP EIR. Therefore, the proposed projects would not result in an increase in cumulative wastewater generation that in conjunction with flows from other future development could exceed wastewater treatment requirements of the Regional Water Quality Control Board for the RRWQCP compared to cumulative wastewater generation that could exceed wastewater treatment requirements of the Regional Water Quality Control Board analyzed in the 2005 LRDP EIR. The proposed projects would not increase the severity of the previously analyzed cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to wastewater treatment capacity that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

Solid Waste

The 2005 LRDP EIR concluded that considering the existing capacity within the disposal and recycling system and the extent of campus efforts to decrease solid waste generation, the impact of the 2005 LRDP with regard to solid waste generation (at buildout year of 2015) would not be cumulatively considerable. Development of the proposed projects would not result in an increase in solid waste generated on campus that was not previously considered in the 2005 LRDP EIR. Therefore, the proposed projects would not result in an increase in cumulative solid waste generation compared to the cumulative solid waste generation estimated and analyzed in the 2005 LRDP EIR. The proposed projects would not increase the severity of the previously analyzed cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to landfill capacity that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

The 2005 LRDP EIR found that the cumulative impact with regard to solid waste diversion requirements required under AB 939 would not be significant and the 2005 LRDP contribution to this impact will not be cumulatively considerable. The proposed projects would comply with all applicable federal, State, and local statutes and regulations related to solid waste. It would therefore not increase the severity of the previously analyzed cumulative impact. No further analysis of this issue is required in the EIR.

Energy

The 2005 LRDP EIR concluded that the overall cumulative impact to electricity supplies would not be significant and the contribution of the 2005 LRDP with respect to demand for electricity supplies or the need for additional facilities would not be cumulatively considerable. The 2005 LRDP EIR also concluded that the cumulative impact related to the supply of natural gas and to the need for additional or

expanded facilities would not be significant, and the contribution from implementation of the 2005 LRDP would not cumulatively considerable.

Development of the proposed projects would not result in an increase in energy demand and would not require the extension of existing electrical and natural gas distribution infrastructure on the campus to areas that were not previously considered for development in the 2005 LRDP EIR. Therefore, the proposed projects would not result in an increase in cumulative environmental effects associated with the construction of new electrical and natural gas infrastructure compared to the environmental effects associated with the construction of new electrical and natural gas infrastructure estimated and analyzed in the 2005 LRDP EIR. The proposed projects would not increase the severity of the previously analyzed cumulative impact. In addition, there have been no changes in circumstances since the certification of the 2005 LRDP EIR relative to energy facilities that could alter the conclusions of the previous analysis. No further analysis of this issue is required in the EIR.

Issues	Impact to be Analyzed in the EH&S Expansion Project EIR	No Additional Analysis Required
18. 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?	■	☐

Relevant Elements of Project

The proposed projects would develop a new EH&S Expansion facility and parking lot, reorganize the existing Corporation Yard (including demolition and replacement of warehouse buildings, and relocation of the TAPS yard/special events program), and relocate existing campus Mail Services and Printing & Reprographic operations to the existing EH&S facility location.

Discussion of Potential Project Impacts

a) As indicated in the preceding discussion, the proposed projects could have the potential to degrade the quality of the environment. However, the proposed projects would not 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, or substantially reduce the number or restrict the range of a rare or endangered plant with mitigation. In addition, the proposed projects would not eliminate

important examples of the major periods of California history or prehistory. Impacts would be less than significant, and no further analysis of this issue is required in the EIR.

b) An analysis of whether the potential impacts of the proposed projects combined with other current projects and probable future projects and projected regional growth in the surrounding area would result in significant cumulative impacts will be included in the EIR.

c) As indicated in the preceding discussion, the proposed projects have the potential to result in potentially significant impacts. An evaluation of whether any of those impacts would have the potential to result in substantial effects to human beings will be included in the EIR.

VI. SUPPORTING INFORMATION SOURCES

California Regional Water Quality Control Board, Santa Ana Region. 1995 and 2008. Water Quality Control Plan for the Santa Ana River Basin. (RWQCB-SA 1995 and 2008)

Chambers Group, Inc. 2008. Historic Resources Evaluation: Assessor Parcel Numbers 251-18-005-6, City of Riverside, Riverside County, California. (Chambers 2008)

City of Riverside. 2007. *City of Riverside General Plan 2025* (Riverside 2007)

Kemp, John. 2011. Operations Superintendent, City of Riverside Regional Water Quality Control Plant. Personal communication via telephone with Paul Stephenson, Impact Sciences, January 14. (Kemp 2011)

Ross, Ryan. 2011. Urban Regional Planner IV, Riverside County Waste Management Department. Personal communication via electronic mail with Paul Stephenson, Impact Sciences, February 3. (Ross 2011)

South Coast Air Quality Management District. 2007. Air Quality Management Plan. (SCAQMD 2007)

Southern California Association of Governments. 2008. Regional Comprehensive Plan. (SCAG 2008a)

Southern California Association of Governments. 2008. Regional Transportation Plan. (SCAG 2008b)

University of California. 2009. Annual Waste Reduction and Recycling Report and Integrated Waste Management Plan, Fiscal Year 2008-2009. (UC 2009)

University of California, Riverside. 2005. Long Range Development Plan Final Environmental Impact Report. SCH No. 2005041164. (UCR 2005)

University of California, Riverside. 2003. *Stormwater Management Plan*. (UCR 2003)

VII. INITIAL STUDY PREPARERS

UC Riverside:

Tricia D. Thrasher, ASLA, LEED AP
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CITY OF RIVERSIDE

Community Development
Department
Planning Division

July 6, 2011

Tricia D. Thrasher, ASLA, LEED AP
Principal Environmental Project Manager
UCR Office of Design and Construction
3615-A Canyon Crest Drive
Riverside, CA 92507

SUBJECT: ENVIRONMENTAL HEALTH & SAFETY EXPANSION: NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT

Dear Ms. Thrasher:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) of an Environmental Impact Report (EIR) for the proposed Environmental Health and Safety Expansion (EH&S) project. The project proposes to expand the EH&S facility and carry out related reorganization of campus support functions on the University of California, Riverside (UCR) campus. City staff understands that the project, more specifically, includes the following components:

Environmental Health & Safety Expansion: Located on the northeast portion of the UCR campus, north of Linden Street, south of Watkins Drive, west of Valencia Hill Drive, and east of the UCR Corporation Yard and Transportation and Parking Services (TAPS) building, this component includes construction of a new single-story, 27,265 square-foot EH&S building that would allow the relocation of the EH&S functions from their present location in the south-central area of the campus and provide space for administrative/office uses, training, laboratories, and materials handling and storage. A new parking lot with approximately 50 parking spaces would be built adjacent to the proposed EH&S expansion site to jointly serve the EH&S facility and the adjacent recreation fields. The land use designation of the proposed EH&S site under the UCR Long Range Development Plan (LRDP) is "Campus Support". As such, the proposed use is consistent with the LRDP.

Renovation and Reuse of Existing EH&S Building: The existing EH&S facility consists of a 6,200 square-foot building and a 2,400-square-foot modular building and is located on the south-central portion of the UCR campus, along south Campus Drive and immediately east of I-215. After both buildings are renovated, Mail Services, currently located at the Corporation Yard, will occupy the existing EH&S modular building and Printing & Reprographic Services, currently located off campus, will occupy the existing EH&S building.

Corporation Yard Reorganization: As the proposed EH&S building and yard will use the existing TAPS yard area, these functions will need to be relocated. The Corporation Yard will accommodate TAPS uses while transferring some units to the existing EH&S building.

Given the location of the proposed EH&S facility in proximity to an established residential neighborhood and child day care center, City staff has reviewed the NOP and offers the following comments for your review and consideration:

Aesthetics

- As identified in the environmental Initial Study (IS), further environmental analysis will be required as part of the EIR to assess the probable aesthetic impacts associated with the development of the EH&S expansion project onto the surrounding area, including the adjacent residential neighborhood. The EIR needs to fully analyze and mitigate aesthetic impacts of the project including providing more detailed information on the project design through preparation of site plans, landscape plans, building elevations as well as other visual analysis such as building perspectives to fully understand the potential aesthetic impacts onto the surrounding area. Specifically, the aesthetic impacts of yards, outdoor storage and truck delivery/pick-up areas on public views need to be minimized to the maximum extent possible. Plans for such areas need to mitigate aesthetic impacts by providing sufficient screening of storage and truck delivery areas from Watkins Drive, with features such as decorative walls and substantially landscaped setbacks.

Hazards and Hazardous Materials

- As identified in the environmental Initial Study (IS), environmental impacts associated with the storage, use, and disposal of hazardous materials and the potential for accidental release of hazardous materials and wastes will be further addressed in the EIR to provide a more comprehensive analysis. The new EH&S facility is proposed to be approximately three times the size of the existing facility and will handle a significantly larger amount of hazardous materials with the establishment of the UCR School of Medicine. Currently UCR handles 43 tons per year of hazardous waste which is anticipated to increase to 172 tons by 2020-2021. The new facility will handle hazardous wastes generated through laboratory and other academic uses and building and grounds maintenance including inorganic and organic chemicals, chemical reagent and reaction products, solvents, mercury, radioisotopes, biohazardous materials, fuels, oils, paints, cleansers and pesticides. The IS indicates that all hazardous material will be handled in compliance with campus policies, the Campus Emergency Response Plan, and state and federal regulations and that through compliance with these policies and regulations impact will be less than significant. However, beyond these policies further information and analysis is needed including a health risk assessment that fully analyzes and mitigates all potential health risks associated with hazardous materials considering proximity to nearby uses which include sensitive receptors.

- *Transport of Hazardous Materials* - Given the proposed location of the EH&S facility, it appears that vehicles transporting hazardous materials to and from the facility will need to use City streets and will travel adjacent to residential areas and other sensitive uses. As such, the EIR and health risk assessment needs to fully analyze and mitigate impacts associated with the transport of hazardous materials including, but not limited to, types of transport vehicles, materials transported, quantity of material transported number of anticipated transport vehicle trips, days and times of transports, and analysis of all transport vehicle routes/access to the EH&S facility.

- *Proximity to UCR's Child Development Center and Residential Uses* – A child day care center (UCR's own Child Development Center) is also located along Watkins Drive, immediately north of the proposed EH&S facility. In addition, an established residential neighborhood is located in close proximity to the proposed EH&S facility. The EIR needs to fully consider the facility's impacts to these sensitive receptors, and clearly demonstrate that there will be no impact, less than significant impact or that impacts can be mitigated to a less than significant level for all sensitive receptors.

  Given the proximity to these sensitive receptors, the health risk assessment of the EIR must consider:

  - Ability or lack thereof, of odors, fumes and gases to dissipate prior to reaching all nearby sensitive receptors in the event of a spill or accidental release of a hazardous substance.

  - Potential for exposure to hazardous materials and short and long term health hazards in the event of a spill or accidental release given the proximity of sensitive uses and in particular, health risks to children.

  - Combined/cumulative impact to sensitive receptors including impacts previously identified by nearby University neighbors. These include impacts associated with additional Metrolink trains that are anticipated with the future Perris Valley Line project and that will travel along the existing railroad tracks that run parallel with Watkins Drive and an existing fuel line located at Blaine Street and the railroad tracks.

- *Hazards Related to Security* - The proposed location of the EH&S facility will be highly visible from the public right-of-way, particularly along Watkins Drive in a location that, due to its visibility, is potentially vulnerable to break-in and breach of security. The EIR needs to consider safe keeping of hazardous materials including provisions for a detailed security plan that fully analyzes and mitigates impacts to the security of facility and its users, including, but not limited to, access control, surveillance, patrolling, lighting, and screening.

Utilities and Service Systems

- *Sewer* - The EIR needs to include an analysis of the project's impact onto the City's sewer collection system and wastewater treatment facility and provide the appropriate mitigation, including payment of all Sewer Capacity Charges to the City to offset any impacts caused by the anticipated increase in wastewater discharges generated by the proposed project.

- *Water* - Riverside Public Utilities (RPU) has an existing 14-inch steel water pipeline within the undeveloped/vacated portion of Linden Street. This line currently exists under an old easement which reserved the entire 66-foot width of the vacated Linden Street for existing public utility facilities. An updated and more specific easement is currently being drafted between UCR and RPU. The Utilities and Service Systems analysis section of the EIR needs to include a discussion of the need to obtain and secure the water line easement and include this as mitigation of potential impacts to the continued operation and maintenance of the water line.

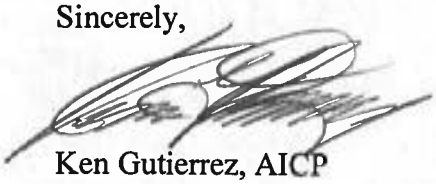
- As-built plans show this water pipeline as being shallow, with approximately three feet beneath the existing ground surface. The EIR needs to address how the line will be protected during construction

activities, including underground utilities, building, and street construction.

- Technical Item - The Utilities and Service Systems analysis section of the IS fails to reference all LRDP Programs and Practices (PP's) related to water conservation. The IS only references PP 4.15-1(a) and 4.15.1(d) rather than referencing PP 4.15-1(a) through 4.15(d). The City's Public Utilities Department Water Division requests that the Utilities and Service Systems analysis section of the EIR reference all LRDP Programs and Practices (PP 4.15-1(a) through 4.15-1(d)) related to water conservation.

Your continued cooperation with the City of Riverside is greatly appreciated. City staff strongly encourages UCR to submit any future building design and landscaping plans to the City for review and comment and looks forward to receiving a draft EIR that full analyzes and mitigates all potential environmental impacts. Should you have any questions regarding this letter, please contact Gus Gonzalez, Associate Planner, at (951) 826-5277 or by email at ggonzalez@riversideca.gov.

Sincerely,



Ken Gutierrez, AICP
Planning Director

cc: Ronald Loveridge, Mayor
Riverside City Council Members
Brad Hudson, City Manager
Belinda Graham, Assistant City Manager
Deanna Lorson, Assistant City Manager
Kristi Smith, Supervising Deputy City Attorney
Scott Barber, Community Development Director
Siobhan Foster, Public Works Director
Tom Boyd, Deputy Public Works Director/City Engineer
David Wright, Public Utilities General Manager
Kevin Milligan, Utilities Assistant General Manager/Water
Steve Earley, Fire Chief
William Schellhous, Fire Marshal
Sergio Diaz, Chief of Police
Larry Gonzalez, Police Lieutenant
Steve Bradshaw, Police Sergeant

Robert Phillips
Scoping Meeting 7-6-11
Comments

Comments Regarding EH&S Initial Project Study

General

The Initial Study makes no mention of project alternatives. The EIR needs to address the very attractive alternative of constructing the EH&S facility at the previously proposed three-acre site near the northeast corner of Canyon Crest Drive and Martin Luther King, Jr., Boulevard. That site has numerous advantages over the Watkins Drive location. First, the facility would be near the future School of Medicine and other science buildings, reducing the haul distance for laboratory waste, thereby reducing air pollution and the potential for traffic accidents and spills. Second, the facility would be immediately adjacent to on-ramps to Interstate 215/State Route 60, eliminating the transportation of hazardous waste, including biological, chemical, and radioactive waste, through residential neighborhoods. Third, the facility would be far from residences and other sensitive receptors, whereas the Watkins Drive location is in the midst of single-family and multi-family residences, dormitories, athletic fields, and the Child Development Center. To date, UCR's only rationale for moving the EH&S facility to Watkins Drive is economic. The alternatives analysis in the EIR needs to address, in detail, the factors of haul distances and compatibility with existing land uses, as well as weight limits on local roadways, such as Watkins Drive.

