DRAFT

INITIAL STUDY

&

MITIGATED NEGATIVE DECLARATION

UCI EAST CAMPUS STUDENT HOUSING

PHASE III DEVELOPMENT PROJECT

Project No. 662022

University of California, Irvine
Office of Campus & Environmental Planning

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January 24, 2008

Mitigated Negative Declaration
for the
UCI East Campus Student Housing Phase III Development Project

Prepared for:
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January, 24 2008

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1.0 PROJECT DESCRIPTION

1.1 INTRODUCTION

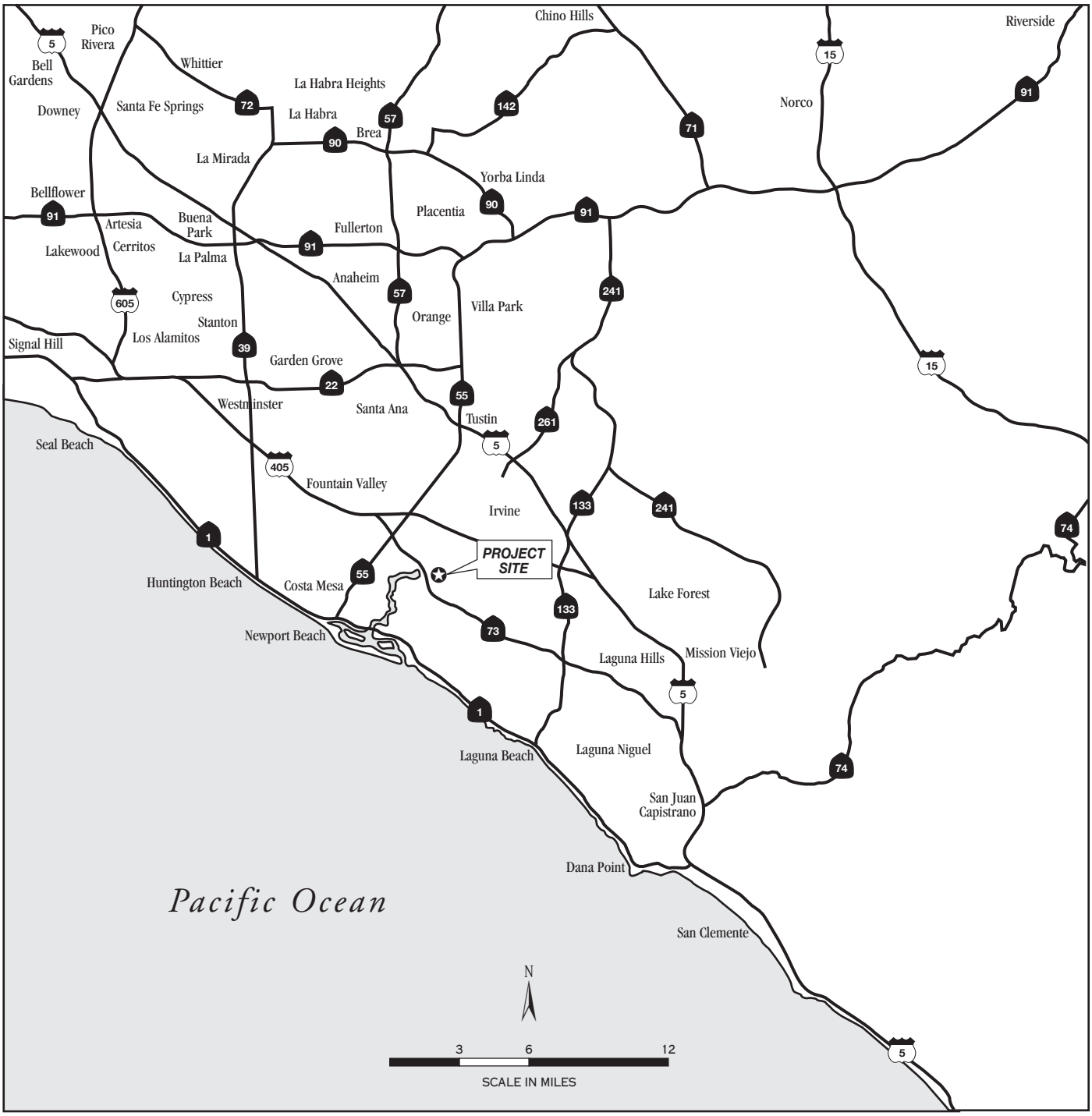
The University of California, Irvine ("UCI") is proposing to develop a third phase of student housing on its East Campus to include town homes and apartments, a variety of community amenities, and centralized parking facilities. (Two earlier phases, Vista del Campo and Vista del Campo Norte, were completed in 2004 and 2006, respectively.) The proposed East Campus Student Housing, Phase III, project ("Project") would further UCI goals to house a greater proportion of its enrollment on the campus; provide affordable, on-campus housing to attract students of the highest caliber; and make available a complete university experience to students.

1.2 PROJECT LOCATION

The proposed Project is located on the UCI campus which is situated in the southern portion of the City of Irvine, Orange County, California (see Figure 1). UCI is adjacent to the City of Newport Beach, and the City of Costa Mesa is located approximately 0.5 mile to the west of the campus. As shown in Figure 2, UCI is bounded generally by Campus Drive and Jamboree Road on the north, Culver Drive on the east, Bonita Canyon Drive on the south, and State Route 73 (SR-73) and MacArthur Boulevard on the west. Regional access is provided to UCI via Interstate 405 (I-405), State Route 55 (SR-55), and SR-73. Newport Coast Drive provides access to and from the beach communities to the south. The San Joaquin Hills Transportation Corridor (a toll road extension of SR-73) provides access to the campus from areas in southern Orange County.

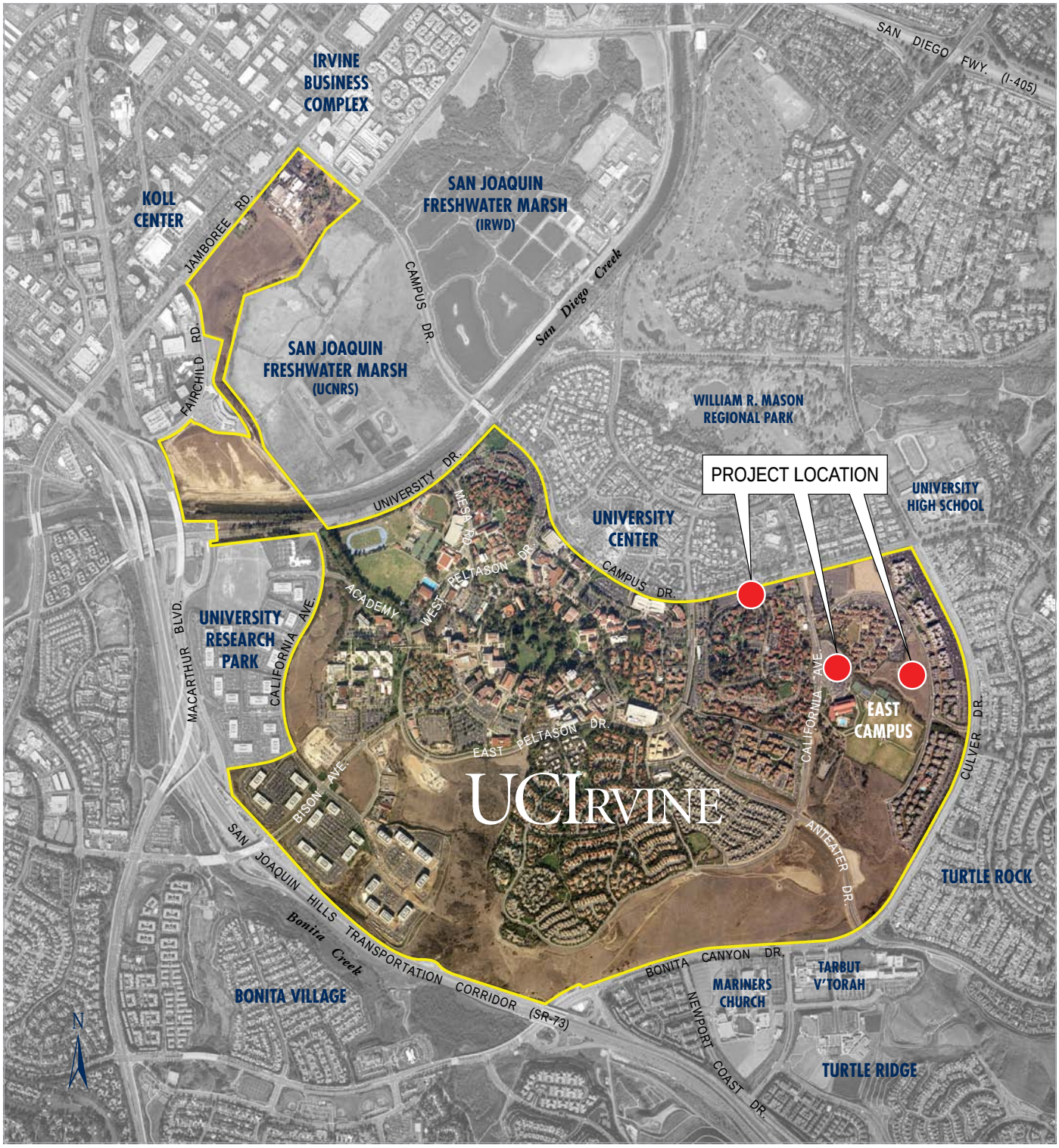
The proposed Project would accommodate approximately 1,760 student bed spaces in two separate communities on UCI's East Campus, with resident parking provided in a new approximately 1,700 space parking structure to be located centrally to the new housing. Containing about 430 acres, the East Campus sector accommodates a large student residential community comprised of a variety of housing and support facilities for undergraduate, graduate, professional, and student families. A key feature of this sector is the Anteater Recreation Center ("ARC"), a state-of-the-art sports and fitness facility which, together with its associated playfields, provides a social center for students living on the East Campus. Bicycle and pedestrian trails and an on-campus shuttle system link the East Campus to the academic core containing UCI's primary teaching and research facilities.

As shown in Figure 3, the proposed Project would be developed on three separate sites totaling approximately 21 acres. Site 1 (about four acres) currently serves as a commuter parking lot and is bordered by Campus Drive on the north, the Orange County headquarters of the American Heart Association on the east, Adobe Circle Road on the south, and another parking lot on the west. Site 2 (about 12 acres) is bordered by the Arroyo Vista student housing community on the north, Arroyo Drive on the east, and a deeply incised gully on the south that separates this parcel from the ARC playfields; this site is largely undeveloped, although it contains a portion of a parking lot serving Arroyo Vista as well as an approximately one-acre community garden used by residents and other UCI affiliates. Site 3 (about five acres) currently serves as a parking lot used primarily by patrons of the ARC and is bordered by California Avenue on the west, a gully on the north and east that separates this parcel from Arroyo Vista, and the ARC on the south. Photographs of existing conditions on the three sites may be found in Figure 4. Land uses surrounding the three sites are shown in Figure 3.



Source: University of California, Irvine, 2007.

Figure 1
Regional Location Map



Source: University of California, Irvine, 2007.

Figure 2
UCI Campus and Local Vicinity

Source: University of California, Irvine, 2007.

APPROXIMATE SITE AREA:

1. 4 Acres
2. 12 Acres
3. 5 Acres

Figure 3
Project Sites and Surrounding Land Uses

Site 1

Site 2

Site 3

Source: P&D Consultants, 2007.

Figure 4
Photographs of Existing Conditions

UCI has selected a private builder/operator to design, construct, and operate the proposed Project. UCI would retain ownership of the project sites and make them available to the builder/operator under a ground lease arrangement; requirements identified in this Initial Study/Mitigated Negative Declaration, including applicable mitigation measures, would be implemented by the builder/operator and UCI, as appropriate, and would become conditions of the ground lease. UCI would monitor the performance of all applicable mitigation measures.

1.3 PROJECT OBJECTIVES

The overall goal of the proposed Project is to provide additional student housing for UCI to achieve its teaching, research, and public service mission as a campus of the University of California. As described in UCI's 2007 Long Range Development Plan ("LRDP"), building a comprehensive university community includes creating high-quality residential neighborhoods for faculty, staff, and students. This includes housing 50 percent of student enrollment on campus, a goal identified in UCI's current academic plan. LRDP planning principles support the development of a strong community-in-residence at UCI to address the demand for affordable University housing and to limit campus impacts on the local housing market and traffic circulation system.

Specific project objectives include the following:

- To address current and projected future demand for on-campus undergraduate and graduate student housing;
- To provide quality affordable housing to UCI students;
- To make substantial progress toward achieving the strategic goal of housing 50 percent of UCI's enrollment on campus;
- To limit traffic impacts on neighboring communities and impacts on the local housing market by providing sufficient on-campus housing for UCI students;
- To continue to develop UCI's East Campus residential community as identified in the campus LRDP, especially in proximity to the Anteater Recreation Center that serves as the "heart" for the new community; and
- To support UCI's teaching mission by providing students with an academic residential experience on campus.

1.4 PROJECT CHARACTERISTICS

The proposed Project would consist of apartments and town homes to accommodate approximately 1,760 student residents, including community amenities and support facilities that will reflect varied elevations of not more than four stories in height. In addition, the proposed Project would include a central parking structure containing approximately 1,700 spaces to serve both residents and the ARC. Following are descriptions of proposed development on the three Project sites.

1.4.1 SITE 1

Site 1 would accommodate approximately 386 apartment units intended primarily for graduate students. The one- and two-bedroom units are designed to house about 562 students and will be fully furnished with connections for high-speed Internet access, telephone, and cable television. All units will include air conditioning.

As shown in Figure 5, the student community on Site 1 would consist of three residential buildings and a community center. Buildings are designed to be consistent with the existing campus architecture (see Figures 6 and 7). The four-story residential buildings will have interior, open-air corridors; post-tension foundations; and stucco exteriors. A community laundry room will serve each building. The graduate community center would include study rooms, a business center, a social lounge, a multi-purpose community room, offices, and a mail center. The site will also accommodate approximately 50 parking spaces (primarily for disabled residents and short-term parking), storage for about 150 bicycles, and a small maintenance storage area.

1.4.2 SITE 2

Site 2 would accommodate approximately 339 garden apartment and town home units intended primarily for undergraduate students. The two-, three-, and four-bedroom units are designed to house about 1,198 students and will be fully furnished with connections for high-speed Internet access, telephone, and cable television. All units will include air conditioning and a washer and dryer.

As shown in Figure 8, the student community on Site 2 would consist of 21 residential buildings, a community building, and a swimming pool. Buildings are designed to be consistent with the existing campus architecture (see Figure 9). The two- and three-story garden-style residential buildings will have modified slab-on-grade foundations, stucco exteriors, and clay tile roofs. The undergraduate community center would include study rooms, a game room, a social lounge with email terminals, offices, and a courtyard with a view of the pool. The site will also accommodate approximately 90 parking spaces (primarily for disabled residents and short-term parking) and 300 bicycle racks.