1. Aesthetics

Under "Aesthetics," the Initial Study indicates that no additional analysis is required regarding Question "D": "Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?" Page 23 indicates, ". . . the proposed EH&S Expansion Building . . . exterior and parking lot lighting has been designed to minimize light spill onto adjacent areas." That's what UCR said about the lighting for the intramural athletic fields on the southwest corner of Valencia Hill Drive and Watkins Drive. That analysis presented a diagram listing anticipated foot-candle measurements on the ground, both on the fields and within a few yards of the fields. That kind of analysis is inadequate, because it doesn't address the fact that, when one looks in the general direction of the fields from most anywhere within a several-block radius, one sees huge banks of brilliant white lights that dominate the view. For instance, as one stands in the parking lot of Grace Community Church on Mount Vernon Avenue, the lights contribute no illumination at ground level, but they create an extremely obnoxious obstruction to the view when one looks south and east. The EH&S exterior and parking lot lighting *will* create a new source of

substantial light and glare, and this issue needs to be addressed in the EIR in terms other than ground-level foot-candle measurements.

There also needs to be a cumulative analysis of the effect of this new source of substantial light and glare as it operates in conjunction with the obtrusive light and glare from the intramural fields and the lights soon to be erected atop the parking structure for Glen Mor II.

3. Air Quality

Under "Air Quality," the Initial Study indicates that no additional analysis is required in response to Question "E": "Would the project create objectionable odors affecting a substantial number of people?" This analysis definitely needs to be performed, since the EH&S facility is proposed to be in the midst of a residential neighborhood, apartments, dormitories, athletic fields, and the Child Development Center, and since there is the potential for the spillage and/or venting of toxic substances, liquids, and gases during the normal operation of the facility, in an emergency such as an earthquake, and during the loading, unloading, handling, or transportation of these toxic materials. In the proposed EH&S site, the prevailing wind blows from west to east and would transmit any toxic fumes or odors directly toward single-family residences. Santa Ana winds from the north would transmit the fumes and odors directly toward several dormitory buildings. The EIR needs to include a detailed analysis of the potential impact on surrounding sensitive receptors of each specific type of chemical waste, each specific type of biological waste, and each specific type of radioactive waste that will be stored at the facility, with particular attention paid to those that will be stored outside or transported on Watkins Drive, and those that have the potential to be vented from the facility in the event of a spill or other emergency. The analysis needs to include the wind conditions commonly experienced in the area of the proposed EH&S facility.

Page 31 of the Initial Study indicates: "The 2005 LRDP EIR concluded that future growth in the campus vicinity would not expose sensitive receptors to substantial pollutant concentrations of CO. The 2005 LRDP contribution to this impact would not be cumulatively considerable. The proposed projects would not result in increases in CO emissions at congested intersections, and thus would not result in a significant cumulative impact. No further evaluation in the EIR is required." This conclusion is dead wrong. The 2005 LRDP EIR did not anticipate the development of the large student apartment complex now beginning construction at the northeast corner of Blaine Street and Iowa Avenue, which will substantially

increase traffic at many already-congested intersections in the campus vicinity. In addition, trucks hauling waste from the EH&S facility to the freeway via Watkins Drive would have to stop and idle at numerous often-congested intersections, contributing substantially to pollutant concentrations. This impact definitely needs to be analyzed in the EIR.

6. Geology and Soils

Under "Geology and Soils," the Initial Study concludes that no additional analysis is required for any of the listed questions. Page 40 indicates, "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." It is well known among geologists that California's Alquist-Priolo earthquake fault mapping has not kept pace with development and is years behind in mapping faults. Although the Box Springs Fault is not documented on Alquist-Priolo maps, it is described in other geotechnical studies. The geotechnical study performed for the Glen Mor II project concluded that the fault did not exist, but that conclusion had no basis. The geologist performed only a visual analysis, which was useless because the fault zone has been graded and is covered by the intramural fields. The geologist performed no subsurface analysis in the area of the fault. I have seen and heard the fault in action during the Big Bear quake, and it definitely does exist. If UCR chooses not to perform a genuine, in-depth geologic analysis of the fault zone, it does so at its own peril. Best of luck to you, your students, and your children when the Big One hits.

8. Hazards and Hazardous Materials

On pages 44 and 45 under "Hazards and Hazardous Materials," the Initial Study indicates that the production of hazardous waste will grow from about 44.5 tons per year to about 172 tons per year by 2020-2021, a 387% increase, but according to page 7, by 2020-2021, the EH&S waste truck will need to make a maximum of only 2 additional trips per day, the medical waste vendor won't need to make any additional trips, the hazardous waste vendor will need to make a maximum of one or two additional trips per year, and the radioactive waste vendor will need to make a maximum of one additional trip per year. It seems doubtful to me that fuller, more efficient loads will handle a fourfold increase in waste with only a few additional trips per year. The EIR needs to specify the hauling capacity of each type of waste truck listed on page 7. If materials are proposed to be stored at the EH&S facility until a full truckload is accumulated, the EIR needs to specify how

long each specific type of waste will be stored, as well as the potential for accidents or the accidental release of these wastes during storage. The EIR needs to consider whether it will be legal for these fully loaded trucks to travel on city streets with posted weight limits, such as Watkins Drive.

The Initial Study indicates that no additional analysis is required regarding Question "G": "Will the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?" This issue should definitely be analyzed in the EIR, because, during an emergency such as a major earthquake, the spillage or discharge of hazardous materials at the EH&S facility could lead to the closure of Watkins Drive, a major arterial roadway, and therefore hinder the movement of emergency vehicles and the evacuation of residents.

Under "Cumulative Impacts," the Initial Study indicates that the EIR will evaluate the "increase in the amount of hazardous materials used and transported on campus." The evaluation also needs to include the increase in the amount of hazardous materials transported *off* campus, through the adjacent residential neighborhood.

9. Hydrology and Water Quality

Under "Hydrology and Water Quality," the Initial Study indicates that no additional analysis is required in response to the Question "F": "Will the project otherwise substantially degrade water quality?" This analysis should be performed, and it should address the issue of whether hazardous waste spilled or discharged at the EH&S facility during an accident or emergency could reach a storm drain and thereby enter the city's sewer system.

10. Land Use and Planning

On page 62, section (b), the Initial Study indicates, "The 2005 LRDP EIR indicated that change in on-campus land uses associated with the 2005 LRDP could be substantially incompatible with existing adjacent land uses. . . . The proposed EH&S Expansion facility would be located . . . near existing on-campus and off-campus residential uses. Due to intervening distance and with the implementation of relevant campus PSs and PPs, the proposed EH&S Expansion facility would not result in potential conflicts with existing or planned adjacent land uses." A cloud of chlorine gas vented after a spill at the facility could easily and rapidly reach neighboring residences and dormitories on the prevailing west

and north winds. Furthermore, the "intervening distance" between waste-hauling trucks on Watkins Drive and houses along Watkins Drive would be about 20 yards, and in the event of a traffic collision, residents could be exposed to hazardous materials immediately and at very close range. These issues need to be addressed in the EIR.

12. Noise

According to page 69 of the Initial Study, "The proposed EH&S Expansion facility would result in a minor increase in vehicular traffic on and around the campus, which in turn would generate increased noise levels. This project element, as well as the Corporation Yard Reorganization, and the reuse of the existing EH&S facility, represent land uses that were previously considered under the 2005 LRDP and would not generate noise levels in excess of those evaluated in the 2005 LRDP EIR." The noise analysis in the 2005 LRDP EIR was faulty, because it failed to evaluate the noise generated by vehicles (including waste-hauling trucks) stopping and accelerating at stop-controlled intersections, such as Valencia Hill Drive and Watkins Drive, where I live. A new analysis needs to be conducted, including *all* intersections that will be traversed by waste-hauling trucks moving to and from the EH&S facility. The cumulative noise analysis mentioned on page 71 also needs to include *all* intersections along Watkins Drive that would be used by waste-hauling trucks. UCR has my permission to place noise-measuring devices in my front yard to get the full impact of the noise generated by trucks that brake and accelerate at my corner.

16. Transportation and Traffic

Under "Transportation and Traffic," on page 87, the Initial Study indicates, regarding the EH&S Expansion facility: "Demolition is estimated to take approximately five working days. Haul traffic is estimated at 270 truckloads, which would occur later in the demolition phase. Demolition waste would be removed by way of Watkins Drive to I-215/SR-60." I interpret this to mean that, during the final two days of the demolition, there will be at least 100 haul-truck trips per day on Watkins Drive. This will substantially degrade the operation of the numerous stop-controlled intersections on Watkins Drive, and the impact of this degradation needs to be analyzed in the EIR.

The Initial Study indicates that no additional analysis is required in response to Question "D": "Will the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g.,

farm equipment)?" This analysis definitely needs to be performed, because the route for waste-hauling trucks leaving the EH&S facility will involve a sharp right turn onto Watkins Drive. The driveway would be on a curved section of roadway, where Watkins Drive has one lane in each direction. If a large truck were slowly exiting the driveway, vehicles rounding the curve would be forced to brake suddenly, with great potential for collisions with the truck and with each other. In addition, when school is in session, vehicles are always parked bumper-to-bumper along the south edge of Watkins Drive on both sides of the proposed driveway. These cars make it difficult for motorists exiting the driveway to see approaching vehicles on Watkins Drive and for motorists on Watkins Drive to see vehicles exiting the driveway. In addition, there is a high volume of pedestrian traffic along the south side of Watkins Drive in the proposed location of the driveway, and the potential for vehicle-versus pedestrian accidents would be great. All of these issues need to be analyzed thoroughly in the EIR.

UNIVERSITY OF CALIFORNIA RIVERSIDE

ENVIRONMENTAL HEALTH & SAFETY EXPANSION FACILITY

SCOPING MEETING

LOCATION:	UNIVERSITY OF CALIFORNIA RIVERSIDE 3615A Canyon Crest Drive Riverside, California 92507
DATE AND TIME:	Wednesday, July 6, 2011 6:00 p.m. - 6:33 p.m.
REPORTED BY:	KRISTI JOHNSON, CSR CSR NO. 12585
JOB NO:	70130-KJ

Riverside, CA July 6, 2011

MS. THRASHER: It's now five after. We'll get started. This is Elizabeth Purl from Impact Sciences, Incorporated, who is our consultant working on the CEQA documentation. She'll do a brief presentation and then take your comments.

MS. PURL: Good evening. Thanks for coming. So we're here tonight for the scoping meeting for the environmental health and safety expansion facility which is proposed by the university. This is what we're going to go through. We're going to talk a little bit about the project itself, about the process, what we are currently considering to address in the EIR, what we have at least tentatively determined, through the initial study process, that does not need to be addressed in the EIR, and we're mostly here to take your comments on the environmental process.

So the environmental review process is driven by CEQA, the California Environmental and Quality Act. This is a discretionary project. The university has a decision to make and, therefore, under CEQA, has to evaluate the environmental consequences of approving the project. So right now, we are not here to consider the merits of the project itself. There will be

opportunities to address that later in the process.

What we're here for tonight is to hear from you what should be addressed in detail in the EIR, what potential environmental impacts there would be from this project that we need to examine in the EIR. There will be, as I mentioned, opportunities, during the process, for comment both on the environmental document and on the project itself.

This slide, things in blue are things we are doing. Preparing document, publishing them for public review. The things in white, the scoping process, that's tonight, and the initial study we have already published as well as the draft EIR, the public review of the document and the hearing on it, and then ultimately, the Regents' hearing, which will consider the EIR and are opportunities for the public to give comment, first on the environmental document, and ultimately, on the project itself.

So we issued the notice of preparation, which is required by CEQA, and published the initial study on June 3rd. The 30-day review period is running longer because this is our opportunity to have a scoping meeting. Comments, we did not cutoff comments on July 3rd. Comments will be accepted through today.

We expect to publish the draft EIR probably in

August. It will be circulated for a 45-day period for the public to review it and comment on it. There will be a public hearing on that document during the period,

probably toward the end of it. Following that, we will collect public comments and comments from any public agency, and we will respond to all of those in a further document, the final EIR, which we expect to publish in early winter, late fall, early winter, so probably around November for that document.

Ultimately, the project -- both the EIR, the final EIR in response to all of the comments, and the project itself are currently scheduled to be considered by the Regents in January.

The project is the construction of a new environmental health and safety expanded facility and a parking lot that would provide 50 spaces, and the location will be along Watkins Drive, east of the existing corporation yard. The EH&S facility will be roughly here, and the remainder of the parcel will be Parking Lot 27 over here. We have the schematic what the building layout would be like. Here's the corporation yard here and the parking. This is the existing recreational field.

The building is about 28,000 square feet and includes all of the existing environmental health and

safety functions, consolidates them in one place, and it would also be sized to allow for the projected expansion with build out of the -- the long-term build out of the campus. It would alleviate the present, very crowded conditions of the existing facility and would be sized

to allow for planned growth. It would include training areas, administration and office, testing laboratories for the materials that are brought in, and storage and handling areas for materials so that they could be properly stored before they leave campus, properly packaged, and moved into trucks and transported out.

The main access for day-to-day operations will be from Linden Street. The trucks that currently circulate through the campus and remove waste would continue to do that, would be brought through campus routes into the facility. That would also be the visitor access. On Watkins side of the building, the only operations from there would be the removal of bulk waste. The pickup that currently exists at the existing facility would then be picked up from there and transported out along the street and to the freeway.

The project would be adjacent to and have access through the corporation yard, which would be also somewhat reorganized. The access to the parking area would be, also, from Linden. It will not have access

from Watkins. In fact, there's plans to have a fence along Watkins, which would restrict vehicle access and control pedestrian access from that side. It would retain the palm trees. There would be no change in the broad appearance of the area with the palms. Those would stay.

The parking lot would both serve the new facility,

which would have a relatively small visitor flow, and the recreational field that already exists. It's intended to alleviate existing parking pressures. This is the same thing you can see over there, showing, roughly, what the outline of the building is and the general layout of the parking and the access.

This is the current land use map. The site is in -- I'm sorry, I don't have a pointer. The site is up here. That area is designated for campus support. The proposed environmental health and safety facility is an allowed use under that designation, so there's no amendment to the LRDP being proposed, nor is any needed. It would fit within the existing designations.

The corporation yard and reuse of the existing building -- and the existing building, by the way, is shown down here. This is the current EH&S facility down here. Those are not actually part of the project that is being considered for approval at this time that's

being examined in detail in this document. They are related projects and logical follow-up ones that would occur after the new EH&S facility is constructed. We are considering them as to what would happen with the reuse in terms of traffic, land use, all the other issues that we are going to consider.

Mostly, the reorganization of the facility will not be very visible to you at the existing facility. Those buildings would be reused. Some storage containers

would be removed, and existing functions elsewhere on campus or off campus would be transferred there.

Then at the corporation yard, the current plan is to move some of the functions within the yard itself, demolish an old warehouse that's outworn, and build a replacement warehouse at a slightly different location on the corporation yard.

Following the initial study process, these are the topics: Aesthetics, air quality, greenhouse gases, hazards and hazardous materials, hydrology and water quality drainage, land use and planning, noise and traffic. Those, we currently plan to address in detail in the EIR. A review in the initial study of those topics showed these need to be looked at.

The same review did not find any impacts to these areas: Agricultural lands -- the property is entirely

paved, or the portion where the parking lot would be for EH&S would go is bare land without any vegetation. Culture resources, geology and soils, there are no mineral resources. Public services and recreation would not be affected, and utility and service systems, only minor upgrades within the existing campus footprint would be needed.

This is not to say these topics can't be commented on. Any topic that you want considered and reviewed, we will take comments on that and respond to those.

Other things we need to talk about in the document,

alternatives. The alternatives, generally, are developed during the course of preparing the EIR in response to the impacts that are identified in the EIR. So we can't say right now what they are because we haven't prepared the EIR, or prepared the analysis sections of the EIR, and figured out what the potential significant impacts are so that we can craft alternatives to try to avoid those. We will certainly address a no development alternative and look at alternatives that may involve other locations or other configurations.

We'll look at cumulative effects that are going on in the surrounding area, whether this would include growth in the area in general and irreversible changes

to the environment as a result of the project.

So that's, in a nutshell, what the project is about and the process. At this point, we'd like anybody who wants to speak, if you filled out a speaker's card and turned it in to come up and give us your comments.

MS. THRASHER: Since there's so few, we're not going to time you for three minutes.

So, Mr. Phillips, if you'd like to go ahead.

MR. PHILLIPS: First, regarding possible alternatives to the project, the EIR needs to address the very attractive alternative of constructing the EH&S facility at the previously proposed three-acre site near the northeast corner of Canyon Crest Drive and Martin

Luther King Jr. Boulevard. The site has numerous advantages over the Watkins Drive location.

First, the facility will be near the future school of medicine and other science buildings for laboratory waste, thereby reducing air pollution and the potential for traffic accidents and spills.

Second, the facility would be immediately adjacent to on-ramps to Interstate 215, slash, 60 eliminating the transportation of hazardous waste, including biological, chemical, and radioactive waste, through residential neighborhoods.

Third, the facility would be far from residences

and other sensitive receptors whereas the Watkins Drive location is in the midst of single-family and multi-family residences, dormitories, athletic fields, and the child development center. To date, UCR's only rationale for moving the EH&S facility to Watkins Drive is economic. The alternative analysis in the EIR needs to address in detail the factors of haul distances and compatibility with existing land uses as well as weight limits on local roadways, such as Watkins Drive.

Under aesthetics, the initial said no additional analysis is required regarding Question D, "Would the project create a new source of substantial light or glare which would adversely affect day- or nighttime views in the area?" Page 23 indicates, "The proposed EH&S expansion building exterior and parking lot

lighting has been designed to minimize light spill into adjacent areas."

That's what UCR said about the lighting for the intermural athletic field on the southwest side of Valencia Hill Drive and Watkins Drive. That analysis presented a diagram listing anticipated footcandle measurements on the ground, both on the fields and within a few yards of the field. That kind of analysis is inadequate. It doesn't address the fact that when one looks in the general direction of the fields from

most anywhere within a several block radius, that lighting dominates the views. For instance, if one stands in the parking lot of Grace Community Church on Mt. Vernon Avenue, the lights contribute no illumination at ground level, but they create an extremely obnoxious obstruction to the view when one looks south and east. The EH&S exterior and parking lot lighting will create a new source of substantial light and glare, and this issue needs to be addressed in the EIR in terms other than ground level footcandle measurements.

There also needs to be a cumulative analysis of the effect of this new source of substantial light and glare as it operates in conjunction with the obtrusive light and glare from the intermural fields and the lights soon to be erected on top of the parking structure for Glen Mor II.

Under air quality, the initial study indicates that

no additional analysis is required in response to Question E, "Would the project create objectionable odors affecting a substantial number of people?" That analysis definitely needs to be performed since the EH&S facility is proposed to be in the midst of a residential neighborhood, apartments, dorms, athletic fields, and the child development center, since there is a potential for the spillage or venting of toxic substances,

liquids, and gases during the normal operation of the facility in an emergency, such as an earthquake, and during the loading, unloading, handling, and transportation of these toxic materials. In the proposed EH&S site, the prevailing wind blows from west to east and would transmit any toxic fumes or odors directly towards single-family residences. Santa Ana winds from the north would transmit the fumes directly towards several dormitory buildings.

The EIR needs to include a detailed analysis of the potential impact on surrounding sensitive receptors of each specific type of chemical waste, each specific type of biological waste, and each specific type of radioactive waste that will be stored at the facility, with particular attention paid to those that will be stored outside or transported on Watkins Drive and those that have the potential to be vented from the facility in the event of a spill or other emergency. The analysis needs to include the wind conditions commonly

experienced in the area of the proposed EH&S facility.

Page 31 of the initial study indicates, quote, "The 2005 LRDP EIR concluded that future growth in the campus vicinity would not expose sensitive receptors to substantial pollutant concentrations of carbon monoxide. The 2005 LRDP contributions to this impact would not be

cumulatively considerable. The proposed projects would result in increases in carbon monoxide emissions at congested intersections, and thus, would not result in a significant cumulative impact. No further evaluation in the EIR is required."

This conclusion is dead wrong. The 2005 LRDP EIR did not anticipate the development of a large student apartment complex now beginning construction at the northeast corner of Blaine Street and Iowa Avenue, which will substantially increase traffic at many already congested intersections in the campus vicinity. In addition, trucks hauling waste from the EH&S facility to the freeway via Watkins Drive would have to stop and idle at numerous, often-congested intersections, contributing substantially to pollutant concentrations that needs to be analyzed in the EIR.

Under geology and soils, the initial study concluded that no additional analysis is required for any of the listed questions. Page 40 indicates, "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."

It is well known among geologists that California's

Alquist-Priolo Earthquake Fault Zoning has not kept pace with development and is years behind. Although the Box Springs fault is not documented on Alquist-Priolo's map, it is described in other geotechnical studies. The geotechnical studies performed for the Glen Mor II project concluded that the fault did not exist, but that conclusion had no basis. The geologist performed only a visual analysis, which was useless because the fault zone is graded and covered by the intermural fields. The geologist performed no subsurface analysis in the area of the fault. I have seen and heard the fault in action during the Big Bear earthquake and it definitely does exists. If UCR does not perform a geologic analysis of the fault, it does so at its own peril.

On page -- it's 44 and 45 under "Hazards and Hazardous Materials," the initial study indicates that the production of hazardous waste will grow from about 44.5 tons per year to about 172 tons per year by 2021, a 387 percent increase, but according to page 7, by 2021, the EH&S waste truck will need to make a maximum of only two additional trips per day, the medical waste vendor won't need to make any additional trips, the hazardous waste vendor will need to make a maximum of one or two

additional trips per year, and the radioactive waste vendor will need to make one more trip per year. It

seems doubtful to me that four more efficient loads will handle a fourfold increase in waste with only a few additional trips per year.

The EIR needs to specify the hauling capacity of each type of waste truck listed on page 7. If materials are proposed to be stored at the EH&S facility until a full truckload is accumulated, the EIR needs to specify how long each specific type of waste will be stored as well as the potential for accidents or the accidental release of these wastes during storage. The EIR needs to consider whether it will be legal for these fully loaded trucks to travel on city streets with posted weight limits, such as Watkins Drive.

The initial study indicates that no additional analysis is required regarding Question G, "Will the project impair implementation of or physically interfere with the adopted emergency response plan or emergency evacuation plan." This should be analyzed in the EIR because, during an emergency, such as a major earthquake, the spillage or discharge of hazardous material by the EH&S facility could lead to the closure of Watkins Drive, a major arterial roadway and, therefore, hinder the movement of emergency vehicles and the evacuation of residents.

Under cumulative impacts, the initial study

indicates that the EIR will evaluate the, quote, "increase in the amount of hazardous materials used and transported on campus," end quote. The evaluation also needs to include the increase in the amount of hazardous materials transported off campus through the adjacent residential neighborhood.

Under hydrology and water quality, the initial study indicates that no additional analysis is required in response to Question F, "Will the project otherwise substantially degrade water quality?" This analysis should be performed and it should address the issue of whether hazardous waste spilled or discharged at the EH&S facility during an accident or emergency could reach a storm drain and, thereby, enter the city's sewer system.

On page 62, Section B, the initial study indicates, quote, "The 2005 LRDP EIR indicated that change in on-campus land uses associated with the 2005 LRDP could be substantially incompatible with existing adjacent land uses. The proposed EH&S expansion facility would be located near existing on-campus and off-campus residential uses. Due to intervening distance and the implementation of relevant campus PSs and PPs, the proposed EH&S expansion facility would not result in potential conflicts with existing or planned adjacent

land uses," end quote. A cloud of chlorine gas vented after a spill at the facility could easily reach neighborhoods and dormitories on the prevailing north and west winds. Furthermore, the quote, "intervening distance," end quote, between waste hauling trucks on Watkins Drive and houses along Watkins Drive would be about 20 yards, and in the event of a traffic collision, residents could be exposed to hazardous materials immediately and at very close range. These issues need to be addressed in the EIR.

According to page 69 of the initial study, the proposed EH&S expansion facility would result in a minor increase in vehicular traffic on and off the campus, which, in turn, would generate increased noise levels. The project element as well as the corporation yard reorganization and the reuse of the existing EH&S facility represent land uses that were previously considered under the 2005 LRDP and would not generate noise levels in excess of those evaluated in the 2005 LRDP EIR. The noise analysis in the 2005 LRDP EIR was faulty because it failed to evaluate the noise generated by vehicles, including waste hauling trucks stopping and accelerating at stop controlled intersections, such as Valencia Hill Drive and Watkins Drive where I live. The new analysis needs -- a new analysis needs to be

conducted, including all intersections that will be traversed by waste hauling trucks moving to and from the EH&S facility. The cumulative noise analysis mentioned on page 71 also needs to include all intersections along Watkins Drive that would be used by waste hauling trucks. UCR has my permission to place noise measuring devises in my front yard to get the full impact of noise from trucks that brake and accelerate at my corner.

On page 87, the initial study indicates, regarding the EH&S expansion facility, quote, "Demolition is expected to take approximately five working days. Haul traffic is estimated at 270 truckloads, which would occur later in the demolition phase. Demolition waste would be removed by way of Watkins Drive to I-215," end quote. I interpret that to mean that during the final two days of the demolition, there will be at least 100 haul truck trips per day. This will substantially degrade the operation of the numerous stop controlled intersections on Watkins Drive, and the impact of this degradation needs to be analyzed in the EIR.

The initial study indicates that no additional analysis is required in response to Question D, "Will the project substantially increase hazards due to a design feature, for example, sharp curves or dangerous intersections or incompatible uses, for example, farm

equipment," end quote. This analysis definitely needs

to be performed because the route for waste hauling trucks leaving the EH&S facility will involve a sharp right turn onto Watkins Drive. The driveway would be on a curved section of roadway where Watkins Drive has one lane in each direction. If a large truck were to slowly exit the driveway, vehicles rounding the curve would be forced to brake suddenly with great potential for collision with the truck and with each other. In addition, when school is in session, vehicles are always parked bumper to bumper on Watkins Drive on both sides of the proposed driveway. These cars make it difficult for motorists exiting the driveway to see approaching vehicles on Watkins Drive and for motorists on Watkins Drive to see vehicles exiting the driveway.

In addition, there's a high volume of pedestrian traffic along the south side of Watkins Drive in the proposed location of the driveway, and the potential for vehicle-versus-pedestrian accidents would be great. All of these issues need to be analyzed thoroughly in the EIR. Thank you.

MS. THRASHER: Do you have a copy of that you can leave with us?

MR. PHILLIPS: Sure. You can have it.

MS. THRASHER: It's very thorough and that would be

helpful. Thank you.

Mr. Dawson.

MR. DAWSON: I don't have anything as formally

prepared as Mr. Phillips. At this point, we're here tonight to discuss this issue because I thought we had settled this issue a while back when it was first proposed to be put in its location. The circumstances have not changed. You have a basic problem that I don't see how you can really resolve, and that problem is that childcare and hazardous waste storage don't go next to each other. That is a no-brainer.

An example of why that is an issue can be found in such documents as the South Coast Air Quality Management District's air quality issues in school site selection guidance document that was prepared in '05 and revised in '07, and this document does deal in terms of an organization that's trying to find a new site for a school, but I believe that you should be considering it in the reverse, that you should be looking in terms of if you have a sensitive receptor use, such as this daycare facility on campus, you need to be considering what impact that facility is going to have on the sensitive receptor use. That identifies specific sources of air pollution that should be considered when selecting a new sensitive land use, such as schools, in

the proposed air quality and land use handbook, community health perspective, and they list some of those sources, such as hazardous waste storage or treatment. So it seems to me appropriate and should be a major focus of your EIR is you do an in-depth

evaluation of that.

How did we get back to this location? I thought we had settled that this facility was going to go on the other side of the freeway. Apparently, the campus commissioned a study, a site study, and the site study looked at several locations recently. I read this document, and one of the glaring things in the document that I notice is that the criteria that the document studied was all about money. How much is it going cost to put it here or there, and it didn't take into consideration the adjacent uses to each one of the sites, as to whether or not there would be compatibility. This type of facility is not compatible with the high density residential nature that has been developed over in this location. It's not compatible with the sensitive receptor use of the two child development centers on Watkins Drive, and I think that those aspects should weigh more heavily than the money aspect.

Sometimes it costs more to do the right thing than

to do what is the cheaper, more expedient. I think the campus should suck it up, and if it costs more to place it in a more appropriate location, that's what the campus should do. I think that should conclude my comments. Thank you.

MS. THRASHER: I don't think I have any more slips. If anybody else would like to say anything -- okay.

We appreciate everybody coming. We will take the comments we received, and I appreciate you leaving this with us. I'll scan it and send it to you.

We'll go into preparation of the document. We'll add additional areas as are necessary, and as Elizabeth said earlier, we anticipate the draft EIR being released sometime in the latter part of August. Those of you who have asked for one will get notification like you did with this one. Anyone else who wants notification, write your information down on a piece of paper, hand it to me, or e-mail it to me. My e-mail address is on our Web site. Thank you very much.

(Proceedings concluded at 6:33 p.m.)

R E P O R T E R' S C E R T I F I C A T E

I, Kristi Johnson, a certified shorthand reporter, No. 12585, for the State of California, do hereby certify:

That the said proceedings was taken down by me in stenotype at the time and place therein stated and was thereafter reduced to printing under my direction.

I further certify that I am not of counsel of

attorney for either of the parties hereto or in any way interested in the event of this cause, and that I am not related to either of the parties hereto.

In witness whereof, I have hereunto subscribed my name this 24th day of July, 2011.

_____
KRISTI JOHNSON, CSR NO. 12585

2005 LRDP Planning Strategies, Programs and Practices, and Mitigation Measures

2005 LRDP PLANNING STRATEGIES, PROGRAMS, AND PRACTICES

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

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).)

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.

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).)

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.

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
- 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).)

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.)

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.

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).)

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.

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.

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).)

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.)

Summary of Applicability and Implementation Status

LRDP EIR Planning Strategies, Programs and Practices and Mitigation Measures
Summary of Applicability and Implementation Status
EH&S Expansion and Parking Lot 27 Project and
Related Corporation Yard Reorganization and Existing EH&S Buildings Re-use