1.4.3 SITE 3

Site 3 would accommodate parking facilities to serve Project residents as well as the existing parking needs of the Anteater Recreation Center. As shown in Figures 10 and 11, approximately 1,700 parking spaces would be provided in a five- to seven-level structure, with an additional 315 spaces provided in a surface lot on the site. The parking structure is intended to provide storage parking for residents of the proposed housing units. A proposed maintenance shop (approximately 3,000 square feet) may be constructed to support the student community on Site 2 as well as facilities on Site 3.

1.4.4 OTHER IMPROVEMENTS

The proposed Project would also include various off-site improvements, such as:

- Intersection and lane enhancements on California Avenue;
- Landscape improvements, including streetscape along Campus Drive (Site 1) and California Avenue (Site 3); and
- Off-site utility extensions and storm drainage improvements.
- The approximately .75 acre community garden currently located on Site 2 would be relocated approximately one-half mile away to an approximately .75 acre site adjacent Anteater Drive and north of California Avenue (see Figure 3). The new garden site is currently an undeveloped area that has been previously graded and disturbed and does not contain any sensitive resources.

Source: University of California, Irvine, 2007.

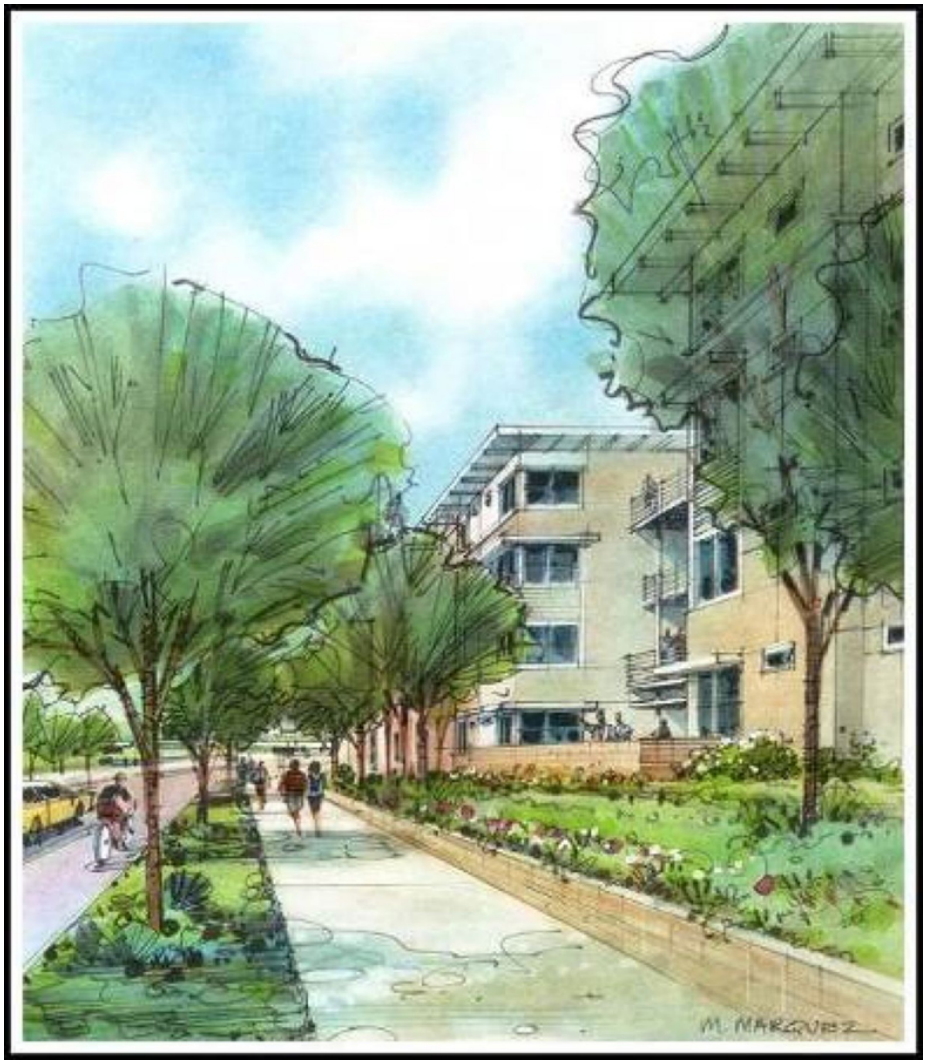
Figure 5
Site 1 – Preliminary Site Plan

Adobe Circle Road Elevation

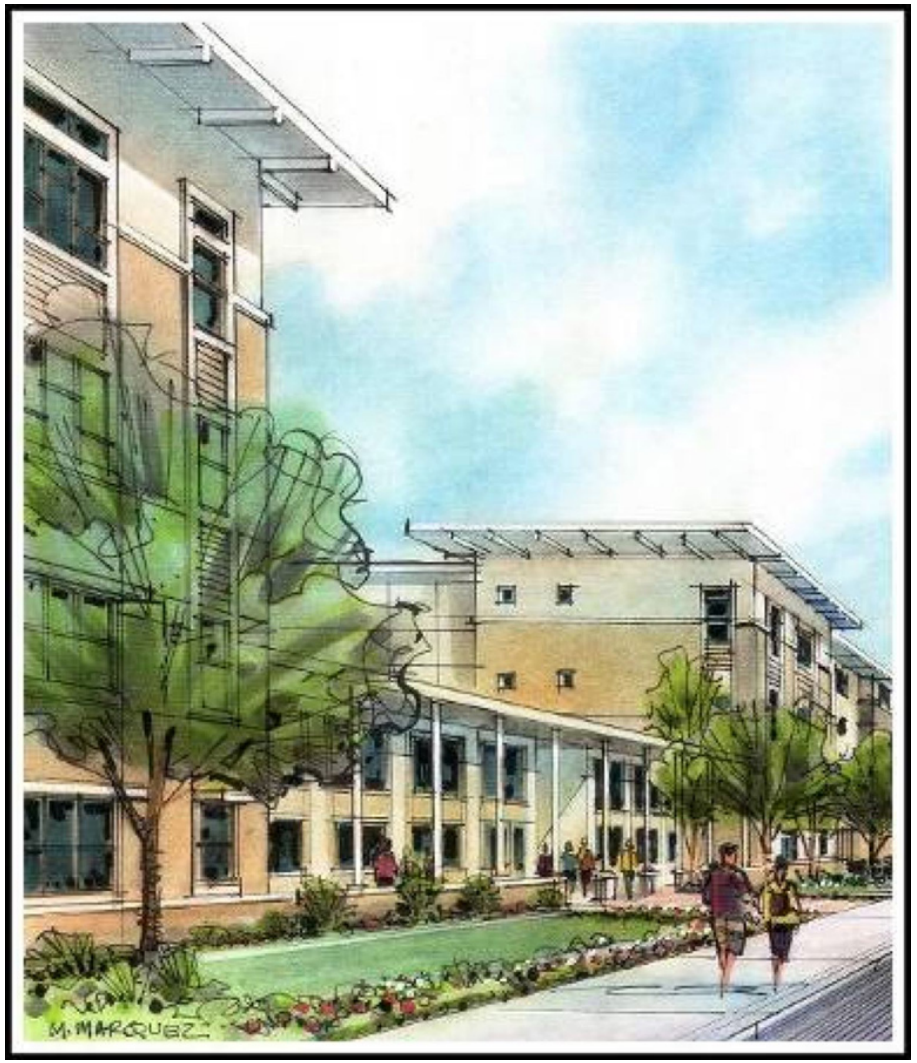
Campus Drive Elevation

Source: University of California, Irvine, 2007.

Figure 6
Site 1 – Elevations



View at Campus Drive



View at Adobe Circle Road

Source: University of California, Irvine, 2007.

Figure 7
Site 1 – Elevations

Source: University of California, Irvine, 2007.

Figure 8
Site 2 – Preliminary Site Plan

View from Arroyo Drive

Source: University of California, Irvine, 2007.

Figure 9
Site 2 – Elevations

LEGEND

1. Pedestrian/Bike Connection
2. Bus Waiting Area/Benches
3. ARC Pick-Up/Drop-Off Area
4. New Tree Allée
5. Shuttle Bus Turn-Around & Stop/Pick-Up
6. New Bike Corral
7. Existing Bike Trail
8. Riparian Area
9. New Screen Trees
10. New Parking Structure
11. Existing Surface Parking
12. 10-Foot Pedestrian/Bike Trail
13. Parking Structure Drive Aisle
14. New Maintenance Shop

Source: University of California, Irvine, 2007.

Figure 10
Site 3 – Preliminary Site Plan

View from California Avenue

View from the Anteater Recreation Center

Source: University of California, Irvine, 2007.

Figure 11
Site 3 – Elevations

1.5 CONSTRUCTION SCHEDULE

The proposed Project is scheduled to begin construction in spring 2008 with completion estimated by fall 2010. Table 1 includes a preliminary schedule of key construction activities.

TABLE 1
PRELIMINARY CONSTRUCTION SCHEDULE

CONSTRUCTION ACTIVITY	DURATION
Mobilization and site grubbing	3 weeks
Rough grading/soil export	3 months
Foundation forming and placement	6 months
Structural framing	9 months
Exterior skin	10 months
Interior build-out	9 months
Site improvements/landscaping	4 months

Source: University of California, Irvine, 2007.

1.6 PROJECT APPROVAL

1.6.1 UNIVERSITY OF CALIFORNIA

The University of California has sole discretionary approval authority for this project and, as such, is responsible for assessing the Project's environmental impacts in accordance with the California Environmental Quality Act ("CEQA") prior to project approval. The purpose of this Initial Study ("IS') document is to comply with CEQA by providing full public disclosure of the proposed project characteristics, its environmental impacts, and the measures to be taken to mitigate potentially significant impacts, and by providing a public review process to allow for comments. This report is intended to provide the information and analysis necessary to support adoption of a Mitigated Negative Declaration ("MND") and approve the proposed project design concepts.

1.6.2 SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD ("RWQCB")

Following project approval and prior to the commencement of any site clearing and grading, the University must obtain approval of a General Construction Permit from the RWQCB, pursuant to their authority under Section 402 of the federal Clean Water Act. This permit is required to comply with the implementing regulations for the National Pollutant Discharge Elimination System program, and would define the construction and post-construction best management practices that would prevent significant impacts to surface or groundwater quality because of site development.

1.7 CONSISTENCY WITH THE LRDP AND LRDP EIR

The 2007 LRDP identifies capacity to accommodate an enrollment of 37,000 students. To meet the 50 percent on-campus housing goal, the LRDP identifies a significant expansion of UCI's housing program. As of 2005-06, approximately 10,800 students live on campus; the 2007 LRDP accommodates an additional 6,800 bed spaces, an increase of approximately 63 percent. Furthermore, the 2007 LRDP designates that most of the new student housing would be developed on the East Campus.

The proposed Project would implement a portion of the LRDP by providing approximately 1,760 new student bed spaces in two separate communities (Site 1 and Site 2) on the East Campus. The 2007 LRDP land use designation of Sites 1 and 2 is *Student Housing*. The proposed parking to be developed on Site 3 is also consistent with the *Transportation* land use designation that is identified for this site in the 2007 LRDP. The existing community garden in Site 2 will be relocated to a site designated for *Open Space – General* land use; a community garden is consistent with primary uses permitted in this designation. The proposed Project is therefore consistent with the land use plan for the 2007 LRDP.

Although this IS/MND is an independent CEQA analysis, background and setting information applicable to the Project are based upon studies and analyses performed for the 2007 LRDP Environmental Impact Report ("EIR") (SCH No. 2006071024). Technical studies performed for the 2007 LRDP EIR are also relied upon for some of the impact analyses for the Project. This project implements the LRDP program and mitigation measures consistent with those included in the certified 2007 LRDP EIR have been incorporated as relevant. The 2007 LRDP EIR is hereby incorporated by reference into this IS/MND. All of the potential impacts and mitigation measures associated with the proposed Project are discussed in this IS/MND.

2.0 PROJECT INFORMATION

University of California

Campus: Irvine Project No. 662022

Project title:
UCI East Campus Housing Phase III Development Project

Lead Agency Name and Address:
University of California, Irvine
Office of Campus & Environmental Planning
750 University Tower
Irvine, California 92697-2325

Contact Person and Phone Number:
Alex S. Marks, AICP, Associate Planner, 949.824.8692

Project location:
The project site is located within the UCI campus, which is located in central/coastal Orange County in the southern portion of the City of Irvine. The UCI campus is bordered by the Cities of Irvine (north and east) and Newport Beach (south and west). More specifically, the proposed project is located within the UCI East Campus (three sites) near the intersection of Campus Drive and California Avenue.

Project Sponsor's Name and Address:
University of California, Irvine
Office of Campus & Environmental Planning
750 University Tower
Irvine, California 92697-2325

Custodian of the Administrative Record for this Project:
Alex S. Marks, AICP, Associate Planner
Office of Campus & Environmental Planning
750 University Tower
Irvine, California 92697-2325

3.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

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

☐ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Geology/Soils
☐ Hazards & Hazardous Materials	☐ Hydrology/Water Quality	☐ Land Use/Planning
☐ Mineral Resources	☐ Noise	☐ Population/Housing
☐ Public Services	☐ Recreation	☐ Transportation/Traffic
☐ Utilities/Service Systems	☐ Mandatory Findings of Significance	

3.1 DETERMINATION

On the basis of the initial evaluation that follows:

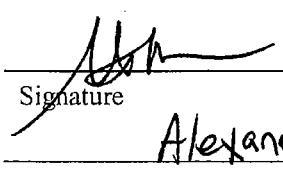
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION would be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION would be prepared.

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

☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. A TIERED ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental document is required. FINDINGS consistent with this determination would be prepared.



Signature — Date: 1/24/08

Alexander S. Marks — Date: 1/24/08

Printed Name

4.0 EVALUATION OF ENVIRONMENTAL IMPACTS

4.1 PURPOSE OF THE INITIAL STUDY

This IS evaluates the proposed project, the potential environmental effects associated with its construction, operation, and measures that may be taken to mitigate any potentially significant environmental effects identified in the IS. The analysis contained in this IS supports the conclusion that the proposed project, with mitigation incorporated, will not result in any potentially significant environmental effects. The IS/MND will be circulated for public review and comment prior to consideration of the IS/MND and any public comments and responses, and approval of the proposed project by The Regents. It is anticipated that The Regents will consider the proposed project for approval in the earlier part of 2008.

4.2 RESPONSE COLUMN HEADING DEFINITIONS

The next section of the IS contains a detailed checklist consisting of questions associated with a variety of environmental parameters. The questions form the basis for assessing the environmental consequences of the proposed project and determining whether such consequences could be significant and can be adequately addressed based on current information, or would require further analysis. Responses for each item are noted under one of four column headings, each defined as follows.

A. **Potentially Significant Impact** is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

B. **Less than Significant with Mitigation Incorporated** applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact."

C. **Less Than Significant Impact** applies where the project creates no significant impacts, only Less than Significant impacts.