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
The following information serves as a key to the coding used for the category, responsible unit, mitigation timing, and compliance action:		
Responsible UCR Units AG OPS: Agricultural Operations CRM: Capital Resource Management DS: Dining Services EHS: Environmental Health and Safety FS: Fleet Services HSG: Housing Services AE: Architects & Engineers PD: Police Department PP: Physical Plant TAPS: Transportation and Parking Services	**Mitigation Timing** P: Implement during programming D: Incorporate into project-specific design E: Implement during environmental documentation (CEQA) C: Implement during construction of specific projects O: Implement as an ongoing campus practice	
Compliance Action AP: Administrative/Planning Activity CD: Incorporate into construction contract specifications ED: Environmental Documentation FO: Field observation activity/inspections	**Category** AM: Administrative Measure PS: Project Specific SL: Service Level	
PS 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. *(Category: AM, PS; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Land Use 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. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Land Use 3 Maintain the teaching and research fields on the West Campus south of Martin Luther King Jr. Boulevard. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Land Use 4 Pursue a goal of housing 50 percent of student enrollment in on campus or campus controlled housing. *(Category: AM; Responsible Unit: CRM, HSG; Timing: P; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
PS Land Use 5 Remove existing family housing units on the East Campus, and provide replacement and additional units of family housing on the West Campus. *(Category: AM; Responsible Unit: CRM, HSG; Timing: P; Compliance: AP)*	Not Applicable	
PS Land Use 6 Provide expanded athletics and recreational facilities and fields on the East and West Campuses, adjacent to concentrations of student housing. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Land Use 7 Over time, relocate parking from central campus locations to the periphery of the academic core and replace surface parking with structures, where appropriate. *(Category: AM; Responsible Unit: CRM,TAPS; Timing: P; Compliance: AP)*	Part of Project. No further action required.	The proposed Parking Lot 27 project would provide parking at the edge of campus.
PS Open Space 1 Protect the steep and natural hillsides on the southeast campus designated as a Natural Open Space Reserve, to protect wildlife habitat, provide a visual backdrop to the campus, and protect against erosion. *(Category: AM, PS; Responsible Unit: CRM, AE, PP; Timing: P, D, C, O; Compliance: AP, CD)*	Not Applicable	
PS Open Space 2 Within the Natural Open Space Reserve, no major facilities are 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. *(Category: AM, PS; Responsible Unit: CRM, AE, PP; Timing: P, D, C, O; Compliance: AP, CD)*	Not Applicable	
PS Open Space 3 In Naturalistic Open Space areas, where arroyos and other natural features exist, preserve wherever feasible, existing landforms, native plant materials, and trees. Where appropriate, restore habitat value. *(Category: AM, PS; Responsible Unit: CRM, AE, PP; Timing: P, D, C, O; Compliance: AP, CD)*	Not Applicable	
PS Open Space 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. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Part of Project. No further action required	The proposed EH&S Expansion and Parking Lot 27 projects would include landscaped buffers and setbacks along Valencia Hill Drive and landscaping including planting evergreen trees along the site frontage on Watkins Drive.
PS Open Space 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. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Open Space 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 spaces within and adjacent to the Mall. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Open Space 7 Provide neighborhood parks and tot lots in the family housing areas as neighborhood open space. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
PS Campus and Community 1 Provide sensitive land use transitions and landscaped buffers where residential off campus neighborhoods might experience noise or light from UCR activities. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Part of Project No further action required	The proposed EH&S Expansion and Parking Lot 27 projects would include landscaped buffers and setbacks along Valencia Hill Drive, landscaping including planting evergreen trees along the site frontage on Watkins Drive, and retention of the mature palm trees along Linden Street.
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Campus and Community 3 Discourage vehicular traffic originating off campus from moving through the campus as a short cut. *(Category: AM, SL; Responsible Unit: CRM, TAPS; Timing: P, O; Compliance: AP)*	Not Applicable	
PS Campus and Community 4 Provide strong connections within the campus and its edges to promote walking, bicycling, and transit use, rather than vehicular traffic. *(Category: AM, SL; Responsible Unit: CRM, TAPS; Timing: P; Compliance: AP)*	Part of Project No further action required	The project features sidewalk connections to nearby campus areas to promote walking and bicycling. The Parking Lot 27 project also includes sidewalks to connect to the adjacent recreational fields.
PS Campus and Community 5 Continue to improve campus signage and wayfinding to provide easy access for visitors and to discourage impacts in neighboring residential areas. *(Category: AM, PS, SL; Responsible Unit: CRM, AE, PP, TAPS; Timing: P, D, C, O; Compliance: AP, CD)*	Not Applicable	
PS Campus and Community 6 Locate public-oriented uses, such as performance facilities, galleries and major sports venues, where they can easily be accessed and where they can contribute to the vitality and economic health of businesses along University Avenue. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Campus and Community 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 service businesses and uses. *(Category: AM; Responsible Unit: CRM; Timing: P; Compliance: AP)*	Not Applicable	
PS Campus and Community 8 Encourage the City to explore the opportunity for student housing in a mixed-use configuration along University Avenue. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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 revitalization program. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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 modification of the University Avenue Specific Plan. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 15 Support the City in developing design guidelines for mixed-use housing and retail along University Avenue. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 18 Work with the City to link the open spaces of UCR with the Citywide Trail Network. *(Category: AM; Responsible Unit: CRM, TAPS; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 19 Work with the City to develop streetscape concepts with banners, lighting, street furniture, and public art that celebrates the linkages between the University and Downtown. Banners should highlight cultural and artistic events in Downtown and UCR when appropriate. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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 Boulevard/14th Street and Blaine/3rd Street as primary freeway connection streets. *(Category: AM; Responsible Unit: CRM, TAPS; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 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. *(Category: AM; Responsible Unit: CRM, TAPS; Timing: O; Compliance: AP)*	Not Applicable	
PS Campus and Community 22 Work with the City to encourage bicycle and pedestrian use and safety, including minimizing the number of curb cuts for residential and retail improvements along University Avenue to Chicago Avenue and then to the Downtown. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
PS Transportation 1 Develop an integrated multi-modal transportation plan to encourage walking, biking and transit use. (Category: AM, SL; Responsible Unit: CRM, TAPS; Timing: O; Compliance: AP)	Not Applicable	
PS Transportation 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. *(Category: SL; Responsible Unit: CRM, TAPS; Timing: O; Compliance: AP)*	Not Applicable	
PS Transportation 3 Provide a continuous network of bicycle lanes and paths throughout the campus, connecting to off-campus bicycle routes. *(Category: AM; Responsible Unit: CRM, TAPS; Timing: P, O; Compliance: AP)*	Not Applicable	
PS Transportation 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. *(Category: AM, SL; Responsible Unit: CRM, TAPS; Timing: P, O; Compliance: AP)*	Not Applicable	
PS Transportation 5 Provide bicycle parking at convenient locations. *(Category: PS, SL; Responsible Unit: CRM, AE, TAPS; Timing: P, D, O; Compliance: AP, CD)*	Part of Project No further action required	The proposed projects include bike-parking facilities.
PS Transportation 6 Implement parking management measures that may include • Restricted permit availability • Restricted permit mobility • Differential permit pricing *(Category: AM; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Part of Project No further action required	Parking Lot 27 would be subject to campus parking management measures, including permit requirements.
PS Development Strategy 1 Establish a design review process to provide regular review of building and landscape development on campus. *(Category: AM; Responsible Unit: CRM, AE; Timing: O; Compliance: AP)*	Not Applicable	
PS Development Strategy 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. *(Category: AM; Responsible Unit: CRM,AE; Timing: O; Compliance: AP)*	Not Applicable	
PS Development Strategy 3 Review other plans or studies that may be prepared, such as district, sub-area plans, or transportation plans, for conformity with the goals and design intent of the LRDP. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
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). *(Category: PS; Responsible Unit: CRM, AE; Timing: P, D; Compliance: AP)*	Part of Project No further action required	The campus has provided the indicated guidelines and instructions to the design team.
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).) *(Category: PS; Responsible Unit: CRM, AE; Timing: P, D; Compliance: AP)*	Part of Project No further action required	The campus has provided the indicated guidelines and instructions to the design team.
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).) *(Category: AM, PS; Responsible Unit: AE, PP; Timing: P, D, E, O; Compliance: AP, CD)*	Not Applicable	The Parking Lot 27 project will retain the mature palm trees along Linden Street.
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).) *(Category: PS; Responsible Unit: AE, PP; Timing: D, E, C, O; Compliance: ED)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
AESTHETICS (continued)		
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 4.8-3(b).) *(Category: AM, PS; Responsible Unit: AG OPS, HSG, AE, PP, TAPS; Timing: D, E, C, O; Compliance: AP, CD, FO)*	Not Applicable	
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. *(Category: PS; Responsible Unit: AE; Timing: D; Compliance: CD)*	Part of Project Ongoing oversight through design and construction	The proposed projects have been subject to a design review process. Project design does not include reflective glass.
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. *(Category: PS; Responsible Unit: AE, PP, TAPS; Timing: D, O; Compliance: AP, CD)*	Part of Project Ongoing oversight through design and construction	Project lighting will be directed downward and shielded to prevent glare.
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. *(Category: PS; Responsible Unit: AE,TAPS; Timing: D, O; Compliance: AP, CD)*	Part of Project No further action required	The proposed projects include walls and/or landscaping along project boundaries that would screen headlight glare. The proposed projects have been subject to a design review process.

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
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.) *(Category: SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Ongoing Campus-wide Program	
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 *(Category: PS; Responsible Unit: AE, PP; Timing: C, O; Compliance: CD, FO)*	Part of Project Ongoing oversight through design and construction Project-level measures to be implemented during construction	These requirements must be incorporated into campus construction specifications and implemented during construction.
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 2 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. (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).) *(Category: AM, PS, SL; Responsible Unit: AE; Timing: C, O; Compliance: AP, CD, FO)*	Part of Project Ongoing oversight through design and construction	These measures must be incorporated into project construction specifications and implemented during construction

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
AIR QUALITY (continued)		
PP 4.3-2(c) The campus shall continue to implement SCAQMD Rule 1403—Asbestos when demolishing existing buildings on the campus. *(Category: PS; Responsible Unit: EHS, AE, PP; Timing: D, E, C, O; Compliance: CD, FO)*	Part of Project Ongoing oversight through design and demolition phase of construction	The project includes asbestos removal prior to demolition of two structures in the Corporation Yard and renovation of the existing EH&S buildings that will ensure compliance with this measure.
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 PM_{10} and $PM_{2.5}$ 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. *(Category: PS; Responsible Unit: AE; Timing: O; Compliance: CD, FO)*	Part of Project Ongoing oversight through design and construction	These measures must be incorporated into project construction specifications and implemented during construction

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
AIR QUALITY (continued)		
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	Part of Project Ongoing oversight through design and construction	These measures must be incorporated into project construction specifications and implemented during construction

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
AIR QUALITY (continued)		
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. *(Category: PS; Responsible Unit: AE; Timing: O; Compliance: CD, FO)*		
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. *(Category: PS; Responsible Unit: AE; Timing: O; Compliance: CD, FO)*	Part of Project Ongoing oversight through design and construction	These measures must be incorporated into project construction specifications and implemented during construction

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
AIR QUALITY (continued)		
MM 4.3-2a: The Campus will:		
• Implement a subsidized vanpool program. *(Category: AM; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Implement staggered or compressed work schedules to reduce vehicular traffic. *(Category: AM; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Use alternative fuel Shuttle buses to reduce intra-campus vehicle trips. *(Category: SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Provide Shuttle service to major off-campus activity centers and Metrolink stations. *(Category: SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Aggressive expansion of the campus TDM program to achieve an AVR of 1.5. *(Category: SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Expand transit subsidies to encourage use of public transit. *(Category: AM; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Implement incentives for telecommuting. *(Category: AM; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Convert campus fleet to low-emission, alternative fuel and electric vehicles over time. *Category: AM; Responsible Unit: FS, PP, TAPS; Timing: O; Compliance: AP)*	Not Applicable	
• Implement solar or low-emission water heaters. *(Category: AM, PS; Responsible Unit: HSG, AE, PP; Timing: P, D, C, O; Compliance: AP, CD)*	Not Applicable	
• Implement an educational program for faculty and staff and distribute information to students and visitors about air pollution problems and solutions. *(Category: AM; Responsible Unit: EHS, TAPS; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: AM. SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Part of Project No further action required	The project includes appropriate GHG reduction measures.

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
AIR QUALITY (continued)		
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. *(Category: AM, PS, SL; Responsible Unit: CRM, AE; Timing: C, O; Compliance: AP, CD, FO)*	Part of Project	See MM 4.3-2b.
MM 4.3-7: The Campus will implement **Mitigation Measure 4.3-2b,** which will reduce traffic associated with campus operations. *(Category: AM, SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Part of Project	See MM 4.3-2b.
BIOLOGICAL RESOURCES		
PP 4.4-1(a) Reduce impacts to the Natural Open Space Reserve area: See PP4.1-2(c)	Not Applicable	
PP 4.4-1(b) Reduce disturbance of Natural and Naturalistic Open Space areas: See PP 4.1-2(d)	Not Applicable	
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. *(Category: AM, PS; Responsible Unit: AE, PP; Timing: P, D, E, C, O; Compliance: AP, CD, FO)*	Not Applicable	
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).) *(Category: AM, PS, SL; Responsible Unit: DS, EHS, HSG, AE, PP; Timing: C, O; Compliance: AP, CD,FO)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
BIOLOGICAL RESOURCES (continued)		
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 (refer to Tables 4.4-1 and 4.4-2) 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. *(Category: PS; Responsible Unit: AE,PP; Timing: D, E, C, O; Compliance: ED)*	Not 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. *(Category: PS; Responsible Unit: AE, PP; Timing: E; Compliance: ED)*	Not Applicable	
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). *(Category: PS; Responsible Unit: AE, PP; Timing: D, E; Compliance: ED)*	Not Applicable	
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. *(Category: PS; Responsible Unit: AE,PP; Timing: D, E; Compliance: ED)*	Not Applicable	
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). *(Category: PS; Responsible Unit: AE, PP; Timing: D, E; Compliance: ED)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
BIOLOGICAL RESOURCES (continued)		
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. *(Category: PS; Responsible Unit: AE, PP; Timing: D, E, C; Compliance: ED)*	Not Applicable	
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. *(Category: PS; Responsible Unit: AE, PP; Timing: D, E, C; Compliance: CD)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
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. *(Category: PS; Responsible Unit: AE; Timing: D, E; Compliance: ED)*	Not Applicable	
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. *(Category: PS; Responsible Unit: AG OPS, AE, PP; Timing: D, E, C, O; Compliance: ED, CD)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
CULTURAL RESOURCES (continued)		
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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: CD)*	Part of Project Ongoing oversight through design and construction	These measures must be incorporated into project construction specifications.
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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: CD)*	Part of Project Ongoing oversight through design and construction	These procedures must be followed if a burial, human bone or suspected human bone are discovered during project construction.
M 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. *(Category: PS; Responsible Unit: CRM, AE, PP; Timing: P, D, E; Compliance: ED)*	Not Applicable	
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. *(Category: PS; Responsible Unit: CRM, AE, PP; Timing: P, D, E; Compliance: ED)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
CULTURAL RESOURCES (continued)		
MM 4.5-2 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. *(Category: PS; Responsible Unit: AE, PP; Timing: D, E; Compliance: ED)*	Not Applicable	
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 • Evaluation of depth to groundwater The structural engineer shall incorporate the recommendations made by the geotechnical report when designing building foundations. *(Category: PS; Responsible Unit: AE; Timing: P, D, E; Compliance: CD)*	Part of Project Ongoing oversight of incorporation of recommendations throughout design and construction	A site-specific geotechnical study has been prepared for the project that presents conclusions respective to these issues.
PP 4.6-1(b) The campus shall continue to implement its current seismic upgrade program. *(Category: PS; Responsible Unit: AE; Timing: D; Compliance: CD)*	Part of Project No further action required	The related Corporation Yard reorganization and existing EH&S buildings reuse projects include seismic upgrades.

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
GEOLOGY AND SOILS (continued)		
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. (Category: PS; Responsible Unit: AE; Timing: P, D; Compliance: CD)	Part of Project Ongoing oversight of incorporation of recommendations throughout design and construction	The project has been designed with the appropriate seismic safety requirements identified in the geotechnical study.
PP 4.6-2(a) Implement SCAQMD Rule 403—Fugitive Dust during the construction See PP 4.3-2(b)	Part of Project	See PP 4.3-2(b)
PP 4.6-2(b) Implement Best Management Practices, as identified in the UCR Stormwater Management Plan See PP 4.4-2(b)	Part of Project	See PP 4.4-2(b)
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. *(Category: AM, SL; Responsible Unit: EHS; Timing: C,O; Compliance: AP,FO)*	Part of Project Ongoing Campus-wide Program Ongoing oversight throughout design, construction and operation	Relevant aspects of these plans will be implemented in the course of normal operations during construction and ongoing operation.
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. *(Category: PS; Responsible Unit: EHS,AE; Timing: P, D, E, C, O; Compliance: CD, FO)*	Part of Project Ongoing oversight throughout design and demolition	Asbestos surveys of the Mail Services Building and the existing EH&S facility have been conducted.
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. *(Category: SL; Responsible Unit: EHS; Timing: O; Compliance: AP, FO)*	Ongoing Campus-wide Program Ongoing oversight throughout design, construction and operation	Relevant hazardous materials minimization strategies will be implemented the course of normal operations during ongoing operation.

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
HAZARDS AND HAZARDOUS MATERIALS (continued)		
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 for contamination 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 on-site 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. *(Category: PS; Responsible Unit: AG OPS,EHS,AE,PP; Timing: P, D, E, C, O; Compliance: ED)*	Part of Project Ongoing oversight through design and demolition	Asbestos surveys of the Mail Services Building and the existing EH&S facility have been conducted. The project includes asbestos removal prior to demolition of the Mail Services Building and renovation of the existing EH&S facility that will ensure compliance with this measure.
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.) *(Category: PS, SL; Responsible Unit: AE,PP,TAPS; Timing: O, C; Compliance: CD,FO)*	Part of Project Ongoing oversight through design and construction	
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[1] 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.) *(Category: PS, SL; Responsible Unit: AE,PP; Timing: O, C; Compliance: CD,FO)*	Part of Project Ongoing oversight through design and construction	The UCR Office of Architects & Engineers must conduct this coordination prior to any roadway closures.