D. **No Impact** applies where a project does not create an impact in that category.

4.3 ENVIRONMENTAL CHECKLIST

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS *Would the project:*				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☒	☐
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐
2. AGRICULTURE 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. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	☐	☐	☐	☒
3. AIR QUALITY *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?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4. BIOLOGICAL RESOURCES *Would the project:*				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and 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 local 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?	☐	☐	☐	☒
5. CULTURAL RESOURCES *Would the project:*				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §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?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
6. GEOLOGY AND SOILS *Would the project:*				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐
ii. Strong seismic ground shaking?	☐	☐	☒	☐
iii. Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv. Landslides?	☐	☐	☐	☒
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☒	☐
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), 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?	☐	☐	☐	☒
7. 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
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?	☐	☐	☐	☒
8. 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 storm water 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
i. Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j. Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒
9. LAND USE AND PLANNING *Would the project:*				
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the LRDP, general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒
10. 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?	☐	☐	☐	☒
11. 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?	☐	☒	☐	☐
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project 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?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
12. POPULATION AND HOUSING *Would the project:*				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
13. PUBLIC SERVICES				
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
14. 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?	☐	☐	☐	☒
15. TRANSPORTATION/TRAFFIC *Would the project:*				
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	☐	☒	☐	☐
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☒	☐	☐
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
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. Result in inadequate parking capacity?	☐	☐	☐	☒
g. Conflict with applicable policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☒	☐
16. 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?	☐	☐	☐	☒
17. MANDATORY FINDINGS OF SIGNIFICANCE				
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, 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 considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

5.0 DISCUSSION OF ENVIRONMENTAL IMPACTS

5.1 AESTHETICS

Would the project:

a. Have a substantial adverse effect on a scenic vista?

No impact. The proposed project is located within a highly urbanized area of the UCI East Campus, and the project site is not part of any scenic vista. The Project would also not be visible from Bonita Canyon Road. Therefore, no significant impacts to a scenic vista would occur and no mitigation measures would be required.

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. There are no structures on the project site and those that surround it do not have characteristics which would qualify them as a resource of historic significance. In addition, there are no rock outcroppings or any other unique and scenic natural features within or adjacent to the proposed project site. Implementation of the proposed project would require the removal of several ornamental trees and shrubs. These ornamental trees and shrubs are common elements and are not considered scenic resources. The removal and replacement of these trees and shrubs is not considered to be a significant impact. Therefore, impacts to scenic resources, including trees, rock outcroppings, and historic buildings would be less than significant and no mitigation measures would be required.

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The proposed project is located within a highly urbanized portion of the UCI East Campus. Site 1 is an existing paved parking lot on 3-acres. Site 2 is a mostly undeveloped 11-acre parcel that contains a community garden and a small paved parking lot. Site 3 is an existing paved parking lot on 3.5 acres. Specific visual features will be determined during the design/build phase of this project; however, the proposed project would be of similar height and scale as surrounding structures. Thus, pursuant to the University's current design practices, the building materials, architectural design elements, colors and geometric rhythms will be similar and/or complementary to the characteristics of the existing campus. Therefore, the proposed project would be visually compatible with the surrounding structural elements and would not degrade the existing visual character or quality of the site and its surroundings. Impacts would be considered less than significant and no mitigation measures would be required.

d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Less Than Significant Impact with Mitigation Incorporated. Implementation of the proposed project would contribute additional lighting within the project area. The project site is located within an urban area of the East Campus that presently generates similar lighting sources. Illumination is provided by a variety of building and pole-mounted outdoor lighting on the project site and its immediate vicinity. The proposed project will incorporate external lighting for visibility and safety; however, the project site is internal to the campus and is not located adjacent to housing or other land uses considered sensitive to night lighting. In addition, night lighting would generate illumination

within a confined area and would not create glare beyond the immediate project site. In accordance with LRDP EIR Mitigation Measure (MM) Aes-2A the project would be designed to minimize glare impacts. In addition, lighting design will be consistent with the Illuminating Engineering Society of North American Lighting Handbook (Ninth Edition) which provides standards for full cut-off lighting to reduce off-site lighting spill or light pollution. Additionally, in accordance with LRDP MM Aes-2B below an exterior lighting plan will be completed and implemented for the proposed project. Thus, impacts related to substantial light or glare would be considered less than significant.

Aes-2A Prior to project design approval for future projects that implement the 2007 LRDP, UCI shall ensure that the projects include design features to minimize glare impacts. These design features shall include use of non-reflective exterior surfaces and low-reflectance glass (e.g., double or triple glazing glass, high technology glass, low-E glass, or equivalent materials with low reflectivity) on all project surfaces that could produce glare.

Aes-2B Prior to approval of construction documents for future projects that implement the 2007 LRDP, UCI shall approve an exterior lighting plan for each project. In accordance with *UCI's Campus Standards and Design Criteria* for outdoor lighting, the plan shall include, but not be limited to, the following design features:

i. Full-cutoff lighting fixtures to direct lighting to the specific location intended for illumination (e.g., roads, walkways, or recreation fields) and to minimize stray light spillover into adjacent residential areas, sensitive biological habitat, and other light-sensitive receptors;
ii. Appropriate intensity of lighting to provide campus safety and security while minimizing light pollution and energy consumption; and Shielding of direct lighting within parking areas, parking structures, or roadways away from adjacent residential areas, sensitive biological habitat, and other light-sensitive receptors through site configuration, grading, lighting design, or barriers such as earthen berms, walls, or landscaping.

5.2 AGRICULTURE 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. Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

No Impact (a, b, and c). The project site is in a fully urbanized academic area of campus and is not located in an area designated as Farmland. The community garden is not considered Farmland and will be replaced in kind as part of this project. According to the State Department of Conservation, Division of Land Resources Protection, the entire UCI campus is designated as "Urban and Built-Up" or "Other Land," neither of which is considered Farmland. There is no Williamson Act contract affecting the project site or any adjacent site that potentially could be impacted by project

implementation. The proposed project would not introduce any changes that would result in conversion of Farmland. Therefore, no significant impacts to Farmland would occur and no mitigation measures would be required.

5.3 AIR QUALITY

Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant With Mitigation Incorporated. The proposed project was evaluated against screening thresholds established for construction and operational phase activities by the South Coast Air Quality Management District (SCAQMD)[1]. These construction and operational phase screening thresholds assist in the implementation of the Air Quality Management Plan's goal of bringing the air basin into compliance with state and federal ambient air quality standards by identifying which projects would result in significant levels of air pollution. Emissions from the proposed project were below the screening thresholds established for the construction and operational phase of the project for all pollutants except Reactive Organic Gases (ROG). However, with implementation of LRDP MM Air-2B below, ROG impacts would be reduced to below a level of significance (refer to 5.3, b). Therefore, the project will not result in a significant impact to air quality. Based on the relatively small magnitude of air pollutant emissions associated with the project, the proposed project would not result in any conflict with, or obstruction of, the objectives or implementation of the SCAQMD Air Quality Management Plan.

b) ***Violate any air quality standard or contribute substantially to an existing or projected air quality violation?***

Less Than Significant With Mitigation Incorporated. The SCAQMD has established significance thresholds for construction and operation, which were used to evaluate potential impacts associated with the proposed project. Construction source emissions were calculated using the URBEMIS2007 (version 9.2.2) emissions inventory model originally developed by the California Air Resources Board (CARB).

Implementation of the project components, including demolition and construction activities, would generate construction-related emissions resulting from engine exhaust and fugitive dust. Based on current construction phasing assumptions, analysis of the potential air quality impacts of the project was conducted for the project construction phase. The analysis is assumed to begin in Spring 2008 for a period of 30 months, based on the following activities: (1) demolition operations; (2) travel by construction workers to the site; (3) delivery and hauling of construction materials and supplies to and from the project site; (4) fuel combustion by on-site construction equipments; and (5) haul truck used in demolition debris removal.

The air quality analysis evaluated the demolition and removal of the existing paving, concrete/brick area and landscaped perimeter. As depicted in Phase 1 of Table AQ-1 (detailed in Appendix A), demolition would not generate emissions above the SCAQMD construction emission thresholds. The proposed project's grading, trenching, building construction, paving, as depicted in Table AQ-1 (Phase 2 through 6) would also result in emissions below the SCAQMD thresholds. During the final phase of the project (Phase 7), the use of architectural coatings will generate ROGs above the SCAQMD construction emissions threshold. However, with implementation of the mitigation

[1] South Coast Air Quality Management District, CEQA Air Quality Handbook, November 1993.

measures identified below, ROG impacts would be reduced to below a level of significance (see Table AQ-2). Therefore, construction of the proposed project would not result in emissions that are above the SCAQMD construction emissions threshold for the criteria pollutants, specifically carbon monoxide (CO), reactive organic gases (ROG), sulfur oxides (SOx), nitrogen oxides (NOx), and particulate matter (PM_{10} and $PM_{2.5}$) during construction. Consequently, the construction of the proposed project would not result in significant air quality impacts after mitigation.

It should be noted that there are no existing methodologies that address the significance of greenhouse gases (GHGs), a cumulative impact issue, emitted from an individual development project and other sources. There are currently no health-based standards that measure the threat GHGs, including CO_2, pose on human health. CO_2 is generally a global pollutant and ordinarily poses an indirect threat to human health because CO_2 production, among other things, contributes to climate change. The proposed project is a student housing project that will locate students in close proximity to their academic destinations thereby reducing vehicle traffic, which is a primary contributor of GHGs. Thus, the project would reduce the demand for driving which in turn would result in a reduction of carbon dioxide from internal combustion of vehicle engines. Therefore, the Project would not be cumulatively considerable for greenhouse gas impacts.

An estimate of CO_2 emissions from the proposed project was developed using URBEMIS 2007 v9.2.2 program. URBEMIS factors in number of households and facilities in order to calculate CO_2 emissions. The operational phase sources of CO_2 include stationary source such as electricity and natural gas consumption. Mobile sources are based upon an estimated fleet of vehicles and projected average trips per day divided into work, shop, or other commutes. Operational CO_2 estimates are based upon fine site grading, building, application of architectural coatings, and laying of asphalt. The estimates of CO_2 can be found in the emissions tables below.

TABLE AQ-1[2]
UNMITIGATED AIR POLLUTANT EMISSIONS FROM CONSTRUCTION ACTIVITIES (LB/DAY)

	ROG	NOx	CO	SO_x	CO_2	PM_{10}	$PM_{2.5}$
Daily Emissions (lb/day)							
Phase 1 (Demolition)							
Fugitive Dust	-	-	-	-	-	1.60	0.33
Demo Off Road Diesel	1.31	8.68	4.91	-	700.30	-	0.62
Demo On Road Diesel	0.12	1.61	0.63	-	186.92	0.01	0.07
Worker Trips	0.04	0.07	1.21	-	124.49	0.01	0.00
Maximum Total	1.48	10.36	6.75	-	1,011.70	2.36	1.03
Phase 2 (Mass Site Grading)							
Mass Grading Dust	-	-	-	-	-	87.60	18.29
Mass Grading Off Road Diesel	5.34	47.22	22.61	0.00	3,873.64	0.00	2.03
Mass Grading On Road Diesel	-	-	-	-	-	-	-
Worker Trips	0.05	0.09	1.52	-	155.61	0.01	0.01
Maximum Total	5.39	47.31	24.13	-	4,029.25	89.82	20.33
Phase 3 (Fine Site Grading)							
Fine Grading Dust	-	-	-	-	-	87.60	18.29
Fine Grading Off Road Diesel	5.34	47.22	22.61	-	3,873.64	-	2.03
Fine Grading On Road Diesel	-	-	-	-	-	-	-
Worker Trips	0.05	0.09	1.52	-	155.61	0.01	0.01

[2] Emissions based on the CARB URBEMIS2007 model.

TABLE AQ-1[2]
UNMITIGATED AIR POLLUTANT EMISSIONS FROM CONSTRUCTION ACTIVITIES (LB/DAY)

	ROG	NOx	CO	SO_x	CO_2	PM_{10}	$PM_{2.5}$
Maximum Total	5.39	47.31	24.13	-	4,029.25	89.82	20.33
Phase 4 (Trenching)							
Trenching Off Road Diesel	2.33	20.12	8.46	-	1,714.64	-	0.92
Worker Trips	0.04	0.07	1.21	-	124.49	0.01	-
Maximum Total	2.37	20.19	9.68	-	1,839.12	1.01	0.92
Phase 5 (Building Construction)							
Building Off Road Diesel	5.10	26.86	14.71	-	2,353.89	-	1.63
Building Vendor Trips	2.56	30.34	22.52	0.05	4,732.53	0.17	1.27
Worker Trips	3.45	6.39	104.75	0.11	10,755.03	0.51	0.42
Maximum Total	11.11	63.59	141.99	0.16	17,841.45	4.05	3.32
Phase 6 (Paving)							
Paving Off-Gas	0.55	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.98	18.01	10.28	0.00	1,418.44	0.00	1.44
Paving On Road Diesel	0.18	2.33	0.90	0.00	317.33	0.01	0.09
Worker Trips	0.07	0.14	2.36	0.00	279.89	0.01	0.01
Maximum Total	3.78	20.48	13.53	0.01	2,015.66	1.69	1.54
Phase 7 (Architectural Coating)							
Architectural Coating	201.24	-	-	-	-	-	-
Worker Trips	0.26	0.49	8.36	0.01	991.77	0.05	0.04
Maximum Total	201.51	0.49	8.36	0.01	991.77	0.07	0.04
SCAQMD Daily Threshold	75	100	550	150	-	150	55
Significant?	**YES**	**NO**	**NO**	**NO**	-	**NO**	**NO**

Source: P&D Consultants, December 2007.