1 Office Design and Construction has been renamed the Office of Architects & Engineers.

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
HAZARDS AND HAZARDOUS MATERIALS (continued)		
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. *(Category: PS; Responsible Unit: AG OPS, AE,PP; Timing: P, D, E; Compliance: ED)*	Not Applicable	
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. *(Category: PS; Responsible Unit: EHS,AE; Timing: D,C; Compliance: CD)*	Part of Project Ongoing oversight through design and construction	
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. *(Category: AM; Responsible Unit: EHS; Timing: O; Compliance: AP)*	Ongoing Campus-wide Program	
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. *(Category: PS; Responsible Unit: AE,PP; Timing: D; Compliance: CD)*	Not Applicable	
MM 4.7-8(b) Implement annual fuel management procedures to maintain a firebreak between the undeveloped areas and structures. *(Category: AM; Responsible Unit: EHS; Timing: O; Compliance: AP,FO)*	Not Applicable	
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.) (Category: AM; Responsible Unit: AG OPS, CRM, AE, PP; Timing: D, C, O; Compliance: AP, FO)	Ongoing Campus-wide Program Ongoing oversight through design, construction, and operation	Project design incorporates all relevant water quality requirements. A SWPPP will be prepared for the project that incorporates project-specific construction BMPs. A final plan will be prepared and a Notice of Intent will be filed under the State General Construction Permit in accordance with applicable regulations and standard campus practice.
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)	Part of Project Ongoing oversight through design and construction	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
HYDROLOGY AND WATER QUALITY (continued)		
(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)	Part of Project Ongoing oversight through design and construction	Project design would conform to Title 24 and includes features consistent with LEED Silver certification.
(iii) Retrofit existing plumbing fixtures that do not meet current standards on a phased basis over time	Not Applicable	
(iv) Install recovery systems for losses attributable to existing and proposed steam and chilled-water systems	Not Applicable	
(v) Prohibit using water as a means of cleaning impervious surfaces	Ongoing Campus-wide Program	
(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).) *(Category: AM, PS; Responsible Unit: AE, PP; Timing: D, O; Compliance: AP, CD, FO)*	Part of Project Ongoing oversight through design and construction	Project design would include water efficient landscape and irrigation consistent with LEED Silver certification.
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).) *(Category: SL; Responsible Unit: AG OPS, HSG, PP, TAPS; Timing: O; Compliance: AP, FO)*	Ongoing Campus-wide Program	
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).) *(Category: SL; Responsible Unit: DS; Timing: O; Compliance: AP, FO)*	Not Applicable	
PP 4.8-3(a) Reduce impacts to the Natural Open Space Reserve See PP 4.1-2(c)	Not Applicable	
PP 4.8-3(b) Reduce disturbance of Natural and Naturalistic Open Space areas: See PP 4.1-2(d)	Not Applicable	
PP 4.8-3(c) SCAQMD Rule 403—Fugitive Dust See PP 4.3-2(b)	Part of Project	See PP 4.3-2(b)
PP 4.8-3(d) Implement Best Management Practices, as identified in the UCR Stormwater Management Plan See PP 4.4-2(b)	Part of Project	See PP 4.4-2(b)

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
HYDROLOGY AND WATER QUALITY (continued)		
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 *(Category: PS; Responsible Unit: CRM, AE, PP; Timing: P, D, E; Compliance: AP, CD)*	Part of Project Ongoing oversight through design and construction	
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. *(Category: AM; Responsible Unit: EHS; Timing: O; Compliance: AP)*	Ongoing Campus-wide Program	
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. (Category: PS; Responsible Unit: CRM; Timing: P, D, E; Compliance: AP, CD, ED)	Not Applicable	
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. (Category: PS; Responsible Unit: AE; Timing: P, D; Compliance: AP, CD)	Not Applicable	
LAND USE AND PLANNING		
PP 4.9-1(a) Provide design professionals with 2007 Campus Design Guidelines See PP 4.1-1	Part of Project	See PP 4.1-1
PP 4.9-1(b) Provide design professionals with the 2007 Campus Design Guidelines See PP 4.1-2(a).	Part of Project	See PP 4.1-2(a)
PP 4.9-1(c) Relocate mature "specimen" trees See PP 4.1-2(b)	Not Applicable	See PP 4.1-2(b)
PP 4.9-1(d) UCR strongly commits to working closely with the City of Riverside to address and resolve land use compatibility impacts arising from increased enrollment on the residential neighborhoods surrounding UCR, particularly related to the impacts of student housing and associated parking, noise, and traffic. *(Category: AM; Responsible Unit: CRM, AE; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
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.	Part of Project No further action required	The project has been designed to consider noise generation and exposure to on- and off-campus residences.
(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.	Part of Project No further action required	
(iii) Adequate acoustic insulation would be added to residence halls to ensure that the interior L_{dn} would not exceed 45 dB(A) during the daytime and 40 dB(A) during the nighttime (10 PM to 7 AM) in rooms facing major streets.	Not applicable	
(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. *(Category: PS; Responsible Unit: AE; Timing: P, D; Compliance: AP, CD, ED)*	Part of Project No further action required	The project has been designed to consider noise generation and exposure to on- and off-campus residences.
PP 4.10-2 The UCR Campus shall limit the hours of exterior construction activities from 7:00 AM to 9:00 PM. Monday through Friday and 8:00 AM. to 6:00PM. 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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: CD)*	Part of Project Ongoing oversight through construction documents and during construction	This is a standard component of campus construction projects.
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. *(Category: AM; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: AM, SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Ongoing Campus-wide Program	The project will not conflict with the campus's Alternative Transportation program.
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. *(Category: PS; Responsible Unit: AE, PP; Timing: P, D, E, C, O; Compliance: AP, CD)*	Part of Project Ongoing oversight through design and construction	
PP 4.10-7(a) To the extent feasible, construction activities shall be limited to 7:00 AM to 9:00 PM. Monday through Friday, 8:00 AM to 6:00 PM 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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: CD)*	Part of Project	See PP 4.10-2

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
NOISE (continued)		
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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: CD)*	Part of Project Ongoing oversight through construction documents and during construction	This is a standard component of campus construction projects.
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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: CD)*	Part of Project Ongoing oversight through construction documents and during construction	This is a standard component of campus construction projects.
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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: AP)*	Part of Project Ongoing oversight through design and construction	This is a standard component of campus construction projects.
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. *(Category: PS; Responsible Unit: AE, PP; Timing: C; Compliance: AP)*	Part of Project Ongoing oversight through design and construction	This is a standard component of campus construction projects.
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. *(Category: PS; Responsible Unit: AE; Timing: C; Compliance: AP)*	Part of Project Ongoing oversight through design and construction	This is a standard component of campus construction projects.
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.	Part of Project Ongoing oversight through design and construction	This is a standard element of the campus design process. The Campus Fire Marshal is a participant in the design and construction process.
(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.	Part of Project No further action required	A fire flow evaluation has been completed.
(iii) Adequate access will be provided to within 50 feet of the main entrance of occupied buildings to accommodate emergency ambulance service.	Part of Project No further action required	This is a standard element of the campus design process. The site plan (Draft EIR Figure 3.0-4) illustrates such access to the EH&S Expansion building under the proposed design.

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
PUBLIC SERVICES (continued)		
(iv) Adequate access for fire apparatus will be provided within 50 feet of stand pipes and sprinkler outlets.	Part of Project Ongoing oversight through design and construction	This is a standard element of the campus design process. The Campus Fire Marshal is a participant in the design and construction process.
(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.	Part of Project Ongoing oversight through design and construction	This is a standard element of the campus design process. The Campus Fire Marshal is a participant in the design and construction process.
(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. *(Category: AM, PS; Responsible Unit: EHS, AE, PP; Timing: D, O; Compliance: AP, ED)*	Ongoing Campus-wide Program	The Campus Fire Marshal has determined that current staffing levels are adequate.
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.	Part of Project Ongoing oversight through design and construction	This is a standard element of the campus design process. The Campus Fire Marshal is a participant in the design and construction process
(ii) Increased staffing levels for local fire agencies shall be encouraged to meet needs generated by LRDP project related on-campus population increases. *(Category: AM, PS, SL; Responsible Unit: EHS, AE, PP; Timing: D, O; Compliance: AP, CD)*	Ongoing Campus-wide Program	
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. *(Category: AM, SL; Responsible Unit: PD; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: SL; Responsible Unit: PD; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
TRANSPORTATION AND TRAFFIC		
PP 4.14-1 Implement a Transportation Demand Management program See PP 4.3-1	Part of Project Ongoing Campus-wide Program	See 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. *(Category: AM, PS; Responsible Unit: AE; Timing: D, C; Compliance: AP)*	Ongoing Campus-Wide Program Ongoing oversight through design and construction	This is a standard component of campus construction projects.
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. *(Category: PS; Responsible Unit: AE; Timing: P, D; Compliance: AP)*	Part of Project No further action required	The campus has provided the indicated guidelines and instructions to the design team.
PP 4.14-5 Maintain at least one unobstructed lane in both directions on campus roadways. See PP 4.7-7(a)	Part of Project	See 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. *(Category: PS; Responsible Unit: AE, PP; Timing: O, C; Compliance: CD)*	Part of Project Ongoing oversight through design and construction	The campus will provide alternative routes.
PP 4.14-8 Maintain adequate access for emergency vehicles during construction. See PP 4.7-7(b)	Part of Project Ongoing Campus-Wide Program	See PP 4.7-7(b)
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. *(Category: AM, PS; Responsible Unit: CRM, AE; Timing: P, E; Compliance: AP)*	Not Applicable	
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. *(Category: SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Part of Project Ongoing Campus-Wide Program	See PP 4.3-1
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. *(Category: SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
TRANSPORTATION AND TRAFFIC (continued)		
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. *(Category: SL; Responsible Unit: TAPS; Timing: O; Compliance: AP)*	Part of Project No further action required	The projects include pedestrian and bicycle improvements.
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. *(Category: SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
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. *(Category: PS; Responsible Unit: CRM, AE; Timing: P, D, E; Compliance: ED)*	Part of Project No further action required	Campus Physical Plant personnel have confirmed adequacy of the domestic system.
PP 4.15-1(b) Reduce the campus' impact on domestic water resources See PP 4.8-2(a)	Part of Project Ongoing Campus-Wide Program	See PP 4.8-2(a)
PP 4.15-1(c) The Campus shall promptly detect and repair leaks in water and irrigation pipes. See PP 4.8-2(b)	Ongoing Campus-Wide Program	See PP 4.8-2(b)
PP 4.15-1(d) Serve water at food service facilities only upon request. See PP 4.8-2(c)	Not Applicable	
PP 4.15-5 Comply with all applicable SARWQCB water quality requirements See PP 4.8-1	Part of Project	See PP 4.8-1
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. *(Category: SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	
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. *(Category: SL; Responsible Unit: CRM; Timing: O; Compliance: AP)*	Not Applicable	

2005 LRDP Planning Strategies, Programs and Practices and Mitigation Measures	Applicability	Notes
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. *(Category: AM, PS, SL; Responsible Unit: AE; Timing: P, D, E, O; Compliance: AP, ED)*	Part of Project No further action required	The proposed projects include all applicable GHG reduction measures and would therefore not conflict with the UCR CAP

APPENDIX 4.2

Air Quality Calculations

Annual Emissions

UCR Environmental Health & Safety

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	6.82	1000sqft
General Office Building	2.16	1000sqft
General Office Building	8.95	1000sqft
Research & Development	1.36	1000sqft
Unrefrigerated Warehouse-No Rail	8.34	1000sqft
Other Asphalt Surfaces	6.4	1000sqft
Parking Lot	40	Space

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Riverside Public Utilities
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Vehicle Trips -

Construction Phase - Schedule based on 18-month schedule provided by UCR.

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					
2012	0.04	0.34	0.20	0.00	0.07	0.02	0.09	0.04	0.02	0.06	0.00	30.77	30.77	0.00	0.00	30.85
2013	0.61	3.22	2.36	0.00	0.08	0.22	0.30	0.03	0.22	0.24	0.00	349.80	349.80	0.05	0.00	350.84
2014	0.73	0.86	0.65	0.00	0.01	0.06	0.07	0.00	0.06	0.06	0.00	93.75	93.75	0.01	0.00	94.01
Total	**1.38**	**4.42**	**3.21**	**0.00**	**0.16**	**0.30**	**0.46**	**0.07**	**0.30**	**0.36**	**0.00**	**474.32**	**474.32**	**0.06**	**0.00**	**475.70**

2.1 Overall Construction

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2012	0.04	0.34	0.20	0.00	0.03	0.02	0.05	0.02	0.02	0.03	0.00	30.77	30.77	0.00	0.00	30.85
2013	0.61	3.22	2.36	0.00	0.06	0.22	0.27	0.01	0.22	0.23	0.00	349.80	349.80	0.05	0.00	350.84
2014	0.73	0.86	0.65	0.00	0.01	0.06	0.07	0.00	0.06	0.06	0.00	93.75	93.75	0.01	0.00	94.01
Total	**1.38**	**4.42**	**3.21**	**0.00**	**0.10**	**0.30**	**0.39**	**0.03**	**0.30**	**0.32**	**0.00**	**474.32**	**474.32**	**0.06**	**0.00**	**475.70**

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	0.24	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
Energy	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	148.47	148.47	0.00	0.00	148.94
Mobile	0.13	0.34	1.42	0.00	0.24	0.02	0.26	0.01	0.02	0.02	0.00	208.27	208.27	0.01	0.00	208.46
Waste						0.00	0.00		0.00	0.00	21.69	0.00	21.69	1.28	0.00	48.60
Water						0.00	0.00		0.00	0.00	0.00	370.44	370.44	1.38	0.04	410.83
Total	**0.37**	**0.35**	**1.43**	**0.00**	**0.24**	**0.02**	**0.26**	**0.01**	**0.02**	**0.02**	**21.69**	**727.18**	**748.87**	**2.67**	**0.04**	**816.83**

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	0.24	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
Energy	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	138.24	138.24	0.00	0.00	138.67
Mobile	0.13	0.34	1.42	0.00	0.24	0.02	0.26	0.01	0.02	0.02	0.00	208.27	208.27	0.01	0.00	208.46
Waste						0.00	0.00		0.00	0.00	5.42	0.00	5.42	0.32	0.00	12.15
Water						0.00	0.00		0.00	0.00	0.00	325.48	325.48	1.21	0.03	360.89
Total	**0.37**	**0.35**	**1.42**	**0.00**	**0.24**	**0.02**	**0.26**	**0.01**	**0.02**	**0.02**	**5.42**	**671.99**	**677.41**	**1.54**	**0.03**	**720.17**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2012

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	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.79	1.79	0.00	0.00	1.79
Total	**0.00**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.79**	**1.79**	**0.00**	**0.00**	**1.79**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.06
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.06**	**0.00**	**0.00**	**0.06**

3.2 Demolition - 2012

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	0.00	0.02	0.01	0.00		0.00	0.00		0.00	0.00	0.00	1.79	1.79	0.00	0.00	1.79
Total	**0.00**	**0.02**	**0.01**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**1.79**	**1.79**	**0.00**	**0.00**	**1.79**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06	0.00	0.00	0.06
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.06**	**0.06**	**0.00**	**0.00**	**0.06**

3.3 Site Preparation - 2012

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					0.03	0.00	0.03	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.17	0.10	0.00		0.01	0.01		0.01	0.01	0.00	14.75	14.75	0.00	0.00	14.79
Total	**0.02**	**0.17**	**0.10**	**0.00**	**0.03**	**0.01**	**0.04**	**0.01**	**0.01**	**0.02**	**0.00**	**14.75**	**14.75**	**0.00**	**0.00**	**14.79**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.00	0.00	0.36
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.36**	**0.36**	**0.00**	**0.00**	**0.36**

3.3 Site Preparation - 2012

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					0.01	0.00	0.01	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.17	0.10	0.00		0.01	0.01		0.01	0.01	0.00	14.75	14.75	0.00	0.00	14.79
Total	**0.02**	**0.17**	**0.10**	**0.00**	**0.01**	**0.01**	**0.02**	**0.01**	**0.01**	**0.02**	**0.00**	**14.75**	**14.75**	**0.00**	**0.00**	**14.79**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.36	0.00	0.00	0.36
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.36**	**0.36**	**0.00**	**0.00**	**0.36**

3.4 Grading - 2012

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					0.05	0.00	0.05	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.15	0.09	0.00		0.01	0.01		0.01	0.01	0.00	13.42	13.42	0.00	0.00	13.45
Total	**0.02**	**0.15**	**0.09**	**0.00**	**0.05**	**0.01**	**0.06**	**0.02**	**0.01**	**0.03**	**0.00**	**13.42**	**13.42**	**0.00**	**0.00**	**13.45**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.4 Grading - 2012

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					0.02	0.00	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.02	0.15	0.09	0.00		0.01	0.01		0.01	0.01	0.00	13.42	13.42	0.00	0.00	13.45
Total	**0.02**	**0.15**	**0.09**	**0.00**	**0.02**	**0.01**	**0.03**	**0.01**	**0.01**	**0.02**	**0.00**	**13.42**	**13.42**	**0.00**	**0.00**	**13.45**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.40	0.00	0.00	0.40
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.40**	**0.00**	**0.00**	**0.40**

3.4 Grading - 2013

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					0.05	0.00	0.05	0.02	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.12	0.07	0.00		0.01	0.01		0.01	0.01	0.00	10.98	10.98	0.00	0.00	11.00
Total	**0.01**	**0.12**	**0.07**	**0.00**	**0.05**	**0.01**	**0.06**	**0.02**	**0.01**	**0.03**	**0.00**	**10.98**	**10.98**	**0.00**	**0.00**	**11.00**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32	0.00	0.00	0.32
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.32**	**0.32**	**0.00**	**0.00**	**0.32**

3.4 Grading - 2013

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					0.02	0.00	0.02	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.12	0.07	0.00		0.01	0.01		0.01	0.01	0.00	10.98	10.98	0.00	0.00	11.00
Total	**0.01**	**0.12**	**0.07**	**0.00**	**0.02**	**0.01**	**0.03**	**0.01**	**0.01**	**0.02**	**0.00**	**10.98**	**10.98**	**0.00**	**0.00**	**11.00**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32	0.00	0.00	0.32
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.32**	**0.32**	**0.00**	**0.00**	**0.32**

3.5 Building Construction - 2013

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	0.57	2.93	2.05	0.00		0.20	0.20		0.20	0.20	0.00	292.72	292.72	0.05	0.00	293.70
Total	**0.57**	**2.93**	**2.05**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**	**0.00**	**292.72**	**292.72**	**0.05**	**0.00**	**293.70**

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	0.00	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
Vendor	0.01	0.16	0.09	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.00	24.72	24.72	0.00	0.00	24.74
Worker	0.01	0.01	0.15	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	21.06	21.06	0.00	0.00	21.09
Total	**0.02**	**0.17**	**0.24**	**0.00**	**0.04**	**0.01**	**0.04**	**0.00**	**0.01**	**0.01**	**0.00**	**45.78**	**45.78**	**0.00**	**0.00**	**45.83**

3.5 Building Construction - 2013

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	0.57	2.93	2.05	0.00		0.20	0.20		0.20	0.20	0.00	292.72	292.72	0.05	0.00	293.70
Total	**0.57**	**2.93**	**2.05**	**0.00**		**0.20**	**0.20**		**0.20**	**0.20**	**0.00**	**292.72**	**292.72**	**0.05**	**0.00**	**293.70**

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	0.00	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
Vendor	0.01	0.16	0.09	0.00	0.01	0.01	0.01	0.00	0.01	0.01	0.00	24.72	24.72	0.00	0.00	24.74
Worker	0.01	0.01	0.15	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00	21.06	21.06	0.00	0.00	21.09
Total	**0.02**	**0.17**	**0.24**	**0.00**	**0.04**	**0.01**	**0.04**	**0.00**	**0.01**	**0.01**	**0.00**	**45.78**	**45.78**	**0.00**	**0.00**	**45.83**

3.5 Building Construction - 2014

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	0.10	0.52	0.38	0.00		0.03	0.03		0.03	0.03	0.00	55.76	55.76	0.01	0.00	55.93
Total	**0.10**	**0.52**	**0.38**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**55.76**	**55.76**	**0.01**	**0.00**	**55.93**

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	0.00	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
Vendor	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.72	4.72	0.00	0.00	4.73
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.94	3.94	0.00	0.00	3.94
Total	**0.00**	**0.03**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**8.66**	**8.66**	**0.00**	**0.00**	**8.67**

3.5 Building Construction - 2014

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	0.10	0.52	0.38	0.00		0.03	0.03		0.03	0.03	0.00	55.76	55.76	0.01	0.00	55.93
Total	**0.10**	**0.52**	**0.38**	**0.00**		**0.03**	**0.03**		**0.03**	**0.03**	**0.00**	**55.76**	**55.76**	**0.01**	**0.00**	**55.93**

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	0.00	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
Vendor	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.72	4.72	0.00	0.00	4.73
Worker	0.00	0.00	0.03	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	3.94	3.94	0.00	0.00	3.94
Total	**0.00**	**0.03**	**0.05**	**0.00**	**0.01**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**8.66**	**8.66**	**0.00**	**0.00**	**8.67**

3.6 Paving - 2014

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	0.04	0.26	0.18	0.00		0.02	0.02		0.02	0.02	0.00	23.30	23.30	0.00	0.00	23.37
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.04**	**0.26**	**0.18**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**23.30**	**23.30**	**0.00**	**0.00**	**23.37**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	1.68	0.00	0.00	1.69
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.68**	**1.68**	**0.00**	**0.00**	**1.69**

3.6 Paving - 2014

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	0.04	0.26	0.18	0.00		0.02	0.02		0.02	0.02	0.00	23.30	23.30	0.00	0.00	23.37
Paving	0.00					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.04**	**0.26**	**0.18**	**0.00**		**0.02**	**0.02**		**0.02**	**0.02**	**0.00**	**23.30**	**23.30**	**0.00**	**0.00**	**23.37**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.68	1.68	0.00	0.00	1.69
Total	**0.00**	**0.00**	**0.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1.68**	**1.68**	**0.00**	**0.00**	**1.69**

3.7 Architectural Coating - 2014

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	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	3.83	3.83	0.00	0.00	3.84
Total	**0.59**	**0.04**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.83**	**3.83**	**0.00**	**0.00**	**3.84**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.00	0.00	0.52
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.52**	**0.52**	**0.00**	**0.00**	**0.52**

3.7 Architectural Coating - 2014

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	0.58					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-Road	0.01	0.04	0.03	0.00		0.00	0.00		0.00	0.00	0.00	3.83	3.83	0.00	0.00	3.84
Total	**0.59**	**0.04**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**3.83**	**3.83**	**0.00**	**0.00**	**3.84**

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	0.00	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
Vendor	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
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.52	0.00	0.00	0.52
Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.52**	**0.52**	**0.00**	**0.00**	**0.52**

4.0 Mobile Detail

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	0.13	0.34	1.42	0.00	0.24	0.02	0.26	0.01	0.02	0.02	0.00	208.27	208.27	0.01	0.00	208.46
Unmitigated	0.13	0.34	1.42	0.00	0.24	0.02	0.26	0.01	0.02	0.02	0.00	208.27	208.27	0.01	0.00	208.46
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	75.09	16.16	6.68	135,973	135,973
General Office Building	23.78	5.12	2.12	43,065	43,065
General Office Building	98.54	21.21	8.77	178,439	178,439
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Research & Development	11.03	2.58	1.51	21,211	21,211
Unrefrigerated Warehouse-No Rail	21.60	21.60	21.60	63,063	63,063
Total	230.04	66.68	40.68	441,751	441,751

4.3 Trip Type Information

	Miles			Trip %		
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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive 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						0.00	0.00		0.00	0.00	0.00	132.50	132.50	0.00	0.00	132.89
Electricity Unmitigated						0.00	0.00		0.00	0.00	0.00	141.61	141.61	0.00	0.00	142.04
NaturalGas Mitigated	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00	0.00	5.74	5.74	0.00	0.00	5.78
NaturalGas Unmitigated	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00	0.00	6.86	6.86	0.00	0.00	6.90
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	tons/yr										MT/yr					
General Office Building	24893	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.33	1.33	0.00	0.00	1.34
General Office Building	32671.1	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.74	1.74	0.00	0.00	1.75
General Office Building	7884	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.42	0.42	0.00	0.00	0.42
Other Asphalt Surfaces	0	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
Parking Lot	0	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
Research & Development	45274.4	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	2.42	2.42	0.00	0.00	2.43
Unrefrigerated Warehouse-No Rail	17847.6	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.95	0.95	0.00	0.00	0.96
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**6.86**	**6.86**	**0.00**	**0.00**	**6.90**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	tons/yr										MT/yr					
General Office Building	6307.2	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.34	0.34	0.00	0.00	0.34
General Office Building	19914.4	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.06	1.06	0.00	0.00	1.07
General Office Building	26136.9	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	1.39	1.39	0.00	0.00	1.40
Other Asphalt Surfaces	0	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
Parking Lot	0	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
Research & Development	40878.9	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	2.18	2.18	0.00	0.00	2.19
Unrefrigerated Warehouse-No Rail	14328.1	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00	0.00	0.76	0.76	0.00	0.00	0.77
Total		**0.00**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**	**0.00**	**5.73**	**5.73**	**0.00**	**0.00**	**5.77**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	23090.4					14.10	0.00	0.00	14.14
General Office Building	72905.8					44.52	0.00	0.00	44.65
General Office Building	95686.2					58.43	0.00	0.00	58.60
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Parking Lot	0					0.00	0.00	0.00	0.00
Research & Development	15055.2					9.19	0.00	0.00	9.22
Unrefrigerated Warehouse-No Rail	25186.8					15.38	0.00	0.00	15.43
Total						**141.62**	**0.00**	**0.00**	**142.04**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	kWh	tons/yr				MT/yr			
General Office Building	21470.4					13.11	0.00	0.00	13.15
General Office Building	67790.8					41.39	0.00	0.00	41.52
General Office Building	88972.9					54.33	0.00	0.00	54.49
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Parking Lot	0					0.00	0.00	0.00	0.00
Research & Development	14323.5					8.75	0.00	0.00	8.77
Unrefrigerated Warehouse-No Rail	24436.2					14.92	0.00	0.00	14.97
Total						**132.50**	**0.00**	**0.00**	**132.90**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive 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	0.24	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
Unmitigated	0.24	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
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.06					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.18					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**0.24**	**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**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.06					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.18					0.00	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	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
Total	**0.24**	**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**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr				MT/yr			
Mitigated					325.48	1.21	0.03	360.89
Unmitigated					370.44	1.38	0.04	410.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	3.18677 / 1.95318					38.62	0.10	0.00	41.53
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Research & Development	0.668704 / 0					5.32	0.02	0.00	5.93
Unrefrigerated Warehouse-No Rail	41.0073 / 0					326.50	1.26	0.03	363.38
Total						**370.44**	**1.38**	**0.03**	**410.84**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	tons/yr				MT/yr			
General Office Building	2.79288 / 1.83404					34.68	0.09	0.00	37.23
Other Asphalt Surfaces	0 / 0					0.00	0.00	0.00	0.00
Parking Lot	0 / 0					0.00	0.00	0.00	0.00
Research & Development	0.586052 / 0					4.67	0.02	0.00	5.19
Unrefrigerated Warehouse-No Rail	35.9388 / 0					286.14	1.10	0.03	318.46
Total						**325.49**	**1.21**	**0.03**	**360.88**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
	tons/yr				MT/yr			
Mitigated					5.42	0.32	0.00	12.15
Unmitigated					21.69	1.28	0.00	48.60
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	16.67					3.38	0.20	0.00	7.58
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Parking Lot	0					0.00	0.00	0.00	0.00
Research & Development	0.1					0.02	0.00	0.00	0.05
Unrefrigerated Warehouse-No Rail	90.07					18.28	1.08	0.00	40.97
Total						**21.68**	**1.28**	**0.00**	**48.60**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	ROG	NOx	CO	SO2	Total CO2	CH4	N2O	CO2e
Land Use	tons	tons/yr				MT/yr			
General Office Building	4.1675					0.85	0.05	0.00	1.90
Other Asphalt Surfaces	0					0.00	0.00	0.00	0.00
Parking Lot	0					0.00	0.00	0.00	0.00
Research & Development	0.025					0.01	0.00	0.00	0.01
Unrefrigerated Warehouse-No Rail	22.5175					4.57	0.27	0.00	10.24
Total						**5.43**	**0.32**	**0.00**	**12.15**

9.0 Vegetation

Summer Emissions

UCR Environmental Health & Safety

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	6.82	1000sqft
General Office Building	2.16	1000sqft
General Office Building	8.95	1000sqft
Research & Development	1.36	1000sqft
Unrefrigerated Warehouse-No Rail	8.34	1000sqft
Other Asphalt Surfaces	6.4	1000sqft
Parking Lot	40	Space

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Riverside Public Utilities
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Vehicle Trips -

Construction Phase - Schedule based on 18-month schedule provided by UCR.

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					
2012	9.71	74.58	45.45	0.07	5.65	4.25	9.90	2.91	4.25	7.16	0.00	7,425.16	0.00	0.87	0.00	7,443.47
2013	4.74	26.29	18.19	0.03	4.76	1.66	6.09	2.49	1.66	3.81	0.00	2,978.05	0.00	0.42	0.00	2,986.94
2014	39.08	23.01	17.67	0.03	0.32	1.50	1.82	0.01	1.50	1.52	0.00	2,975.23	0.00	0.39	0.00	2,983.36
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	9.71	74.58	45.45	0.07	2.37	4.25	6.62	1.14	4.25	5.39	0.00	7,425.16	0.00	0.87	0.00	7,443.47
2013	4.74	26.29	18.19	0.03	1.92	1.66	3.25	0.97	1.66	2.30	0.00	2,978.05	0.00	0.42	0.00	2,986.94
2014	39.08	23.01	17.67	0.03	0.32	1.50	1.82	0.01	1.50	1.52	0.00	2,975.23	0.00	0.39	0.00	2,983.36
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.03	0.03	0.00		0.00	0.00		0.00	0.00		41.44		0.00	0.00	41.69
Mobile	0.99	2.39	10.37	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,712.68		0.07		1,714.21
Total	**2.30**	**2.42**	**10.40**	**0.02**	**1.86**	**0.11**	**1.97**	**0.06**	**0.11**	**0.17**		**1,754.12**		**0.07**	**0.00**	**1,755.90**

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	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00		34.67		0.00	0.00	34.88
Mobile	0.99	2.39	10.37	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,712.68		0.07		1,714.21
Total	**2.30**	**2.42**	**10.39**	**0.02**	**1.86**	**0.11**	**1.97**	**0.06**	**0.11**	**0.17**		**1,747.35**		**0.07**	**0.00**	**1,749.09**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2012

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	5.41	40.86	24.57	0.04		2.51	2.51		2.51	2.51		3,946.47		0.48		3,956.64
Total	**5.41**	**40.86**	**24.57**	**0.04**		**2.51**	**2.51**		**2.51**	**2.51**		**3,946.47**		**0.48**		**3,956.64**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.08	0.95	0.00	0.17	0.01	0.18	0.01	0.01	0.01		139.47		0.01		139.65
Total	**0.07**	**0.08**	**0.95**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**139.47**		**0.01**		**139.65**