TABLE AQ-2
MITIGATED AIR POLLUTANT EMISSIONS FROM CONSTRUCTION ACTIVITIES (LB/DAY)

	ROG	NOx	CO	SO_x	CO_2	PM_{10}	$PM_{2.5}$
Phase 1 (Demolition)							
Fugitive Dust	-	-	-	-	-	1.60	0.33
Demo Off Road Diesel	1.31	8.68	4.91	-	700.30	0.68	0.62
Demo On Road Diesel	0.12	1.61	0.63	-	186.92	0.08	0.07
Worker Trips	0.04	0.07	1.21	-	124.49	0.01	0.00
Maximum Total	1.48	10.36	6.75	-	1,011.70	2.36	1.03
Phase 2 (Mass Site Grading)							
Mass Grading Dust	-	-	-	-	-	35.78	7.47
Mass Grading Off Road Diesel	5.34	47.22	22.61	-	3,873.64	2.21	2.03
Mass Grading On Road Diesel	-	-	-	-	-	-	-
Worker Trips	0.05	0.09	1.52	-	155.61	0.01	0.01
Maximum Total	5.39	47.31	24.13	-	4,029.25	37.99	9.51
Phase 3 (Fine Site Grading)							
Fine Grading Dust	-	-	-	-	-	35.78	7.47
Fine Grading Off Road Diesel	5.34	47.22	22.61	-	3,873.64	2.21	2.03
Fine Grading On Road Diesel	-	-	-	-	-	-	-
Worker Trips	0.05	0.09	1.52	-	155.61	0.01	0.01

TABLE AQ-2
MITIGATED AIR POLLUTANT EMISSIONS FROM CONSTRUCTION ACTIVITIES (LB/DAY)

	ROG	NOx	CO	SO_x	CO_2	PM_{10}	$PM_{2.5}$
Maximum Total	5.39	47.31	24.13	-	4,029.25	37.99	9.51
Phase 4 (Trenching)							
Trenching Off Road Diesel	2.33	20.12	8.46	-	1,714.64	1.00	0.92
Worker Trips	0.04	0.07	1.21	-	124.49	0.01	0.00
Maximum Total	2.37	20.19	9.68	-	1,839.12	1.01	0.92
Phase 5 (Building Construction)							
Building Off Road Diesel	5.10	26.86	14.71	-	2,353.89	1.78	1.63
Building Vendor Trips	2.56	30.34	22.52	0.05	4,732.53	1.49	1.27
Worker Trips	3.45	6.39	104.75	0.11	10,755.03	0.79	0.42
Maximum Total	11.11	63.59	141.99	0.16	17,841.45	4.05	3.32
Phase 6 (Paving)							
Paving Off-Gas	0.55	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.98	18.01	10.28	0.00	1,418.44	1.57	1.44
Paving On Road Diesel	0.18	2.33	0.90	0.00	317.33	0.11	0.09
Worker Trips	0.07	0.14	2.36	0.00	279.89	0.02	0.01
Maximum Total	3.78	20.48	13.53	0.01	2,015.66	1.69	1.54
Phase 7 (Architectural Coating)							
Architectural Coating	20.12	-	-	-	-	0.07	-
Worker Trips	0.26	0.49	8.36	0.01	991.77	0.07	0.04
Maximum Total	20.39	0.49	8.36	0.01	991.77	0.07	0.04
SCAQMD Daily Threshold	75	100	550	150	-	150	55
Significant?	**NO**	**NO**	**NO**	**NO**	**-**	**NO**	**NO**

Source: P&D Consultants, December 2007.

The SCAQMD has also established significance thresholds, which were used to evaluate potential impacts associated with operation of the proposed project. Operation source emissions were calculated using the URBEMIS2007 (version 9.2.2) emissions inventory model as well. Operation of the proposed project would increase vehicle emissions generated by mobile source as well as emissions generated by stationary sources, including natural gas and electricity consumption, and emissions generated from the use of consumer products. Mobile source emissions related to trips to and from the project site were calculated by using the ITE Trip Generation (7^{th} Edition, 2003) for apartment housing, which results in a total project trip estimate of 4872 trips per day. As described in the project traffic study this provides a conservative estimate of project trip generation. Mobile and stationary source emissions for the proposed project would result in a net increase in CO, ROG, Sox, NOx, PM_{10} and $PM_{2.5}$, as shown in Table AQ-3. As indicated in Table AQ-3, the net increase in pollutants would be below the SCAQMD daily thresholds for the operation of the proposed project. As such, the resulting stationary and mobile source emissions generated during operation of the proposed project would not result in a significant impact on air quality.

TABLE AQ-3
OPERATIONAL EMISSIONS
(LB/DAY)

	ROG	NOx	CO	SO_x	CO_2	PM_{10}	$PM_{2.5}$
Mobile Sources[3]	24.13	33.04	209.6	0.15	16699.09	25.73	5.35
Stationary Sources (Mitigated)[4]	30.5	9.82	26	0	12302.71	0.08	0.08
Total	54.63	42.86	235.6	0.15	29001.8	25.81	5.43
SCAQMD Standard	55	55	550	150	-	150	55
Significant?	**NO**	**NO**	**NO**	**NO**	-	**NO**	**NO**

Source: P&D Consultants, December 2007.

Air-2B Prior to initiating on-site construction for future projects that implement the 2007 LRDP, UCI shall ensure that the project construction contract includes a construction emissions mitigation plan, including measures compliant with SCAQMD Rule 403 (Fugitive Dust) to be implemented and supervised by the on-site construction supervisor, which shall include, but not be limited to, the following BMPs:

i. During grading and site preparation activities, exposed soil areas shall be stabilized via frequent watering, non-toxic chemical stabilization, or equivalent measures at a rate to be determined by the on-site construction supervisor.
ii. During windy days when fugitive dust can be observed leaving the construction site, additional applications of water shall be required at a rate to be determined by the on-site construction supervisor.
iii. Disturbed areas designated for landscaping shall be prepared as soon as possible after completion of construction activities.
iv. Areas of the construction site that will remain inactive for three months or longer following clearing, grubbing and/or grading shall receive appropriate BMP treatments (e.g., revegetation, mulching, covering with tarps, etc.) to prevent fugitive dust generation.
v. All exposed soil or material stockpiles that will not be used within 3 days shall be enclosed, covered, or watered twice daily, or shall be stabilized with approved non-toxic chemical soil binders at a rate to be determined by the on-site construction supervisor.
vi. Unpaved access roads shall be stabilized via frequent watering, non-toxic chemical stabilization, temporary paving, or equivalent measures at a rate to be determined by the on-site construction supervisor.
vii. Trucks transporting materials to and from the site shall allow for at least two feet of freeboard (i.e., minimum vertical distance between the top of the load and the top of the trailer). Alternatively, trucks transporting materials shall be covered.
viii. Speed limit signs at 15 mph or less shall be installed on all unpaved roads within construction sites.
ix. Where visible soil material is tracked onto adjacent public paved roads, the paved roads shall be swept and debris shall be returned to the construction site or transported off site for disposal.
x. Wheel washers, dirt knock-off grates/mats, or equivalent measures shall be installed within the construction site where vehicles exit unpaved roads onto paved roads.

[3] Vehicle emissions based on the CARB URBEMIS2007 model.
[4] Emission from energy consumption based on methodologies established in the SCAQMD CEQA Air Quality Handbook, 1993.

xi. Diesel powered construction equipment shall be maintained in accordance with manufacturer's requirements, and shall be retrofitted with diesel particulate filters where available and practicable.

xii. Heavy duty diesel trucks and gasoline powered equipment shall be turned off if idling is anticipated to last for more than 5 minutes.

xiii. Where feasible, the construction contractor shall use alternatively fueled construction equipment, such as electric or natural gas-powered equipment or biofuel.

xiv. Heavy construction equipment shall use low NO_x diesel fuel to the extent that it is readily available at the time of construction.

xv. To the extent feasible, construction activities shall rely on the campus's existing electricity infrastructure rather than electrical generators powered by internal combustion engines.

xvi. The construction contractor shall develop a construction traffic management plan that includes the following:
- Scheduling heavy-duty truck deliveries to avoid peak traffic periods
- Consolidating truck deliveries

xvii. Where possible, the construction contractor shall provide a lunch shuttle or on-site lunch service for construction workers.

xviii. The construction contractor shall, to the extent possible, use pre-coated architectural materials that do not require painting. Water-based or low VOC coatings shall be used that are compliant with SCAQMD Rule 1113. Spray equipment with high transfer efficiency, such as the high volume-low pressure spray method, or manual coatings application shall be used to reduce VOC emissions to the extent possible.

Project constructions plans and specifications will include a requirement to define and implement a work program that would limit the emissions of reactive organic gases (ROG's) during the application of architectural coatings to the extent necessary to keep total daily ROG's for each project to below 75 pounds per day, or the current SCAQMD threshold, throughout that period of construction activity to the extent feasible. The specific program may include any combination of restrictions on the types of paints and coatings, application methods, and the amount of surface area coated as determined by the contractor.

xix. The construction contractor shall maintain signage along the construction perimeter with the name and telephone number of the individual in charge of implementing the construction emissions mitigation plan, and with the telephone number of the SCAQMD's complaint line. The contractor's representative shall maintain a log of any public complaints and corrective actions taken to resolve complaints.

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)?

Less Than Significant Impact. Pollutants generated by the proposed project would be below the SCAQMD thresholds for construction activities. These thresholds are designed to identify those projects which may result in significant levels of air pollution and to assist the region in attaining the applicable state and federal ambient air quality standards. Because the project would not exceed these thresholds, its emissions are not cumulatively considerable or significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. The proposed building sites are located within a highly urbanized portion of the UCI East Campus. As previously discussed, construction and operation of the

proposed project would not exceed the SCAQMD construction or operational screening thresholds with the incorporation of mitigation measures, and therefore, would not result in any substantial air pollution concentrations. Consequently, the proposed project would not expose sensitive receptors to significant air pollution concentrations. No significant impacts would occur.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. The proposed project would not create unusual or objectionable odors. Odors may be associated with the operation of diesel engines during site preparation and building construction; however, these odors are typical of urbanized environments and would be subject to construction and air quality regulations, including proper maintenance of diesel engines to minimize engine emissions. These emissions would also be of short duration and would be quickly dispersed into the atmosphere. Therefore, the proposed project would not create objectionable odor impacts that would affect a substantial number of people. No impacts would occur and no measures for odor mitigation would be required.

5.4 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?

Less Than Significant With Mitigation Incorporated. The project sites are within an urbanized area of campus and have been previously disturbed. Site 2 is a mostly undeveloped 11-acre parcel that contains a community garden and a small paved parking lot. Sites 1 (3-acres) and 3 (3.5-acres) consist of paved parking lots with ornamental landscaping, and no existing structures. Consistent with the 2007 LRDP EIR, MM Bio-2A will be implemented prior to construction on Site 2 in order to reduce potential impacts to burrowing owl and Bio-1A and 2B to reduce impacts to other wildlife. Therefore, the proposed project would not result in any substantial adverse effects to federal or state listed or other sensitive designated species..

Bio-1A Prior to initiating on-site construction for future projects that implement the 2007 LRDP and involve land clearing, grading, or similar land development activities adjacent to designated habitat areas including the UCI NCCP Reserve Area, and San Joaquin Freshwater Marsh Reserve (SJFM), UCI shall retain a qualified biologist to conduct a sensitive plant survey of the respective areas within 150 feet of the approved limits of disturbance. If sensitive plant species are detected from the survey, then UCI shall approve contractor specifications that include measures to reduce indirect construction and post-construction impacts to the identified species, to the maximum extent feasible. These measures shall include, but are not limited to, the following:

i. A pre-construction meeting shall be held to ensure that construction crews are informed of the sensitive plants in the vicinity of the construction site. Prior to commencement of clearing or grading activities, a biologist (or other qualified person) shall supervise the installation of temporary construction fencing along the approved limits of disturbance to discourage errant intrusions into the identified sensitive plants by construction vehicles or personnel. All construction access and circulation shall be limited to designated construction zones. This fencing shall be removed upon completion of construction activities.

ii. Storm water treatment and erosion control measures or facilities shall be maintained in a manner that avoids the discharge of polluted runoff and erosion impacts to the identified sensitive plants. In areas that have been set aside as mitigation for project impacts or are known to support species listed as threatened or endangered, the work shall be overseen by a qualified biologist.
iii. Refer to mitigation measure Air-2B for dust control measures during construction.
iv. Staging areas for equipment and materials shall be located at least 50 feet from the identified sensitive plants. During and after construction, the proper use and disposal of oil, gasoline, diesel fuel, antifreeze, and other toxic substances shall be enforced.
v. Equipment to extinguish small brush fires (such as from trucks or other vehicles) shall be present on-site during all construction phases, along with personnel trained in the use of such equipment. Smoking shall be prohibited in construction areas adjacent to flammable vegetation.
vi. A biological monitor shall be present on-site on at least a weekly basis during rough grading to ensure that the fenced construction limits are not exceeded.
vii. Irrigation for project landscaping shall be minimized and controlled in areas adjacent to the identified sensitive plants through measures such as designing irrigation systems to match landscaping water needs, satellite-controlled timers, water management systems, and automatic flow reducers/shut-off valves that are triggered by a drop in water pressure from broken sprinkler heads or pipes. To the extent practicable, drainage from development areas shall be directed away the identified sensitive plants. If this is not feasible, then energy dissipation measures shall be installed at the drainage outlets in the vicinity of the identified sensitive plants to prevent erosive flow velocities.
viii. Invasive species shall not be used in landscaped areas in the immediate vicinity of the identified sensitive plants.
ix. Integrated Pest Management principles shall be implemented in landscaped and revegetation areas adjacent to the identified sensitive plants for chemical pesticides, herbicides and fertilizers, through alternative weed/pest control measures (e.g., hand removal) and proper application techniques (e.g., conformance to manufacturer specifications and legal requirements).

Bio-2A Prior to initiating on-site construction for future projects in the east campus and west campus that implement the 2007 LRDP and that involve land clearing, grading, or similar land development activities adjacent to suitable habitat for the western burrowing owl (i.e., large open areas of non-native grassland, ruderal (weedy) areas, and scrub habitat), UCI shall retain a qualified biologist to conduct a burrowing owl survey of the respective habitat areas within 300 feet of the approved limits of disturbance. If occupied burrows are detected from the survey, then they shall not be disturbed during the nesting season (February 1 through August 31) until the biologist verifies through noninvasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. If owls must be moved away from the disturbance area, passive relocation is preferable to trapping. A time period of at least one week is recommended to allow the owls to move and acclimate to alternate burrows. When destruction of occupied burrows is unavoidable, relocation burrows shall be created (by installing artificial burrows) at a ratio of 1:1 in suitable foraging habitat. The biologist shall document all findings and results in a report submitted to UCI.

Bio-2B Prior to initiating on-site construction for future projects that implement the 2007 LRDP and that involve land clearing, grading, or similar land development activities adjacent to habitat areas identified as suitable for sensitive wildlife species, UCI shall retain a qualified biologist to conduct a sensitive wildlife survey of the respective areas within 150 feet of the approved

limits of disturbance. If sensitive wildlife species are detected from the survey, then UCI shall approve contractor specifications that include measures to reduce indirect construction and post-construction impacts to the identified species, to the maximum extent feasible. These measures shall include, but are not limited to, the following:

i. A pre-construction meeting shall be held to ensure that construction crews are informed of the sensitive wildlife and habitats in the vicinity of the construction site. Prior to commencement of clearing or grading activities, a biologist (or other qualified person) shall supervise the installation of temporary construction fencing along the approved limits of disturbance to discourage errant intrusions into the identified sensitive wildlife habitats by construction vehicles or personnel. All construction access and circulation shall be limited to designated construction zones. This fencing shall be removed upon completion of construction activities.
ii. If suitable habitat for raptors or protected bird species is present and raptors or protected bird species are observed in the vicinity, the pre-construction surveys for active nests shall be performed within 30 calendar days prior to commencement of clearing or grading activities during the breeding season for raptors and protected bird species (generally February 1 through August 31) at locations where suitable nesting habitat exists within 500 feet of the approved limits of disturbance. Construction activities within 500 feet of active raptor nests (300 feet for protected bird species) shall be monitored by the biologist and modified as directed by the biologist until the biologist determines that the nest is no longer active. Construction activity may encroach into the 500-foot buffer area only at the discretion of the biologist.
iii. Refer to mitigation measure Noi-2A for noise abatement measures during construction.
iv. Storm water treatment and erosion control measures or facilities shall be maintained in a manner that avoids the discharge of polluted runoff and erosion impacts to the identified sensitive plants.
v. Refer to mitigation measure Air-2B for dust control measures during construction.
vi. Night lighting shall be avoided during construction. Any necessary lighting shall be shielded to minimize temporary lighting of the surrounding habitat.
vii. A biological monitor shall be present on-site on at least a weekly basis during rough grading to ensure that the fenced construction limits are not exceeded.
viii. Permanent lighting adjacent to natural habitat areas shall be selectively placed, shielded, and directed to minimize output to sensitive wildlife.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact. As noted in the previous response, Sites 1 and 3 are completely developed, including ornamental landscaping elements that have negligible habitat value. Site 2 is primarily undeveloped, but contains a community garden and small parking lot. A streambed with riparian habitat is present adjacent the southern boundary of Site 2. Project site plan will adhere to a 50-foot setback from this streambed to avoid impacting sensitive habitat within the streambed. As a result of this setback and water quality BMP's identified in Section 5.8 of this IS, the project will result in less than significant impacts on riparian habitat or other sensitive natural communities and no mitigation measures would be required.