3.2 Demolition - 2012

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	5.41	40.86	24.57	0.04		2.51	2.51		2.51	2.51	0.00	3,946.47		0.48		3,956.64
Total	**5.41**	**40.86**	**24.57**	**0.04**		**2.51**	**2.51**		**2.51**	**2.51**	**0.00**	**3,946.47**		**0.48**		**3,956.64**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.08	0.95	0.00	0.17	0.01	0.18	0.01	0.01	0.01		139.47		0.01		139.65
Total	**0.07**	**0.08**	**0.95**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**139.47**		**0.01**		**139.65**

3.3 Site Preparation - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.38	0.00	5.38	2.90	0.00	2.90						0.00
Off-Road	4.18	33.58	19.35	0.03		1.74	1.74		1.74	1.74		3,253.39		0.37		3,261.25
Total	**4.18**	**33.58**	**19.35**	**0.03**	**5.38**	**1.74**	**7.12**	**2.90**	**1.74**	**4.64**		**3,253.39**		**0.37**		**3,261.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.58	0.00	0.10	0.00	0.11	0.00	0.00	0.01		85.83		0.01		85.94
Total	**0.04**	**0.05**	**0.58**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**85.83**		**0.01**		**85.94**

3.3 Site Preparation - 2012

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					2.10	0.00	2.10	1.13	0.00	1.13						0.00
Off-Road	4.18	33.58	19.35	0.03		1.74	1.74		1.74	1.74	0.00	3,253.39		0.37		3,261.25
Total	**4.18**	**33.58**	**19.35**	**0.03**	**2.10**	**1.74**	**3.84**	**1.13**	**1.74**	**2.87**	**0.00**	**3,253.39**		**0.37**		**3,261.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.58	0.00	0.10	0.00	0.11	0.00	0.00	0.01		85.83		0.01		85.94
Total	**0.04**	**0.05**	**0.58**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**85.83**		**0.01**		**85.94**

3.4 Grading - 2012

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					4.66	0.00	4.66	2.48	0.00	2.48						0.00
Off-Road	3.46	27.83	16.01	0.03		1.44	1.44		1.44	1.44		2,689.97		0.31		2,696.48
Total	**3.46**	**27.83**	**16.01**	**0.03**	**4.66**	**1.44**	**6.10**	**2.48**	**1.44**	**3.92**		**2,689.97**		**0.31**		**2,696.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.58	0.00	0.10	0.00	0.11	0.00	0.00	0.01		85.83		0.01		85.94
Total	**0.04**	**0.05**	**0.58**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**85.83**		**0.01**		**85.94**

3.4 Grading - 2012

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					1.82	0.00	1.82	0.97	0.00	0.97						0.00
Off-Road	3.46	27.83	16.01	0.03		1.44	1.44		1.44	1.44	0.00	2,689.97		0.31		2,696.48
Total	**3.46**	**27.83**	**16.01**	**0.03**	**1.82**	**1.44**	**3.26**	**0.97**	**1.44**	**2.41**	**0.00**	**2,689.97**		**0.31**		**2,696.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.58	0.00	0.10	0.00	0.11	0.00	0.00	0.01		85.83		0.01		85.94
Total	**0.04**	**0.05**	**0.58**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**85.83**		**0.01**		**85.94**

3.4 Grading - 2013

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					4.66	0.00	4.66	2.48	0.00	2.48						0.00
Off-Road	3.28	26.25	15.38	0.03		1.32	1.32		1.32	1.32		2,689.97		0.29		2,696.15
Total	**3.28**	**26.25**	**15.38**	**0.03**	**4.66**	**1.32**	**5.98**	**2.48**	**1.32**	**3.80**		**2,689.97**		**0.29**		**2,696.15**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.53	0.00	0.10	0.00	0.11	0.00	0.00	0.01		83.95		0.00		84.05
Total	**0.04**	**0.05**	**0.53**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**83.95**		**0.00**		**84.05**

3.4 Grading - 2013

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					1.82	0.00	1.82	0.97	0.00	0.97						0.00
Off-Road	3.28	26.25	15.38	0.03		1.32	1.32		1.32	1.32	0.00	2,689.97		0.29		2,696.15
Total	**3.28**	**26.25**	**15.38**	**0.03**	**1.82**	**1.32**	**3.14**	**0.97**	**1.32**	**2.29**	**0.00**	**2,689.97**		**0.29**		**2,696.15**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.53	0.00	0.10	0.00	0.11	0.00	0.00	0.01		83.95		0.00		84.05
Total	**0.04**	**0.05**	**0.53**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**83.95**		**0.00**		**84.05**

3.5 Building Construction - 2013

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	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61		2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**		**2,561.58**		**0.41**		**2,570.13**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.10	1.28	0.63	0.00	0.07	0.04	0.11	0.01	0.04	0.05		217.08		0.00		217.19
Worker	0.09	0.11	1.26	0.00	0.25	0.01	0.26	0.01	0.01	0.02		199.38		0.01		199.62
Total	**0.19**	**1.39**	**1.89**	**0.00**	**0.32**	**0.05**	**0.37**	**0.02**	**0.05**	**0.07**		**416.46**		**0.01**		**416.81**

3.5 Building Construction - 2013

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	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61	0.00	2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**	**0.00**	**2,561.58**		**0.41**		**2,570.13**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.10	1.28	0.63	0.00	0.07	0.04	0.11	0.01	0.04	0.05		217.08		0.00		217.19
Worker	0.09	0.11	1.26	0.00	0.25	0.01	0.26	0.01	0.01	0.02		199.38		0.01		199.62
Total	**0.19**	**1.39**	**1.89**	**0.00**	**0.32**	**0.05**	**0.37**	**0.02**	**0.05**	**0.07**		**416.46**		**0.01**		**416.81**

3.5 Building Construction - 2014

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	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46		2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**		**2,561.58**		**0.37**		**2,569.39**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.09	1.17	0.58	0.00	0.07	0.04	0.11	0.01	0.04	0.04		217.82		0.00		217.91
Worker	0.09	0.10	1.16	0.00	0.25	0.01	0.26	0.01	0.01	0.02		195.84		0.01		196.06
Total	**0.18**	**1.27**	**1.74**	**0.00**	**0.32**	**0.05**	**0.37**	**0.02**	**0.05**	**0.06**		**413.66**		**0.01**		**413.97**

3.5 Building Construction - 2014

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	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46	0.00	2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**2,561.58**		**0.37**		**2,569.39**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.09	1.17	0.58	0.00	0.07	0.04	0.11	0.01	0.04	0.04		217.82		0.00		217.91
Worker	0.09	0.10	1.16	0.00	0.25	0.01	0.26	0.01	0.01	0.02		195.84		0.01		196.06
Total	**0.18**	**1.27**	**1.74**	**0.00**	**0.32**	**0.05**	**0.37**	**0.02**	**0.05**	**0.06**		**413.66**		**0.01**		**413.97**

3.6 Paving - 2014

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	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46		1,712.73		0.25		1,718.00
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.84**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**		**1,712.73**		**0.25**		**1,718.00**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.06	0.07	0.79	0.00	0.17	0.01	0.18	0.01	0.01	0.01		134.00		0.01		134.15
Total	**0.06**	**0.07**	**0.79**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**134.00**		**0.01**		**134.15**

3.6 Paving - 2014

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	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46	0.00	1,712.73		0.25		1,718.00
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.84**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**1,712.73**		**0.25**		**1,718.00**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.06	0.07	0.79	0.00	0.17	0.01	0.18	0.01	0.01	0.01		134.00		0.01		134.15
Total	**0.06**	**0.07**	**0.79**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**134.00**		**0.01**		**134.15**

3.7 Architectural Coating - 2014

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	38.62					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24		281.19		0.04		282.03
Total	**39.07**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**		**281.19**		**0.04**		**282.03**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.02	0.02	0.24	0.00	0.05	0.00	0.05	0.00	0.00	0.00		41.23		0.00		41.28
Total	**0.02**	**0.02**	**0.24**	**0.00**	**0.05**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**		**41.23**		**0.00**		**41.28**

3.7 Architectural Coating - 2014

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	38.62					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24	0.00	281.19		0.04		282.03
Total	**39.07**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**281.19**		**0.04**		**282.03**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.02	0.02	0.24	0.00	0.05	0.00	0.05	0.00	0.00	0.00		41.23		0.00		41.28
Total	**0.02**	**0.02**	**0.24**	**0.00**	**0.05**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**		**41.23**		**0.00**		**41.28**

4.0 Mobile Detail

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	0.99	2.39	10.37	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,712.68		0.07		1,714.21
Unmitigated	0.99	2.39	10.37	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,712.68		0.07		1,714.21
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	75.09	16.16	6.68	135,973	135,973
General Office Building	23.78	5.12	2.12	43,065	43,065
General Office Building	98.54	21.21	8.77	178,439	178,439
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Research & Development	11.03	2.58	1.51	21,211	21,211
Unrefrigerated Warehouse-No Rail	21.60	21.60	21.60	63,063	63,063
Total	230.04	66.68	40.68	441,751	441,751

4.3 Trip Type Information

	Miles			Trip %		
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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00		34.67		0.00	0.00	34.88
NaturalGas Unmitigated	0.00	0.03	0.03	0.00		0.00	0.00		0.00	0.00		41.44		0.00	0.00	41.69
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
General Office Building	21.6	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		2.54		0.00	0.00	2.56
General Office Building	68.2	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		8.02		0.00	0.00	8.07
General Office Building	89.51	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		10.53		0.00	0.00	10.59
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Research & Development	124.039	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		14.59		0.00	0.00	14.68
Unrefrigerated Warehouse-No Rail	48.8975	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		5.75		0.00	0.00	5.79
Total		**0.00**	**0.03**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**41.43**		**0.00**	**0.00**	**41.69**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Office Building	0.01728	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		2.03		0.00	0.00	2.05
General Office Building	0.05456	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.42		0.00	0.00	6.46
General Office Building	0.071608	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		8.42		0.00	0.00	8.48
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Research & Development	0.111997	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		13.18		0.00	0.00	13.26
Unrefrigerated Warehouse-No Rail	0.0392551	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		4.62		0.00	0.00	4.65
Total		**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**34.67**		**0.00**	**0.00**	**34.90**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.32					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.99					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.32					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.99					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Vegetation

Winter Emissions

UCR Environmental Health & Safety

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric
General Office Building	6.82	1000sqft
General Office Building	2.16	1000sqft
General Office Building	8.95	1000sqft
Research & Development	1.36	1000sqft
Unrefrigerated Warehouse-No Rail	8.34	1000sqft
Other Asphalt Surfaces	6.4	1000sqft
Parking Lot	40	Space

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Utility Company**	Riverside Public Utilities
Climate Zone	10	**Precipitation Freq (Days)**	28		

1.3 User Entered Comments

Project Characteristics -

Vehicle Trips -

Construction Phase - Schedule based on 18-month schedule provided by UCR.

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					
2012	9.70	74.59	45.26	0.07	5.65	4.25	9.90	2.91	4.25	7.16	0.00	7,400.41	0.00	0.87	0.00	7,418.70
2013	4.74	26.30	18.11	0.03	4.76	1.66	6.09	2.49	1.66	3.81	0.00	2,954.21	0.00	0.42	0.00	2,963.09
2014	39.08	23.06	17.60	0.03	0.32	1.50	1.82	0.01	1.50	1.52	0.00	2,951.71	0.00	0.39	0.00	2,959.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2012	9.70	74.59	45.26	0.07	2.37	4.25	6.62	1.14	4.25	5.39	0.00	7,400.41	0.00	0.87	0.00	7,418.70
2013	4.74	26.30	18.11	0.03	1.92	1.66	3.25	0.97	1.66	2.30	0.00	2,954.21	0.00	0.42	0.00	2,963.09
2014	39.08	23.06	17.60	0.03	0.32	1.50	1.82	0.01	1.50	1.52	0.00	2,951.71	0.00	0.39	0.00	2,959.83
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.03	0.03	0.00		0.00	0.00		0.00	0.00		41.44		0.00	0.00	41.69
Mobile	0.98	2.51	9.71	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,558.07		0.07		1,559.45
Total	**2.29**	**2.54**	**9.74**	**0.02**	**1.86**	**0.11**	**1.97**	**0.06**	**0.11**	**0.17**		**1,599.51**		**0.07**	**0.00**	**1,601.14**

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	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Energy	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00		34.67		0.00	0.00	34.88
Mobile	0.98	2.51	9.71	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,558.07		0.07		1,559.45
Total	**2.29**	**2.54**	**9.73**	**0.02**	**1.86**	**0.11**	**1.97**	**0.06**	**0.11**	**0.17**		**1,592.74**		**0.07**	**0.00**	**1,594.33**

3.0 Construction Detail

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2012

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	5.41	40.86	24.57	0.04		2.51	2.51		2.51	2.51		3,946.47		0.48		3,956.64
Total	**5.41**	**40.86**	**24.57**	**0.04**		**2.51**	**2.51**		**2.51**	**2.51**		**3,946.47**		**0.48**		**3,956.64**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.09	0.83	0.00	0.17	0.01	0.18	0.01	0.01	0.01		124.15		0.01		124.31
Total	**0.07**	**0.09**	**0.83**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**124.15**		**0.01**		**124.31**

3.2 Demolition - 2012

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	5.41	40.86	24.57	0.04		2.51	2.51		2.51	2.51	0.00	3,946.47		0.48		3,956.64
Total	**5.41**	**40.86**	**24.57**	**0.04**		**2.51**	**2.51**		**2.51**	**2.51**	**0.00**	**3,946.47**		**0.48**		**3,956.64**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.07	0.09	0.83	0.00	0.17	0.01	0.18	0.01	0.01	0.01		124.15		0.01		124.31
Total	**0.07**	**0.09**	**0.83**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**124.15**		**0.01**		**124.31**

3.3 Site Preparation - 2012

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.38	0.00	5.38	2.90	0.00	2.90						0.00
Off-Road	4.18	33.58	19.35	0.03		1.74	1.74		1.74	1.74		3,253.39		0.37		3,261.25
Total	**4.18**	**33.58**	**19.35**	**0.03**	**5.38**	**1.74**	**7.12**	**2.90**	**1.74**	**4.64**		**3,253.39**		**0.37**		**3,261.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.06	0.51	0.00	0.10	0.00	0.11	0.00	0.00	0.01		76.40		0.00		76.50
Total	**0.04**	**0.06**	**0.51**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**76.40**		**0.00**		**76.50**

3.3 Site Preparation - 2012

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					2.10	0.00	2.10	1.13	0.00	1.13						0.00
Off-Road	4.18	33.58	19.35	0.03		1.74	1.74		1.74	1.74	0.00	3,253.39		0.37		3,261.25
Total	**4.18**	**33.58**	**19.35**	**0.03**	**2.10**	**1.74**	**3.84**	**1.13**	**1.74**	**2.87**	**0.00**	**3,253.39**		**0.37**		**3,261.25**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.06	0.51	0.00	0.10	0.00	0.11	0.00	0.00	0.01		76.40		0.00		76.50
Total	**0.04**	**0.06**	**0.51**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**76.40**		**0.00**		**76.50**

3.4 Grading - 2012

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					4.66	0.00	4.66	2.48	0.00	2.48						0.00
Off-Road	3.46	27.83	16.01	0.03		1.44	1.44		1.44	1.44		2,689.97		0.31		2,696.48
Total	**3.46**	**27.83**	**16.01**	**0.03**	**4.66**	**1.44**	**6.10**	**2.48**	**1.44**	**3.92**		**2,689.97**		**0.31**		**2,696.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.06	0.51	0.00	0.10	0.00	0.11	0.00	0.00	0.01		76.40		0.00		76.50
Total	**0.04**	**0.06**	**0.51**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**76.40**		**0.00**		**76.50**

3.4 Grading - 2012

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					1.82	0.00	1.82	0.97	0.00	0.97						0.00
Off-Road	3.46	27.83	16.01	0.03		1.44	1.44		1.44	1.44	0.00	2,689.97		0.31		2,696.48
Total	**3.46**	**27.83**	**16.01**	**0.03**	**1.82**	**1.44**	**3.26**	**0.97**	**1.44**	**2.41**	**0.00**	**2,689.97**		**0.31**		**2,696.48**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.06	0.51	0.00	0.10	0.00	0.11	0.00	0.00	0.01		76.40		0.00		76.50
Total	**0.04**	**0.06**	**0.51**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**76.40**		**0.00**		**76.50**