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?

Less Than Significant Impact. Construction of the proposed project would require the alteration of a drainage swale within Site 2. This feature was delineated in May 2002 in conjunction with the implementation of Phase I of the East Campus Student Apartments project (now known as "Vista del Campo"). Phase I impacts to Waters of the U.S. within this feature (referenced as "Gully 2" in the delineation report) were addressed in a 404 Permit secured from the Army Corps of Engineers for the Phase I project. Based on the previous delineation, it is estimated that the proposed Phase III project would permanently impact approximately 0.01 acre of federal jurisdiction in the remaining portion of Gully 2. On January 10, 2008 a qualified biologist examined Site 2 and verified that this estimated area of impact is accurate. As discussed on page 4.3-43 of the LRDP EIR, impacts to less than 0.1 acre are less than significant. Therefore, the project's impact to 0.01 acre of federally protected wetlands is a considered less than significant.

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?

Less Than Significant Impact. Although, the proposed project would include substantial tree plantings and landscape improvements, construction would require the removal of some existing trees within the three sites. The removal of these trees has the potential to significantly impact active bird nests including those of raptors and other migratory nongame birds. The California Department of Fish and Game has previously commented that a pair of Osprey had been observed on campus near Eucalyptus trees adjacent to the San Joaquin Freshwater Marsh. The project is located approximately 1.25 miles from the location of the osprey siting and is remote from the Marsh. As a result it is unlikely that Osprey would utilize existing trees on the project site for nesting. UCI however will ensure that construction of the project is implemented consistent with the Federal Migratory Bird Treaty Act of 1918 (50 C.F.R. Section 10.13) and Sections 3503, 3503.5, and 3513 of the California Fish and Game Code in order to reduce any potential impacts to migratory and/or nesting birds to below a level of significance.

e. Conflict with any local applicable policies protecting biological resources?

No Impact. Implementation of the proposed project would not conflict with LRDP or local policies protecting biological resources that apply to the project sites. No impact would occur and no mitigation measures would be required.

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other applicable habitat conservation plan?

No Impact. The proposed project location does not contain biological resources that are managed under any conservation plans. Therefore, the project would not result in any conflicts with conservation plans. No impact would occur and no mitigation measures would be required.

5.5 CULTURAL RESOURCES

Would the project:

a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

No Impact. As part of the 2007 LRDP EIR, the UCI campus was surveyed to identify significant and potentially significant cultural resources in the planning area. According to the LRDP EIR, historical resources found on campus that are considered to be significant are the UCI Ranch Buildings and the renovated barn used by the School of the Arts. Both of these historic resources are located on the East Campus, but are not within the proposed projects' disturbance limits. Therefore, implementation of the proposed project would not affect historical resources and no mitigation measures would be required.

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

No Impact. According to the 2007 LRDP EIR, twenty archaeological sites within the LRDP planning area have been identified, most of which have been discovered and recorded by previous surveys. None of these sites are known to exist within the project site or vicinity. There is no evidence to suggest that project-related grading activities could have any impact on a recorded archeological resource. Therefore, no impacts are anticipated and no mitigation measures are required.

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant With Mitigation Incorporated. Sites 1 and 3 are within an urbanized area of campus and have been previously disturbed. The majority of Site 2 remains undeveloped and undisturbed. According to the 2007 LRDP EIR, a majority of the UCI campus, including the project site, is identified as part of a "high-sensitivity" area for paleontological resources. Therefore, there is a possibility that paleontological resources could be found in native soil materials during the grading/excavation phase. Any adverse impacts related to paleontological resources would be reduced to less than significant with implementation of the following LRDP EIR mitigation measures.

Cul-4A Prior to grading or excavation for future projects that implement the 2007 LRDP and would excavate sedimentary rock material other than topsoil, UCI shall retain a qualified paleontologist to monitor these activities. In the event fossils are discovered during grading, the on-site construction supervisor shall be notified and shall redirect work away from the location of the discovery. The recommendations of the paleontologist shall be implemented with respect to the evaluation and recovery of fossils, in accordance with mitigation measures Cul-4B and Cul-4C, after which the on-site construction supervisor shall be notified and shall direct work to continue in the location of the fossil discovery. A record of monitoring activity shall be submitted to UCI each month and at the end of monitoring.

Cul-4C For significant fossils as determined by mitigation measure Cul-4B, the paleontologist shall prepare and implement a data recovery plan. The plan shall include, but not be limited to, the following measures:

i. The paleontologist shall ensure that all significant fossils collected are cleaned, identified, catalogued, and permanently curated with an appropriate institution with a research interest in the materials (which may include UCI);

ii. The paleontologist shall ensure that specialty studies are completed, as appropriate, for any significant fossil collected; and
iii. The paleontologist shall ensure that curation of fossils are completed in consultation with UCI. A letter of acceptance from the curation institution shall be submitted to UCI.

d. Disturb any human remains, including those interred outside of formal cemeteries?

Less Than Significant Impact. According to the 2007 LRDP EIR, the cultural resources survey and previous surveys have revealed that no human remains are known to exist within the campus planning area. Therefore, human remains are unlikely to be encountered or disturbed during the grading/excavation phase. In the unlikely event that human remains are uncovered during grading operations, the contractor would be required to notify the County Coroner, in accordance with Section 7050.5 of the CHSC who must then determine whether the remains are of forensic interest. If the coroner, with the aid of supervising archaeologist determines that the remains are or appear to be of a Native American, he/she would contact the Native American Heritage Commission for further investigation.

5.6 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?

Less Than Significant Impact. According to the Alquist-Priolo Earthquake Fault Zoning Map, neither the project site nor the UCI campus is located in the immediate vicinity of any known active faults. Ground surface rupture may be possible along the potentially active UCI Campus Fault; however, this is not expected to result in significant impacts to people or structures because all campus buildings are constructed in compliance with the California Building Code (CBC) and UC Seismic Safety Policy. In addition, none of the sites are located within 50 feet of the UCI Campus Fault. Therefore, the proposed project will comply with the University's Restricted Use Zone (RUZ), a 50-foot setback for occupied buildings on either side of the UCI Campus Fault to prevent increased hazards to students/residents living on campus. Therefore, impacts associated with fault ruptures are considered to be less than significant.

ii. Strong seismic ground shaking?

Less Than Significant Impact. The proposed project is located in seismically active Southern California and prone to earthquakes, which may generate various levels of seismic ground shaking on-site which has the potential to dislodge objects from walls, ceilings, and shelves, and to damage and destroy buildings and other structures. The potential severity of ground shaking depends on many factors, including distance from the originating fault, the earthquake magnitude, and the nature of the earth materials below the project site. Although implementation of the proposed project has the potential to result in the exposure of people and structures to strong ground shaking during a seismic event, this exposure is no greater than exposure present in other areas throughout the Southern California region.

The proposed project would be designed and constructed in accordance with the current CBC seismic safety requirements, which is anticipated to minimize the potential for damage. In addition, the proposed project would be subject to the following UCI requirements:

- All draft building plans would be reviewed for compliance with the CBC, which includes specific structural seismic safety provisions;
- The UC Seismic Safety Policy, which requires anchorage for seismic resistance of nonstructural building elements such as furnishings, fixtures, material storage facilities, and utilities that could create a hazard if dislodged during an earthquake; and
- Incorporation of seismic related emergency procedures into departmental emergency response plans.

These programs and procedures would reduce the hazards from seismic shaking by preparing faculty, staff, and students for emergencies. All of these programs and procedures would be implemented for the proposed project. Therefore, impacts associated with ground shaking are considered to be less than significant.

iii. Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. The majority of soils on the project site/UCI campus are terraced deposits. However, according to the California Department of Mines and Geology, portions of the project site are located in a liquefaction area (historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacement). Therefore, implementation of the proposed project may expose people and/or structures to potential substantial adverse effects due to soil instability (liquefaction) including the risk of loss, injury, or death. However, compliance with CBC and implementation of recommendations in the site-specific geotechnical investigation would reduce hazards associated with liquefaction to below a level of significance.

iv. Landslides?

No Impact. The UCI East Campus including the project sits is characterized as gently sloping to flat terrain. Neither the project site nor its vicinity is designated as a potential landslide area by the California Department of Mines and Geology. Due to the relatively flat terrain of the project sites, the probability of seismically induced landslides occurring on the project site is considered remote. Therefore, no impact would occur..

b. Result in substantial soil erosion or the loss of topsoil?

Less Than Significant Impact. The proposed project has the potential to result in a minimal amount of soil erosion during construction activities. However, impacts would be reduced by implementation of a system of erosion control measures (water quality BMPs) to be identified in the project SWPPP described in Section 5.8 of this IS. Therefore, impacts related to soil erosion or the loss of topsoil would be less than significant.

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?

Less Than Significant Impact. The majority of soils on the project site/UCI campus are terraced deposits. However, according to the California Department of Mines and Geology, portions of the project site are located in a liquefaction area (historic occurrence of liquefaction, or local geological, geotechnical and groundwater conditions indicate a potential for permanent ground displacement). Therefore, implementation of the proposed project would expose people and/or structures to potential substantial adverse effects due to soil instability including the risk of loss, injury, or death. However, compliance with CBC and implementation of recommendations in the site-specific geotechnical investigation would reduce hazards associated with unstable soils to below a level of significance.

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?

Less Than Significant Impact. The top soil at the project site and throughout the UCI campus is highly expansive ranging from eight to 12 percent swell. The expansive top soils are generally a dark brown sandy clay, clayey sand, or lean clay. The underlying material consists of terrace deposits which is non-expansive to moderately expansive with a swell ranging from zero to eight percent. However, this is not expected to result in significant impacts to people or structures because the CBC includes provisions for construction on expansive soils. These provisions (proper fill selection, moisture control, and compaction during construction) can prevent these soils from causing significant damage. Expansive soils can be treated by removal (typically the upper three feet below finish grade) and replacement with low expansive soils, lime-treatment, and/or moisture conditioning. Therefore, compliance with the CBC requirements would ensure that impacts related to expansive soils would be less than significant.

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?

No Impact. The project site is served by sewers and no septic tanks or other alternative wastewater disposal systems are proposed. Therefore, no impact would occur.

5.7 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?

Less Than Significant Impact (a and b). There is no evidence or record that hazardous substances or waste materials have ever been produced, stored, or disposed of on-site. The construction and operation of the proposed project would not involve the storage, transport, use, or disposal of a significant amount of hazardous materials. The small amount of hazardous materials that would be used during construction will be transported, used, stored, and disposed of, according to city, state, and federal regulations. Therefore, implementation of the proposed project would not result in a significant impact and no mitigation measures would be required.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

No Impact. There are no private or public schools within a quarter-mile of the project site, except those that are part of the UCI campus educational facilities. As discussed in previous responses, this project would not involve handling of hazardous or acutely hazardous materials and would not generate any significant hazardous emissions, and no mitigation measures would be required.

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?

No Impact. A search of hazardous waste sites compiled pursuant to Government Code Section 65962.5 was conducted for the project site. The project site was not found during a review of sites containing hazardous materials. Therefore, the proposed project would not be located on a site that is included on a list of hazardous materials sites and no mitigation measures would be required.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

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?

No Impact (e and f). The UCI campus is approximately three miles from John Wayne Airport, which is the only public use airport in Orange County. The project site is outside of the airport land use plan area. There are no private airstrips within the vicinity of the project site. Therefore, implementation of the proposed project would not expose people or structures to air traffic hazards and no mitigation measures would be required.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

No Impact. The project would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan. All construction-related activities would be contained within and immediately around the project site. Road closures are not anticipated during construction activities; however, in the event that a closure is necessary standard contractor specifications imposed by UCI include a requirement to ensure that roadways surrounding the project site remain accessible to emergency vehicles and crews, and open for emergency evacuations, if necessary.

UCI has an Emergency Management Plan that addresses the campus community's planned response for various levels of emergencies, including fires, hazardous spills, earthquakes, flooding, and explosions. Therefore, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan and no mitigation measures would be required.

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?

No Impact. There are no wildland areas in or near this highly urbanized part of the campus. Therefore, the proposed project would not expose people or structures to potential fire hazards associated with wildland and urban interfaces and no mitigation measures would be required.

5.8 HYDROLOGY AND WATER QUALITY

Would the project:

a. Violate any water quality standards or waste discharge requirements?

Short-Term (Construction) Impacts

Less Than Significant With Mitigation Incorporated. There is the potential for short-term surface water quality impacts to occur during the grading and construction phases, including runoff of loose soils and/or a variety of construction wastes and fuels that could be carried off-site in surface runoff and into local storm drains and streets that drain eventually into water resources protected under federal and state laws. These water quality impacts would be avoided through compliance with the NPDES regulations set forth under Section 402 of the federal Clean Water Act. Pursuant to the NPDES regulations, the contractor will need to file a Notice of Intent for a General Construction Permit with the RWQCB. To obtain this permit, the contractor would prepare a SWPPP that specifies BMPs (erosion and sediment controls such as silt fences and/or straw wattles or bails, runoff water quality monitoring, means of waste disposal, implementation of approved local plans, prevention and containment of accidental fuel spills or other waste releases, inspection requirements, etc) to ensure that the proposed project does not violate any water quality standards or any waste discharge requirements during the construction phases. This permit would cover the entire grading footprint area of the proposed sites, along with the adjacent staging areas. Compliance with the approved permit would ensure that the proposed project does not violate any water quality standards or any waste discharge requirements during the construction phases. Additionally, in compliance with LRDP EIR MM Hyd-1A (see 5.8-c,d,e) a drainage study would be completed for the project and prior to initiating on-site construction an erosion control plan consistent with LRDP EIR MM Hyd-2A will be approved. Therefore, implementation of the proposed project would result in less than significant impacts related to the violation of water quality standards and waste discharge requirements.

Hyd-2A Prior to initiating on-site construction for future projects that implement the 2007 LRDP, UCI shall approve an erosion control plan for project construction. The plan shall include, but not be limited to, the following applicable measures to protect downstream areas from sediment and other pollutants during site grading and construction:

i. Proper storage, use, and disposal of construction materials.
ii. Removal of sediment from surface runoff before it leaves the site through the use of silt fences, gravel bags, fiber rolls or other similar measures around the site perimeter.
iii. Protection of storm drain inlets on-site or downstream of the construction site through the use of gravel bags, fiber rolls, filtration inserts, or other similar measures.
iv. Stabilization of cleared or graded slopes through the use of plastic sheeting, geotextile fabric, jute matting, tackifiers, hydro-mulching, revegetation (e.g., hydroseeding and/or plantings), or other similar measures.

v. Protection or stabilization of stockpiled soils through the use of tarping, plastic sheeting, tackifiers, or other similar measures.
vi. Prevention of sediment tracked or otherwise transported onto adjacent roadways through use of gravel strips or wash facilities at exit areas (or equivalent measures).
vii. Removal of sediment tracked or otherwise transported onto adjacent roadways through periodic street sweeping.
viii. Maintenance of the above-listed sediment control, storm drain inlet protection, slope/stockpile stabilization measures.

Long-Term Impacts

Less Than Significant With Mitigation Incorporated. Waste Discharge Requirements are issued by the RWQCB under the provisions of Division 7, Article 4 of the California Water Code. These requirements regulate "point source" discharges of wastes to surface and groundwaters, such as septic systems, sanitary landfills, dairies, etc. All wastewater produced within the proposed project would be discharged into the campus sewer network that serves the UCI campus. Therefore, the proposed project would have no point sources of wastewater discharge and thus would have no direct effect upon surface or groundwaters.

In the portions of the project site already covered by impervious surfaces, including concrete and pavement, the composition of surface runoff from the developed project site would be similar to existing conditions. As a majority of Site 2 consists of undeveloped land, project construction on Site 2 will result in an increase in the amount of impervious surfaces resulting in more storm runoff and increase the potential for water quality impacts. However, with the implementation of LRDP EIR MM Hyd-2B and compliance with Waste Discharge Requirements, water quality impacts during project operation would be considered less than significant. Operation of the proposed project would not violate any water quality standards or any waste discharge requirements. Therefore, implementation of the proposed project would result in less than significant impacts related to the violation of water quality standards and waste discharge requirements.

Hyd-2B Prior to project design approval for future projects that implement the 2007 LRDP and would result in land disturbance of 1 acre or more, the UCI shall ensure that the projects include the design features listed below, or their equivalent, in addition to those listed in mitigation measure Hyd-1A. Equivalent design features may be applied consistent with applicable MS4 permits (UCI's Storm Water Management Plan) at that time. All applicable design features shall be incorporated into project development plans and construction documents; shall be operational at the time of project occupancy; and shall be maintained by UCI.

i. All new storm drain inlets and catch basins within the project site shall be marked with prohibitive language and/or graphical icons to discourage illegal dumping per UCI standards.
ii. Outdoor areas for storage of materials that may contribute pollutants to the storm water conveyance system shall be covered and protected by secondary containment.
iii. Permanent trash container areas shall be enclosed to prevent off-site transport of trash, or drainage from open trash container areas shall be directed to the sanitary sewer system.
iv. At least one treatment control is required for new parking areas or structures, or for any other new uses identified by UCI as having the potential to generate substantial pollutants. Treatment controls include, but are not limited to, detention basins, infiltration basins, wet ponds or wetlands, bio-swales, filtration devices/inserts at

storm drain inlets, hydrodynamic separator systems, increased use of street sweepers, pervious pavement, native California plants and vegetation to minimize water usage, and climate controlled irrigation systems to minimize overflow. Treatment controls shall incorporate volumetric or flow-based design standards to mitigate (infiltrate, filter, or treat) storm water runoff, as appropriate.

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)?

No Impact. All water demand for the proposed project would be met through UCI's existing water service agreements with Irvine Ranch Water District (IRWD). The proposed project would not have the potential to directly change the rate or flow of groundwater because it would not interfere with any known aquifers. Therefore, no impact to groundwater supplies or recharge would be expected to occur and no mitigation would be required.

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 that 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 that would result in flooding on- or off-site?

e. Create or contribute runoff water, which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant With Mitigation Incorporated (c, d, and e). Implementation of the proposed project would result in alterations to existing drainage patterns and hydrology which could significantly increase runoff volumes resulting in flooding, exceed existing storm water drainage system capacity, and erosion and siltation at downstream water bodies. In compliance with LRDP MM Hyd-1A a drainage study would be completed for the project. Thus, impacts would be reduced to below a level of significance.

Hyd-1A As early as possible in the planning process of future projects that implement the 2007 LRDP and would result in land disturbance of 1 acre or greater, and for all development projects occurring on the North Campus in the watershed of the San Joaquin Freshwater Marsh, a qualified engineer shall complete a drainage study. Design features and other recommendations from the drainage study shall be incorporated into project development plans and construction documents. Design features shall be consistent with UCI's Storm Water Management Program, shall be operational at the time of project occupancy, and shall be maintained by UCI. At a minimum, all drainage studies required by this mitigation measure shall include, but not be limited to, the following design features:

i. Site design that controls runoff discharge volumes and durations shall be utilized, where applicable and feasible, to maintain or reduce the peak runoff for the 10-year, 6-hour storm event in the post-development condition compared to the pre-development condition, or as defined by current water quality regulatory requirements.

ii. Measures that control runoff discharge volumes and durations shall be utilized, where applicable and feasible, on manufactured slopes and newly-graded drainage channels, such as energy dissipaters, revegetation (e.g., hydroseeding and/or plantings), and slope/channel stabilizers.

f. Otherwise substantially degrade water quality?

Less than Significant With Mitigation Incorporated. The proposed project would not involve any additional water quality impacts beyond those discussed in the preceding responses and mitigated by Hyd-1A, 2A, and 2B. Therefore, no degradation of water quality would occur. .

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?

No Impact. According to the 1997 FEMA flood insurance rate maps, UCI campus is located in Zone X, which is outside of the 100-year and 500-year flood hazard areas. Therefore, no impact would occur.

h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

No Impact. As stated in checklist response 5.8, g) above, the UCI campus is located in Flood Zone X which is outside of the 100- and 500-year floodplains. Therefore, the proposed project would not place structures within the 100-year flood hazard area that would impede or redirect flood flows. Therefore, no impact would occur.

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?

No Impact. The main core of the UCI campus is located at an elevation of approximately 100 feet above mean sea level and is not located within a designated flood hazard area. It is extremely unlikely that dam or levee failure occurring at remote inland Orange County locations would have any effect on elevated campus lands located near the Pacific Coast. Flood flows emanating from inland areas would likely travel to the coast via San Diego Creek and other waterways. San Diego Creek, in the vicinity of the campus, is located at approximately 10 feet above mean sea level. Therefore, the development of the proposed project would not expose people or property to water-related hazards over current conditions and no impact would occur.

j. Inundation by seiche, tsunami, or mudflow?

No Impact. The project site is neither located near a large body of water that would be subject to tsunamis or seiches, canyons, slopes, drainage courses, or other natural features on or near the project site that that would generate mudflows during heavy rainstorms. Therefore, no impact would occur .

5.9 LAND USE AND PLANNING

Would the project:

a. Physically divide an established community?

No Impact. The project site is located within an urbanized part of the UCI East Campus. The proposed project would not physically affect the configuration of any surrounding sites or buildings

of the campus. The proposed project would not physically divide a community or prevent interaction between members of the community. Therefore, no impact would occur.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the LRDP, general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The proposed project is located within the UCI East Campus and would be consistent with the 2007 LRDP land use designations assigned to the project elements (*Student Housing*, *Transportation*, and *Open Space – General*). Therefore, no conflict would exist with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project site and no mitigation measures would be required.

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

No Impact. The proposed project site is located in a highly urbanized area of the campus and is not in or adjacent to any habitat conservation or natural community conservation areas. Therefore, no impacts would occur.

5.10 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?

No Impact (a and b). No mineral resources are known to exist on or adjacent to the project site. Therefore, the proposed project would not result in loss of availability of any mineral resource that would be of future value to the region. Therefore, no impact would occur.

5.11 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?

Construction Phase

Less Than Significant With Mitigation Incorporated. Construction of the proposed project would require various types of construction equipment, such as scrapers, loaders, graders, and backhoes which would have the potential to create temporary significant noise impacts the approximately two-year construction period (spring 2008 to fall 2010) as described below:

- Mobilization and Site Grubbing, three weeks;
- Rough Site Grading/Soil Export, three months;

- Foundation Forming and Placement, six months;
- Structural Frame, nine months;
- Exterior Skin, ten months;
- Interior Build-Out, nine months;
- Site Improvements/Landscaping, four months.

Noise levels during construction would vary with the type of equipment and machinery in use. Construction generated noise levels for the phases noted above would be higher than the existing ambient noise environment and will be restricted to Monday through Friday, with Saturdays as required and work hours consistent with UCI and City of Irvine policies. Construction noise would be most audible by people in the immediate vicinity, including construction crews, pedestrians, bicyclists, students in adjacent buildings, and resdiential areas in the City of Irvine located across Campus Drive from Site 1. The construction crews routinely work in a noisy environment and are not considered sensitive receptors. The experience of construction noise by passing pedestrians and bicyclists would be momentary and thus less than significant. Students residing in adjacent buildings would be exposed to increased noise levels during the proejct's construction. However any adverse impacts related to such noise would be reduced to less than significant with the incorporation of LRDP EIR MM Noi-2A below[5].

Noi-2A Prior to initiating on-site construction for future projects that implement the 2007 LRDP, UCI shall approve contractor specifications that include measures to reduce construction/ demolition noise to the maximum extent feasible. These measures shall include, but are not limited to, the following:

i. Noise-generating construction activities occurring Monday through Friday shall be limited to the hours of 7:00 A.M. to 7:00 P.M., except during summer, winter, or spring break at which construction may occur at the times approved by UCI.
ii. Noise-generating construction activities occurring on weekends in the vicinity of (can be heard from) off-campus land uses shall be limited to the hours of 9:00 A.M. to 6:00 P.M. on Saturdays, with no construction occurring on Sundays or holidays.
iii. Noise-generating construction activities occurring on weekends in the vicinity of (can be heard from) on-campus residential housing shall be limited to the hours of 9:00 A.M. to 6:00 P.M. on Saturdays, with no construction on Sundays or holidays.
iv. However, as determined by UCI, if on-campus residential housing is unoccupied (during summer, winter, or spring break, for example), or would otherwise be unaffected by construction noise, construction may occur at any time.
v. Construction equipment shall be properly outfitted and maintained with manufacturer recommended noise-reduction devices to minimize construction-generated noise.
vi. Stationary construction noise sources such as generators, pumps or compressors shall be located at least 100 feet from noise-sensitive land uses (i.e., campus housing, classrooms, libraries, and clinical facilities), as feasible.
vii. Laydown and construction vehicle staging areas shall be located at least 100 feet from noise-sensitive land uses (i.e., campus housing, classrooms, libraries, and clinical facilities), as feasible.
viii. All neighboring land uses that would be subject to construction noise shall be informed at least two weeks prior to the start of each construction project, except in an emergency situation.

[5] Although not subject to local regulations such as the City of Irvine Noise Ordinance; UCI strives to meet community standards to ensure compatibility with the local community. Therefore, the City's ordinance is reflected in N-1.

ix. Loud construction activity such as jackhammering, concrete sawing, asphalt removal, pile driving, and large-scale grading operations occurring within 600 feet of a residence or an academic building shall not be scheduled during any finals week of classes. A finals schedule shall be provided to the construction contractor.

Operational Phase

Less Than Significant With Mitigation Incorporated. The noise level generated by the normal operation of the proposed project is not expected to result in a significant increase in the ambient noise level. Deliveries to and/or pickups from the project site and maintenance of the project site may result in increased noise during operation but would not be considered significant. Project-related traffic noise is not expected to result in a substantial permanent increase in ambient noise levels in the project vicinity. The project would be designed in compliance with LRDP EIR MM Noi-1A to reduce noise impacts to sensitive land uses and LRDP EIR MM Noi-1B to reduce potential impacts related to the construction of the parking structure on Site 3.Therefore, exposure of persons to or generation of noise levels in excess of standards during operation of the proposed project would be less than significant.

Noi-1A Prior to project design approval for future projects that implement the 2007 LRDP and include noise-sensitive land uses (i.e., campus housing, classrooms, libraries, and clinical facilities), UCI shall ensure that the project design will adhere to the following state noise standards: 60 dBA CNEL (single-family campus housing); 65 dBA CNEL (multi-family campus housing, dormitories, lodging); and 70 dBA CNEL (classrooms, libraries, clinical facilities). Applicable project design features may include, but are not limited to, the following:

i. Specific window treatments, such as dual glazing, and mechanical ventilation when the 45 dBA CNEL limit within habitable rooms and the 50 dBA CNEL limit within classrooms can only be achieved with a closed window condition.
ii. Setbacks; orientation of usable outdoor living spaces, such as balconies, patios, and common areas, away from roadways; and/or landscaped earthen berms, noise walls, or other solid barriers.

Noi-1B As early as possible in the planning process of future projects that implement the 2007 LRDP and would include new or modified stationary noise sources such as utility plant facilities (constant noise source), major HVAC systems (constant noise source), and parking structures (constant and/or intermittent noise source), UCI shall ensure they are designed in a manner that would minimize the exposure of noise-sensitive land uses (i.e., campus housing, classrooms, libraries, and clinical facilities) to noise levels that exceed the following state noise standards: 60 dBA CNEL (single-family campus housing); 65 dBA CNEL (multi-family campus housing, dormitories, lodging); and 70 dBA CNEL (classrooms, libraries, clinical facilities). If the affected noise-sensitive land uses are already exposed to noise levels in excess of these standards, then the new or modified stationary noise sources shall not increase the ambient noise level by more than 3 dBA. These criteria shall be achieved by:

i. Implementing the following noise reduction measures into the design of the satellite utilities plant, as applicable:
   - Use low-speed fans, baffles, mufflers, or other mechanical system design features to reduce emitted noise;
   - Increase the distance from the noise source to sensitive receptors with setbacks;

- Place equipment inside buildings or within solid enclosures;
- Construct earthen berms, noise walls, or other solid barriers for noise attenuation;
- Eliminate glass, louvers, openings, or vents in the exterior walls of the plant, particularly those facing noise-sensitive land uses. If openings are necessary, install acoustical louvers or baffles on project components at all exterior openings;
- Install silencers on the intake and exhaust system;
- Place cooling towers as close to plant buildings as possible to utilize the buildings as noise barriers; and
- Install integrated noise barriers on the sides of cooling towers.

ii. Implementing the following noise reduction measures into the design of new major HVAC systems, as applicable:
- Install acoustical shielding (parapet wall or near-field noise barrier) around all new equipment; and
- Place equipment below grade in basement space.

iii. Implementing the following noise reduction measures into the design of new parking structures:
- Incorporate architectural design features that attenuate noise including solid panels at locations facing noise-sensitive land uses; and
- Construct earthen berms, noise walls, or other solid barriers between noise-sensitive land uses and parking structures.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant With Mitigation Incorporated. The proposed project will not require the need to perform pile driving but it will require the need to drill for the piles in order to reach suitable materials for foundation support. The pile holes will be drilled by a track-mounted drill rig and a steel reinforced pile cage will be lowered into the hole and then filled with concrete. Implementation of the proposed project will require the removal of paved areas which will require the use of jackhammers resulting in minor groundborne vibration, which is mitigated by Noi-2A (see 5.11 a.) Therefore, impacts would be reduced to below a level of significance with the incorporation of mitigation measure Noi-2A.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant With Mitigation Incorporated. The primary source of noise generated by the proposed project would be related to vehicle trips to and from the sites. Project-related traffic noise is not expected to result in substantial permanent increase in ambient noise levels in the project vicinity and would be within the traffic volumes and resulting noise levels projected in the 2007 LRDP EIR which identified no significant noise impacts from LRDP generated traffic. Deliveries to and/or pickups from the project site and maintenance of the project site may result in a minimal increase in daily ambient noise levels but would be considered less than significant. Noise generated by rooftop mechanical equipment (air conditioning/heating) would not be audible beyond the project site, with typical sound attenuation features to be included in the project design and implementation of LRDP MM Noi-1B (see 5.11 a.). Therefore, implementation of the proposed project would not result in a substantial permanent increase of ambient noise levels and would be considered less than significant.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant With Mitigation Incorporated. Please refer to response 5.11, a above.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project site is neither located within an airport land use plan or two miles of a public airport or public use airport. Therefore, the project would not expose people residing or working in the project area to excessive noise levels and no mitigation measures would be required.