3.4 Grading - 2013

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					4.66	0.00	4.66	2.48	0.00	2.48						0.00
Off-Road	3.28	26.25	15.38	0.03		1.32	1.32		1.32	1.32		2,689.97		0.29		2,696.15
Total	**3.28**	**26.25**	**15.38**	**0.03**	**4.66**	**1.32**	**5.98**	**2.48**	**1.32**	**3.80**		**2,689.97**		**0.29**		**2,696.15**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.47	0.00	0.10	0.00	0.11	0.00	0.00	0.01		74.71		0.00		74.81
Total	**0.04**	**0.05**	**0.47**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**74.71**		**0.00**		**74.81**

3.4 Grading - 2013

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					1.82	0.00	1.82	0.97	0.00	0.97						0.00
Off-Road	3.28	26.25	15.38	0.03		1.32	1.32		1.32	1.32	0.00	2,689.97		0.29		2,696.15
Total	**3.28**	**26.25**	**15.38**	**0.03**	**1.82**	**1.32**	**3.14**	**0.97**	**1.32**	**2.29**	**0.00**	**2,689.97**		**0.29**		**2,696.15**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.04	0.05	0.47	0.00	0.10	0.00	0.11	0.00	0.00	0.01		74.71		0.00		74.81
Total	**0.04**	**0.05**	**0.47**	**0.00**	**0.10**	**0.00**	**0.11**	**0.00**	**0.00**	**0.01**		**74.71**		**0.00**		**74.81**

3.5 Building Construction - 2013

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	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61		2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**		**2,561.58**		**0.41**		**2,570.13**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.11	1.33	0.71	0.00	0.07	0.04	0.12	0.01	0.04	0.05		215.19		0.01		215.29
Worker	0.09	0.12	1.11	0.00	0.25	0.01	0.26	0.01	0.01	0.02		177.44		0.01		177.66
Total	**0.20**	**1.45**	**1.82**	**0.00**	**0.32**	**0.05**	**0.38**	**0.02**	**0.05**	**0.07**		**392.63**		**0.02**		**392.95**

3.5 Building Construction - 2013

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	4.54	23.27	16.29	0.03		1.61	1.61		1.61	1.61	0.00	2,561.58		0.41		2,570.13
Total	**4.54**	**23.27**	**16.29**	**0.03**		**1.61**	**1.61**		**1.61**	**1.61**	**0.00**	**2,561.58**		**0.41**		**2,570.13**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.11	1.33	0.71	0.00	0.07	0.04	0.12	0.01	0.04	0.05		215.19		0.01		215.29
Worker	0.09	0.12	1.11	0.00	0.25	0.01	0.26	0.01	0.01	0.02		177.44		0.01		177.66
Total	**0.20**	**1.45**	**1.82**	**0.00**	**0.32**	**0.05**	**0.38**	**0.02**	**0.05**	**0.07**		**392.63**		**0.02**		**392.95**

3.5 Building Construction - 2014

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	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46		2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**		**2,561.58**		**0.37**		**2,569.39**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.10	1.21	0.67	0.00	0.07	0.04	0.11	0.01	0.04	0.04		215.89		0.00		215.99
Worker	0.08	0.11	1.01	0.00	0.25	0.01	0.26	0.01	0.01	0.02		174.25		0.01		174.45
Total	**0.18**	**1.32**	**1.68**	**0.00**	**0.32**	**0.05**	**0.37**	**0.02**	**0.05**	**0.06**		**390.14**		**0.01**		**390.44**

3.5 Building Construction - 2014

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	4.15	21.74	15.92	0.03		1.46	1.46		1.46	1.46	0.00	2,561.58		0.37		2,569.39
Total	**4.15**	**21.74**	**15.92**	**0.03**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**2,561.58**		**0.37**		**2,569.39**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	0.10	1.21	0.67	0.00	0.07	0.04	0.11	0.01	0.04	0.04		215.89		0.00		215.99
Worker	0.08	0.11	1.01	0.00	0.25	0.01	0.26	0.01	0.01	0.02		174.25		0.01		174.45
Total	**0.18**	**1.32**	**1.68**	**0.00**	**0.32**	**0.05**	**0.37**	**0.02**	**0.05**	**0.06**		**390.14**		**0.01**		**390.44**

3.6 Paving - 2014

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	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46		1,712.73		0.25		1,718.00
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.84**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**		**1,712.73**		**0.25**		**1,718.00**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.06	0.07	0.69	0.00	0.17	0.01	0.18	0.01	0.01	0.01		119.22		0.01		119.36
Total	**0.06**	**0.07**	**0.69**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**119.22**		**0.01**		**119.36**

3.6 Paving - 2014

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	2.80	17.55	11.98	0.02		1.46	1.46		1.46	1.46	0.00	1,712.73		0.25		1,718.00
Paving	0.04					0.00	0.00		0.00	0.00						0.00
Total	**2.84**	**17.55**	**11.98**	**0.02**		**1.46**	**1.46**		**1.46**	**1.46**	**0.00**	**1,712.73**		**0.25**		**1,718.00**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.06	0.07	0.69	0.00	0.17	0.01	0.18	0.01	0.01	0.01		119.22		0.01		119.36
Total	**0.06**	**0.07**	**0.69**	**0.00**	**0.17**	**0.01**	**0.18**	**0.01**	**0.01**	**0.01**		**119.22**		**0.01**		**119.36**

3.7 Architectural Coating - 2014

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	38.62					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24		281.19		0.04		282.03
Total	**39.07**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**		**281.19**		**0.04**		**282.03**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.02	0.02	0.21	0.00	0.05	0.00	0.05	0.00	0.00	0.00		36.68		0.00		36.73
Total	**0.02**	**0.02**	**0.21**	**0.00**	**0.05**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**		**36.68**		**0.00**		**36.73**

3.7 Architectural Coating - 2014

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	38.62					0.00	0.00		0.00	0.00						0.00
Off-Road	0.45	2.77	1.92	0.00		0.24	0.24		0.24	0.24	0.00	281.19		0.04		282.03
Total	**39.07**	**2.77**	**1.92**	**0.00**		**0.24**	**0.24**		**0.24**	**0.24**	**0.00**	**281.19**		**0.04**		**282.03**

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00		0.00
Vendor	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
Worker	0.02	0.02	0.21	0.00	0.05	0.00	0.05	0.00	0.00	0.00		36.68		0.00		36.73
Total	**0.02**	**0.02**	**0.21**	**0.00**	**0.05**	**0.00**	**0.05**	**0.00**	**0.00**	**0.00**		**36.68**		**0.00**		**36.73**

4.0 Mobile Detail

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	0.98	2.51	9.71	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,558.07		0.07		1,559.45
Unmitigated	0.98	2.51	9.71	0.02	1.86	0.11	1.97	0.06	0.11	0.17		1,558.07		0.07		1,559.45
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	75.09	16.16	6.68	135,973	135,973
General Office Building	23.78	5.12	2.12	43,065	43,065
General Office Building	98.54	21.21	8.77	178,439	178,439
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Research & Development	11.03	2.58	1.51	21,211	21,211
Unrefrigerated Warehouse-No Rail	21.60	21.60	21.60	63,063	63,063
Total	230.04	66.68	40.68	441,751	441,751

4.3 Trip Type Information

	Miles			Trip %		
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
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00
Other Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00
Research & Development	9.50	7.30	7.30	33.00	48.00	19.00
Unrefrigerated Warehouse-No Rail	9.50	7.30	7.30	59.00	0.00	41.00

5.0 Energy Detail

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.00	0.03	0.02	0.00		0.00	0.00		0.00	0.00		34.67		0.00	0.00	34.88
NaturalGas Unmitigated	0.00	0.03	0.03	0.00		0.00	0.00		0.00	0.00		41.44		0.00	0.00	41.69
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	lb/day										lb/day					
General Office Building	21.6	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		2.54		0.00	0.00	2.56
General Office Building	68.2	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		8.02		0.00	0.00	8.07
General Office Building	89.51	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		10.53		0.00	0.00	10.59
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Research & Development	124.039	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		14.59		0.00	0.00	14.68
Unrefrigerated Warehouse-No Rail	48.8975	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		5.75		0.00	0.00	5.79
Total		**0.00**	**0.03**	**0.03**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**41.43**		**0.00**	**0.00**	**41.69**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU	lb/day										lb/day					
General Office Building	0.01728	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		2.03		0.00	0.00	2.05
General Office Building	0.05456	0.00	0.01	0.00	0.00		0.00	0.00		0.00	0.00		6.42		0.00	0.00	6.46
General Office Building	0.071608	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		8.42		0.00	0.00	8.48
Other Asphalt Surfaces	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Parking Lot	0	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00	0.00	0.00
Research & Development	0.111997	0.00	0.01	0.01	0.00		0.00	0.00		0.00	0.00		13.18		0.00	0.00	13.26
Unrefrigerated Warehouse-No Rail	0.0392551	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		4.62		0.00	0.00	4.65
Total		**0.00**	**0.03**	**0.02**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**34.67**		**0.00**	**0.00**	**34.90**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

Use Low VOC Cleaning Supplies

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Unmitigated	1.31	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**

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	0.32					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.99					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

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	0.32					0.00	0.00		0.00	0.00						0.00
Consumer Products	0.99					0.00	0.00		0.00	0.00						0.00
Landscaping	0.00	0.00	0.00	0.00		0.00	0.00		0.00	0.00		0.00		0.00		0.00
Total	**1.31**	**0.00**	**0.00**	**0.00**		**0.00**	**0.00**		**0.00**	**0.00**		**0.00**		**0.00**		**0.00**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Toilet

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Vegetation

APPENDIX 4.8

Intersection Level of Service Calculations

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.94			0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	3450		1770	3472		1770	1751			1727	
Flt Permitted	0.95	1.00		0.95	1.00		0.58	1.00			0.85	
Satd. Flow (perm)	1770	3450		1770	3472		1088	1751			1490	
Volume (vph)	151	514	104	65	546	79	49	50	33	93	45	93
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	182	619	125	78	658	95	59	60	40	112	54	112
RTOR Reduction (vph)	0	23	0	0	15	0	0	17	0	0	17	0
Lane Group Flow (vph)	182	721	0	78	738	0	59	83	0	0	261	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.0	21.5		4.0	21.5		37.2	37.2			37.2	
Effective Green, g (s)	4.0	21.5		4.0	21.5		37.2	37.2			37.2	
Actuated g/C Ratio	0.05	0.29		0.05	0.29		0.50	0.50			0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	95	993		95	999		542	872			742	
v/s Ratio Prot	c0.10	0.21		0.04	c0.21			0.05				
v/s Ratio Perm							0.05				c0.18	
v/c Ratio	1.92	0.73		0.82	0.74		0.11	0.10			0.35	
Uniform Delay, d1	35.4	24.0		35.0	24.1		10.0	9.9			11.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	448.5	2.7		41.0	2.9		0.4	0.2			1.3	
Delay (s)	483.9	26.6		76.0	27.0		10.4	10.1			12.7	
Level of Service	F	C		E	C		B	B			B	
Approach Delay (s)		116.5			31.6			10.2			12.7	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM Average Control Delay	63.5	HCM Level of Service	E
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.97		1.00	0.98		1.00	0.94			0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	3450		1770	3472		1770	1751			1729	
Flt Permitted	0.95	1.00		0.95	1.00		0.58	1.00			0.83	
Satd. Flow (perm)	1770	3450		1770	3472		1074	1751			1469	
Volume (vph)	151	514	104	65	546	79	49	50	33	105	45	93
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	182	619	125	78	658	95	59	60	40	127	54	112
RTOR Reduction (vph)	0	23	0	0	15	0	0	17	0	0	16	0
Lane Group Flow (vph)	182	721	0	78	738	0	59	83	0	0	277	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.0	21.5		4.0	21.5		37.2	37.2			37.2	
Effective Green, g (s)	4.0	21.5		4.0	21.5		37.2	37.2			37.2	
Actuated g/C Ratio	0.05	0.29		0.05	0.29		0.50	0.50			0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	95	993		95	999		535	872			732	
v/s Ratio Prot	c0.10	0.21		0.04	c0.21			0.05				
v/s Ratio Perm							0.05				c0.19	
v/c Ratio	1.92	0.73		0.82	0.74		0.11	0.10			0.38	
Uniform Delay, d1	35.4	24.0		35.0	24.1		10.0	9.9			11.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	448.5	2.7		41.0	2.9		0.4	0.2			1.5	
Delay (s)	483.9	26.6		76.0	27.0		10.4	10.1			13.1	
Level of Service	F	C		E	C		B	B			B	
Approach Delay (s)		116.5			31.6			10.2			13.1	
Approach LOS		F			C			B			B	

Intersection Summary			
HCM Average Control Delay	63.2	HCM Level of Service	E
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.94			0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	3452		1770	3470		1770	1752			1727	
Flt Permitted	0.95	1.00		0.95	1.00		0.55	1.00			0.83	
Satd. Flow (perm)	1770	3452		1770	3470		1025	1752			1467	
Volume (vph)	175	574	113	74	616	92	55	58	38	108	52	108
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	211	692	136	89	742	111	66	70	46	130	63	130
RTOR Reduction (vph)	0	21	0	0	15	0	0	17	0	0	18	0
Lane Group Flow (vph)	211	807	0	89	838	0	66	99	0	0	305	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.0	24.5		4.0	24.5		37.2	37.2			37.2	
Effective Green, g (s)	4.0	24.5		4.0	24.5		37.2	37.2			37.2	
Actuated g/C Ratio	0.05	0.32		0.05	0.32		0.48	0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	91	1088		91	1094		491	839			702	
v/s Ratio Prot	c0.12	0.23		0.05	c0.24			0.06				
v/s Ratio Perm							0.06				c0.21	
v/c Ratio	2.32	0.74		0.98	0.77		0.13	0.12			0.43	
Uniform Delay, d1	36.8	23.8		36.8	24.0		11.3	11.2			13.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	626.4	2.8		86.2	3.3		0.6	0.3			2.0	
Delay (s)	663.2	26.5		123.0	27.3		11.8	11.5			15.3	
Level of Service	F	C		F	C		B	B			B	
Approach Delay (s)		155.8			36.3			11.6			15.3	
Approach LOS		F			D			B			B	

Intersection Summary			
HCM Average Control Delay	81.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	77.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00			1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.94			0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1770	3452		1770	3470		1770	1752			1729	
Flt Permitted	0.95	1.00		0.95	1.00		0.54	1.00			0.82	
Satd. Flow (perm)	1770	3452		1770	3470		1015	1752			1448	
Volume (vph)	175	574	113	74	616	92	55	58	38	120	52	108
Peak-hour factor, PHF	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	211	692	136	89	742	111	66	70	46	145	63	130
RTOR Reduction (vph)	0	21	0	0	15	0	0	17	0	0	17	0
Lane Group Flow (vph)	211	807	0	89	838	0	66	99	0	0	321	0
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.0	24.5		4.0	24.5		37.2	37.2			37.2	
Effective Green, g (s)	4.0	24.5		4.0	24.5		37.2	37.2			37.2	
Actuated g/C Ratio	0.05	0.32		0.05	0.32		0.48	0.48			0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	91	1088		91	1094		486	839			693	
v/s Ratio Prot	c0.12	0.23		0.05	c0.24			0.06				
v/s Ratio Perm							0.07				c0.22	
v/c Ratio	2.32	0.74		0.98	0.77		0.14	0.12			0.46	
Uniform Delay, d1	36.8	23.8		36.8	24.0		11.3	11.2			13.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00			1.00	
Incremental Delay, d2	626.4	2.8		86.2	3.3		0.6	0.3			2.2	
Delay (s)	663.2	26.5		123.0	27.3		11.9	11.5			15.8	
Level of Service	F	C		F	C		B	B			B	
Approach Delay (s)		155.8			36.3			11.6			15.8	
Approach LOS		F			D			B			B	

Intersection Summary			
HCM Average Control Delay	81.4	HCM Level of Service	F
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	77.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			