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?

No Impact. The proposed project is not located in the vicinity of any private airstrips. Therefore, the project would not expose people residing or working in the project area to excessive noise levels and no mitigation would be required.

5.12 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)?

Less Than Significant Impact. The approximately 430-acre East Campus presently accommodates a large student residential community comprised of a variety of housing and support facilities for undergraduate, graduate and professional students, as well as students with families. The proposed project would be located on three sites totaling approximately 17.5 acres within the East Campus and together would accommodate 1,760 student-housing beds. The project would extend or increase infrastructure (road extensions/improvements) only to support the proposed project's needs by installing project-level connections to existing infrastructure. Students who would occupy the proposed project may include those not currently residing on, or near the campus, or in Orange County. This would result in a less than significant impact on the housing stock of Orange County and the surrounding region, and is not expected to require the construction of any new housing developments or infrastructure that are not already planned as part of the region's anticipated growth. The proposed project is consistent with the housing goal of the LRDP to house 50 percent of students on campus, and comprises a portion of full build-out of the LRDP analyzed in the LRDP EIR , which concluded less than significant impacts in the area of Population and Housing. Therefore, the proposed project would not induce substantial population growth in the surrounding area. Impacts are considered less than significant and no mitigation would be required.

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact (b and c). Project sites 1 and 3 are relatively flat paved areas (hardscape) with ornamental landscaping and no existing infrastructure. Site 2 is mostly undeveloped and contains a community garden and small paved parking lot. Therefore, implementation of the proposed project would not displace existing housing units or households and no impact would occur.

5.13 PUBLIC SERVICES

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services?

Fire protection?

Less Than Significant Impact. Implementation of the proposed project would result in an increase in the on-campus student population. Assuming that the increase in call generation for fire protection services would be generally equivalent to the increase in campus population, the proposed project call volume from UCI would incrementally increase. According to the CEQA analysis prepared for the 2007 LRDP, the addition to the existing call volume related to the proposed project would be within the determined Station #4 capacity which is the primary responder that serves the UCI main campus. Therefore, Fire Station #4 would be able to accommodate the increased demand for fire protection services on the UCI campus, and implementation of the proposed project would not result in significant impacts related to fire protection and no mitigation measures would be required.

Police protection?

Less Than Significant Impact. UCI campus police provide primary police protection on the UCI Campus. According to the 2007 LRDP, an increase in campus population, such as the proposed project, could result in an increased demand on police services on the campus. The UCI Police Department employs 30 sworn officers. Based on the general goal of one officer per 1,000 people in the population, the UCI Police Department meets the general goal of acceptable levels of service. The growth in student population could require additional officers. However, the one officer per 1,000 people is a general goal and the police department bases its staffing needs on a number of factors such as campus population, calls for service, activity levels, and crime levels. As a result, as the campus population grows, the UCI Police Department would hire additional police officers to serve the community. The addition of one or two police officers to the campus force would not result in the need for new police facilities that could have a physical impact on the environment. Therefore, impacts related to police protection would be less than significant and no mitigation measures would be required.

Schools?

Less than Significant Impact. The proposed project would not generate a significant increase in school-age children living on-campus. Based on the proposed housing unit design, target student population, and K-12 student generation from existing UCI graduate student housing communities, the graduate student housing proposed on Site 1 is not anticipated to generate a significant number of K-12 students and the undergraduate housing on Site 3 is anticipated to generate no K-12 students. The project will not result in the need to alter the existing or construct new schools of which could result in significant impacts on the physical environment.

Parks?

No Impact. Project sites 1 and 3 are relatively flat paved areas (hardscape) with a landscaped perimeter and no existing structures. Project site 2 is undeveloped, with the exception of a community garden and small paved parking lot. These sites do not contain any existing parks and are not planned for such uses in the LRDP. Student resident recreation needs are served by the UCI Anteater Recreation Center and other on-campus recreation amenities. The demand for additional public park facilities is not expected to rise as a result of the proposed project. No impact would occur and no mitigation measures would be required.

Other public facilities?

No Impact. The proposed project is not expected to adversely affect any other public facilities located on- or off-campus. Therefore, no impact to public facilities would occur and no mitigation measures would be required.

5.14 RECREATION

Would the project:

a. 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?

No Impact. The proposed project would provide approximately 1,760 student-housing beds in two communities. Site 3 is an existing paved parking lot on 3.5 acres used to accommodate the Anteater Recreation Center (ARC), a complete state-of-the-art sports and fitness center, adjacent to the project site. The recreational needs of the building's occupants would be met by existing campus facilities, including the ARC and amenities (game room, social lounge, swimming pool) incorporated into the project. Therefore, no impact to parks or other recreation facilities would result from the proposed project and no mitigation would be required.

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?

No Impact. Implementation of the proposed project does not include outdoor parks or require the construction of recreational facilities. Currently, the UCI campus provides recreational areas and facilities in various parts of the campus based on campus-wide needs and LRDP policies. The student housing buildings will have recreational amenities (game room, social lounge, swimming pool). The existing community garden will be relocated to an already graded nearby site as identified on Figure 3. Therefore, the proposed project will not include the development of off-site recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. No impact would occur and no mitigation measures would be required.

5.15 TRANSPORTATION/TRAFFIC

Would the project:

a) Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

Less Than Significant With Mitigation Incorporated. The proposed project will provide on-campus housing to approximately UCI 1,760 students, thereby reducing the need for students to commute from off-campus locations. According to the Traffic Study prepared by Austin-Foust Associates (Appendix B) dated January 2008, the proposed project will not exceed the performance criteria for any of the intersections and off-campus roadway links analyzed within the study area. As shown in Table T-1 below, all the studied locations will operate at an acceptable level of service of LOS C or better with the exception of Culver Drive/Bonita Canyon Drive at Anteater Drive which is expected to operate at an unacceptable LOS E. However, the circulation system analyzed for year 2010 conditions has adequate capacity to accommodate the proposed project (includes widening improvements along westbound Bonita Canyon Drive). In addition, the proposed project does not contribute measurable traffic at Culver Drive/Bonita Canyon Drive at Anteater Drive (i.e., the project ICU does not increase by .02 or more compared to no-project). Additionally, with ongoing implementation of LRDP MMs Tra-1A, C, and D, UCI will continue to reduce vehicle trips and monitor campus trip generations and intersection performance. Therefore, traffic impacts would be considered less than significant.

TABLE T-1
2010 INTERSECTION LOS SUMMARY

Intersection	No-Project				With-Project			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
1. Campus & Bridge/Peltason	.49	A	.66	B	.49	A	.68	B
2. Stanford & Campus	.38	A	.56	A	.39	A	.58	A
3. Berkeley/Peltason & Campus	.51	A	.70	B	.53	A	.72	C
4. Peltason & Pereira	.42	A	.54	A	.42	A	.54	A
5. California & Campus	.44	A	.69	B	.47	A	.79	C
6. California & Adobe Circle N	.20	A	.37	A	.22	A	.41	A
7. California & Arroyo	.26	A	.47	A	.30	A	.49	A
8. California & Adobe Circle N	.24	A	.37	A	.30	A	.46	A
9. California & Anteater	.38	A	.37	A	.40	A	.40	A
10. Culver & Campus	.64	B	.60	A	.64	B	.61	B
11. Culver/Bonita Canyon & Anteater	.94	E	.78	C	.94	E	.79	C

TABLE T-1
2010 INTERSECTION LOS SUMMARY

Intersection	No-Project				With-Project			
	A.M. Peak Hour		P.M. Peak Hour		A.M. Peak Hour		P.M. Peak Hour	
	ICU	LOS	ICU	LOS	ICU	LOS	ICU	LOS
12. Arroyo & Vista Del Campo	.1	A	.11	A	.11	A	.11	A
13. Culver & Vista Del Campo	.34	A	.36	A	.34	A	.36	A

Source: Austin-Foust Associates, 2008

Level of service ranges:
.00 - .60 A

.61 - .70 B
.71 - .80 C
.81 - .90 D
.91 – 1.00 E
Above 1.00 F

Abbreviations: ICU – intersection capacity utilization
LOS – level of service

Tra-1A To reduce on- and off-campus vehicle trips and resulting impacts, UCI will continue to implement a range of Transportation Demand Management (TDM) strategies. Program elements will include measures to increase transit and shuttle use, encourage alternative transportation modes including bicycle transportation, implement parking polices that reduce demand, and implement other administrative mechanisms that reduce vehicle trips to and from the campus. UCI shall monitor the performance of TDM programs through annual surveys.

Tra-1C To enhance transit systems serving the campus and local community, UCI will work cooperatively with the City of Irvine, City of Newport Beach, OCTA and other local agencies to coordinate service and routes of the UCI Shuttle with existing and proposed shuttle and transit programs including the proposed Jamboree/IBC Shuttle, proposed Orange County Great Park Shuttle, Irvine Spectrum Shuttle, and other community transit programs.

Tra-1D UCI will monitor campus trip generation and distribution and the performance of UCITP intersections in relationship to enrollment growth. Monitoring will be conducted in consultation with the City of Irvine and the City of Newport Beach, and will occur at each 3,000-student increase in enrollment (measured as General Campus three-term average headcount), above the 2007-08 General Campus enrollment level. If UCI monitoring determines that LRDP traffic results in significant traffic impacts at UCITP intersections, UCI will implement measures to reduce vehicle trips contributing to the impact or provide "fair share" funding for improvements at the impacted intersections as described in Mitigation Measures Tra-1E and Tra-1F. UCI's share of funding will be determined by the percentage of UCI traffic volumes compared to the total traffic volumes at the impacted intersections.

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

Less Than Significant With Mitigation Incorporated. As discussed above, with continued implementation LRDP EIR MM Tra-1D (see 5.15 a.) the proposed project would not result in a significant adverse impact and will not exceed the performance criteria for any of the intersections and off-campus roadway links analyzed within the study area. Therefore, the proposed project will not either individually or cumulatively exceed LOS standards.

c) Results in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. No airports are located in the project vicinity and due to the nature and size of the proposed project, it would not have the potential to affect air traffic. Therefore, no impact would occur.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

No Impact. The proposed project does not require alterations to existing streets or highways and would not introduce hazardous design features such as sharp curves or dangerous intersections or provide incompatible uses. Access to the project site will be from an existing streets (Campus Drive, Culver Drive, California Avenue, and Arroyo Drive). Implementation of the proposed project would not result in safety hazards from design features or incompatible uses. Therefore, no impact would occur.

e) Result in inadequate emergency access?

No Impact. Construction of the proposed project would not require road closures. In addition, standard contractor specifications imposed by UCI would include a requirement to ensure that roadways surrounding the project site remain accessible to emergency vehicles and crews and open for emergency evacuations. As previously noted, the proposed project does not include any new or alterations to existing vehicular access. Once the project is completed, the ability of fire or emergency vehicles to respond to the project site will remain the same as it currently exists. No impact would occur and no mitigation measures would be required.

f) Result in inadequate parking capacity?

No Impact. The proposed project will result in the removal of 580 existing commuter parking spaces as a result of construction on Site 1 and the removal of approximately 112 existing residential parking spaces on Site 2. The proposed project will result in the construction of 50 residential parking spaces on Site 1, 90 residential parking spaces on Site 2, and 1990 residential parking spaces on Site 3 resulting in a net increase of 2018 residential spaces and a net decrease of 580 commuter spaces. As described in Section 4.13.1.2 of the 2007 LRDP EIR, UCI parking staff conducts a campus wide Transportation Demand Management program and regularly monitors parking permit sales, space utilization, and other parking demand factors. Therefore, with the amount of parking spaces provided and regular monitoring by UCI parking staff, no parking related impacts would occur and no mitigation measures would be required.

g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

Less Than Significant Impact. The UC Sustainable Transportation Policy states that the University will "incorporate alternative means of transportation to/from and within the campus to improve the quality of life on campus and in the surrounding community. The campuses will continue their strong commitment to provide affordable on-campus housing, in order to reduce the volume of commutes to and from campus. These housing goals are detailed in the campuses' Long Range Development Plans." The proposed housing development is consistent with this policy in that it would minimize the volume of commutes to and from campus through the provision of a larger on-campus housing supply. Furthermore, the project contributes to the achievement of the LRDP goal of providing 50 percent on-campus housing at UCI, which is among the highest on-campus housing goals in the University of California system.

In accordance with LRDP EIR Mitigation Measure Tra-1A, UCI continally implements a range of Transportation Demand Management strategies across the campus. UCI will continue to look at ways to reduce the parking demand in the East Campus, including car-sharing opportunities for student residents, which has potential to further reduce the demand for storage parking facilities.

The following practice pertaining to parking structures is included in the Sustainable Transportation Policy guidelines: "to the extent practicable, campuses will develop a business-case analysis for any proposed parking structure projects." A parking structure serving the proposed housing developments is included in the proposed project. For this project it was concluded – on the basis of an analysis which assumes parking ratios of 1 space for each graduate student and 0.75 space for each undergraduate student – that a parking structure is the best utilization of land to meet the project's parking demand.

No adverse changes to the existing alternative transportation systems are planned as a part of the proposed project. The project site is accessible to bike and foot traffic via a system of sidewalks, pathways, and an on-campus shuttle system. The proposed project would expand and add shuttle and bicycle facilities at the project sites.These facilities would provide access to and from the project site.

Therefore, the proposed project would result in less than significant conflicts with policies, plans, or programs that support alternative transportation and no mitigation measures would be required.

5.16 UTILITIES AND SERVICE SYSTEMS

Would the project:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Less Than Significant Impact. Wastewater generated by the proposed project are within the overall campus generation rates identified in the 2007 LRDP and would be of similar generation rates and composition as generated by other student housing facilities on the UCI Campus. On-site sewer lines would need to be placed in all three sites and connected to the main campus sewer systems. Wastewater discharges from this project would flow into the main campus sewer system and would ultimately be treated at the Irvine Ranch Water District (IRWD) or Orange Sanitation Districts' wastewater treatment facilities. Implementation of the proposed project is not expected to exceed wastewater treatment requirements pursuant to RWQCB, as overseen by the Orange County

Sanitation District. Therefore, this impact is considered less than significant and no mitigation measures would be required.

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?

Less Than Significant Impact. The proposed project is consistent with the planned land uses and intensities set forth in the 2007 LRDP. Therefore, the water demand and wastewater generation would be within existing planning projections for both water and wastewater treatment. No new or modified mainline water or wastewater facilities would be required for the proposed project. Domestic, fire, and reclaimed water service for the proposed project would be provided through connections to existing domestic and reclaimed water mains within the project vicinity . Construction of the local water connections would result in less than significant environmental impacts and no mitigation measures would be required.

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?

Less Than Significant Impact. Grading and storm drainage improvements to serve the project will result in minor changes to existing conditions. Currently, project sites 1 and 3 are paved parking lots. Implementation of the proposed project is not anticipated to result in a significant increase in impervious surfaces on these sites. Site 2 is most undeveloped with a community garden and small paved parking lot. Implementation of the proposed project would increase the amount of impervious surfaces at this site. However, the projects sites are included in projections in the UCI Storm Drain Master Plan and existing campus storm drainage facilities would be adequate to accommodate the increased runoff that would result from project implementation. Therefore, the proposed project would not require or result in construction of new storm water drainage facilities or the expansion of existing facilities, which could cause significant environmental effects. Impacts would be considered less than significant and no mitigation measures would be required.

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. The proposed project is consistent with the 2007 LRDP and would not exceed LRDP development intensity levels. Development of this project and the water demand associated with the completed facilities would be consistent with projected LRDP demands and IRWD projections for meeting LRDP water demand. The increased water demand from the proposed project would not require any new or expanded water supply entitlements. Sufficient water supplies would be available to serve the project from existing entitlements and resources. Therefore, impacts are considered less than significant and no mitigation measures would be required.

e. 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?

Less Than Significant Impact. Since the proposed land uses and intensities are consistent with the 2007 LRDP Land Use Element, the increased wastewater generation resulting from the proposed project is consistent with projected LRDP demands. It should be noted that the IRWD plans to expand the capacity of the Michelson Water Reclamation Plant from 18 million gallons per day (mgd) to 33 mgd by the year 2025. The proposed project's increased wastewater generation would be consistent with previous forecasts for this part of the campus, based on the LRDP. Development of

the proposed project would have a minimal impact on the capacity of IRWD's wastewater treatment facilities and would not result in the need for any new or expanded facilities. Therefore, impacts are considered less than significant and no mitigation measures would be required.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Construction and implementation of the project would comply with University of California Green Building policies inlcuding the minimization of solid waste. This includes the diversion of construction waste by 50% or more and the diversion of solid waste be 50%. As a result the proposed project would minimize the amount of solid waste generated by project construction activities (grading, foundation construction, utility connections, and building construction) with construction waste reduced, reused, and/or recycled consistent with UC policy. The amount of construction waste generated would not be expected to significantly impact landfill capacities. . In addition, operation of the proposed project would comply with UCI's solid waste management program and recycle daily waste consistent with UC policy. As a result operation of the proposed project would not result in the need for new solid waste facilities in the County of Orange. Therefore, impacts are considered less than significant and no mitigation measures would be required.

g. Comply with applicable federal, state, and local statues and regulations related to solid waste?

No Impact. In accordance with UCI's standard construction practices, all contractors must properly dispose of construction wastes in accordance with applicable statutes and regulations. Operation of the proposed project would generate the same types of solid wastes as those generated by the other campus facilities. The proposed project would not require any revisions to the UCI solid waste management program and would not result in any violations of or conflicts with state, federal, or local laws governing solid waste disposal and no mitigation measures would be required.

5.17 MANDATORY FINDINGS OF SIGNIFICANCE

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, 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?

Less Than Significant With Mitigation Incorporated. The project site is within an urbanized area of the UCI East Campus and majority of the site has been previously disturbed. The proposed project would be developed on a total of approximately 17.5 acres on three separate sites. Site 1 is an existing paved parking lot on 3-acres. Site 2 is a mostly undeveloped 11-acre parcel that contains a community garden and a small paved parking lot. Site 3 is an existing paved parking lot on 3.5 acres. These sites contain minimal habitat value and do not support sensitive wildlife or plant species. No candidate, sensitive or special status species occupy the project site. Therefore, development of the proposed project would not degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, or threaten to eliminate a plant or animal. However, implementation of the proposed project has the potential to significantly impact native nests including raptors and other migratory nongame birds during construction. Implementation of mitigation measure previously mentioned (B-1), would reduce this impact to less than significant.

As discussed in Section 5.5, Cultural Resources, implementation of the proposed project has the potential to significantly impact cultural resources during site grading/excavation. However, with implementation of the mitigation measure previously mentioned (CR-1), significant impacts to cultural resources would be avoided.

As discussed in Section 5.11, Noise, implementation of the proposed project has the potential to result in significant impacts related to ambient noise increase during construction and intermittent groundborne vibration in the project vicinity. However, with implementation of the mitigation measures previously mentioned (N-1, N-2 & N-3), significant impacts related to ambient noise during construction and to intermittent groundborne vibration would be avoided.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Less Than Significant With Mitigation Incorporated. As Table M-1 indicates, there are nine projects under construction across the UCI campus and two that have been approved and are planned for development in the near future. None of these projects are scheduled to occur on or adjacent the project sites during its construction. All of the projects currently under construction or approved for construction have been reviewed for environmental impacts in accordance with the University of California guidelines for Implementation of CEQA. Mitigation measures are being or will be implemented, where required, to avoid or reduce the severity of potential impacts from each project.

TABLE M-1
UCI PROJECTS CURRENTLY UNDER CONSTRUCTION OR APPROVED/PLANNED FOR DEVELOPMENT

Projects Currently Under Construction		
Project Name	**Gross Square Feet**	**Estimated Completion Date**
Rowland Hall Seismic Improvements	60,000(a)	December 2007
Biological Sciences Unit 3	147,000	February 2008
ICHA Faculty Housing Area 9	90 units	July 2008
Anteater Recreation Center Expansion - Step 3	26,650	September 2008
Engineering Unit 3	122,500	July 2009
Humanities Building	83,883	June 2009
Telemedicine/PRIME LC Facilities	65,000	Summer 2009
Social & Behavioral Sciences Building	130,000	August 2009
Steinhaus Hall Exterior Wall Repair	NA	September 2008
Projects Approved and/or Planned for Development		
Irvine Biomedical Research Facility 4	81,600	Schedule not available
Graduate School of Management	73,000	Schedule not available

(a) New space resulting from seismic retrofit project
Source: UCI, Design & Construction Services, 2007.

Construction

All campus construction projects, including the proposed project, must implement air quality measures to control fugitive dust as required by the SCAQMD. In addition, the proposed project will also be required to implement project-specific controls (Mitigation Measure AQ-1 and AQ-2) to ensure that emissions of reactive organic compounds during the application of architectural coatings and other building sealants do not exceed SCAQMD daily thresholds. Since no other construction projects are currently scheduled in the vicinity of the proposed project, during the same time period, project-related impacts to biological resources, cultural resources, geology and soils, hydrology/water quality, noise, and transportation/traffic are also not considered to be cumulatively considerable. Given the broad distribution of other ongoing projects and the continued implementation of mitigation measures to minimize impacts to air quality, biological resources, cultural resources, geology and soils, hydrology/water quality, and noise, no significant cumulative construction impacts would occur as a result of the proposed project.

Operation

The proposed project is consistent with the building space forecasts in the 2007 LRDP and no significant environmental impacts have been identified in this IS/MND (after mitigation). Primary long-term effects resulting from the additional building intensity and increased capacity to accommodate housing needs associated with future enrollment would include: more building massing within the East Campus area; consistent in scale and massing with other buildings in the vicinity; and an increase in the daily and peak period traffic trips. Therefore, the proposed project would not result in cumulatively considerable aesthetic impacts and would not contribute to cumulative impacts involving expansions to utility facilities.

As discussed in the CEQA analysis prepared for the 2007 LRDP, this project in conjunction with other projects would have the potential to result in cumulative traffic impacts. However, with implementation of the mitigation measures identified in the CEQA analysis of the 2007 LRDP, cumulative traffic related impacts would be considered less than significant. As noted in the response 5.3, b, the project's air emissions during operation would be below the SCAQMD thresholds, which were established to assess the significance of both project level and cumulative impacts.

The proposed project would not result in significant impacts that cannot be mitigated to a level that is less than significant. The analysis in this IS/MND has determined that the proposed project would not have any individually limited or cumulatively considerable impacts.

c. Does the project have environmental effects which would cause substantial adverse effects on human beings, either directly or indirectly?

No Impact. Construction and operation of the proposed project would not cause substantial adverse effects on human beings, either directly or indirectly. The impacts that the proposed project could have on human beings have been reduced to below a level of significance by implementation of mitigation measures. In addition, the proposed project will result in a beneficial impact by providing additional student housing needs for graduates and undergraduate students which will reduce peak hour vehicle trips and reduce impacts on affordable housing stock in the local community.

6.0 REFERENCES

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APPENDICES

APPENDIX A
AIR QUALITY CALCULATIONS

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Urbemis 2007 Version 9.2.2

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\alee\Application Data\Urbemis\Version9a\Projects\UCI.urb9

Project Name: UCI East Campus Student Apartments

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 1/7/2008-2/7/2008 Active Days: 24	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Demolition 01/07/2008-02/07/2008	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Fugitive Dust	0.00	0.00	0.00	0.00	1.60	0.00	1.60	0.33	0.00	0.33	0.00
Demo Off Road Diesel	1.31	8.68	4.91	0.00	0.00	0.68	0.68	0.00	0.62	0.62	700.30
Demo On Road Diesel	0.12	1.61	0.63	0.00	0.01	0.07	0.08	0.00	0.06	0.07	186.92
Demo Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 2/11/2008-6/11/2008 Active Days: 88	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Mass Grading 02/11/2008-06/11/2008	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Mass Grading Dust	0.00	0.00	0.00	0.00	35.78	0.00	35.78	7.47	0.00	7.47	0.00
Mass Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61

Time Slice 6/12/2008-8/12/2008 Active Days: 44	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Fine Grading 06/12/2008-08/12/2008	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Fine Grading Dust	0.00	0.00	0.00	0.00	35.78	0.00	35.78	7.47	0.00	7.47	0.00
Fine Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Time Slice 8/13/2008-11/12/2008 Active Days: 66	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching 08/13/2008-11/12/2008	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 11/13/2008-12/31/2008 Active Days: 35	11.11	**63.59**	**141.99**	**0.16**	0.67	**3.38**	4.05	0.24	**3.08**	3.32	**17,841.45**
Building 11/13/2008-02/12/2010	11.11	63.59	141.99	0.16	0.67	3.38	4.05	0.24	3.08	3.32	17,841.45
Building Off Road Diesel	5.10	26.86	14.71	0.00	0.00	1.78	1.78	0.00	1.63	1.63	2,353.89
Building Vendor Trips	2.56	30.34	22.52	0.05	0.17	1.32	1.49	0.06	1.22	1.27	4,732.53
Building Worker Trips	3.45	6.39	104.75	0.11	0.51	0.28	0.79	0.18	0.24	0.42	10,755.03
Time Slice 1/1/2009-12/31/2009 Active Days: 261	10.40	59.80	132.70	**0.16**	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building 11/13/2008-02/12/2010	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building Off Road Diesel	4.87	25.49	14.31	0.00	0.00	1.70	1.70	0.00	1.56	1.56	2,353.89
Building Vendor Trips	2.40	28.47	21.00	0.05	0.17	1.20	1.37	0.06	1.10	1.16	4,732.71
Building Worker Trips	3.13	5.84	97.38	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,750.24
Time Slice 1/1/2010-2/12/2010 Active Days: 31	9.67	55.52	124.02	**0.16**	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building 11/13/2008-02/12/2010	9.67	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building Off Road Diesel	4.59	24.22	13.93	0.00	0.00	1.59	1.59	0.00	1.47	1.47	2,353.89
Building Vendor Trips	2.24	25.95	19.52	0.05	0.17	1.08	1.25	0.06	0.99	1.05	4,732.81
Building Worker Trips	2.85	5.34	90.56	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,747.12

Time Slice 2/15/2010-3/15/2010 Active Days: 21	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Asphalt 02/15/2010-03/15/2010	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Paving Off-Gas	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.98	18.01	10.28	0.00	0.00	1.57	1.57	0.00	1.44	1.44	1,418.44
Paving On Road Diesel	0.18	2.33	0.90	0.00	0.01	0.10	0.11	0.00	0.09	0.09	317.33
Paving Worker Trips	0.07	0.14	2.36	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.89
Time Slice 3/16/2010-5/14/2010 Active Days: 44	20.39	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Coating 03/16/2010-05/14/2010	20.39	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Architectural Coating	20.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.26	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/12/2008 - 8/12/2008 - Default Fine Site Grading/Excavation Description
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Mass Grading 2/11/2008 - 6/11/2008 - Default Mass Site Grading/Excavation Description
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 3/16/2010 - 5/14/2010 - Default Architectural Coating Description
For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 90%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 90%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:
ROG: 90%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:
ROG: 90%

Phase Assumptions

Phase: Demolition 1/7/2008 - 2/7/2008 - Default Demolition Description

Building Volume Total (cubic feet): 76230.36

Building Volume Daily (cubic feet): 3810.3

On Road Truck Travel (VMT): 44.1

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/12/2008 - 8/12/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 17.5

Maximum Daily Acreage Disturbed: 4.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 2/11/2008 - 6/11/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 17.5

Maximum Daily Acreage Disturbed: 4.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/13/2008 - 11/12/2008 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/15/2010 - 3/15/2010 - Default Paving Description

Acres to be Paved: 4.38

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/13/2008 - 2/12/2010 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

1 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Architectural Coating 3/16/2010 - 5/14/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

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Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

12/5/2007 5:03:31 PM

Urbemis 2007 Version 9.2.2

Detail Report for Summer Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\alee\Application Data\Urbemis\Version9a\Projects\UCI.urb9

Project Name: UCI East Campus Student Apartments

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 1/7/2008-2/7/2008 Active Days: 24	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Demolition 01/07/2008-02/07/2008	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Fugitive Dust	0.00	0.00	0.00	0.00	1.60	0.00	1.60	0.33	0.00	0.33	0.00
Demo Off Road Diesel	1.31	8.68	4.91	0.00	0.00	0.68	0.68	0.00	0.62	0.62	700.30
Demo On Road Diesel	0.12	1.61	0.63	0.00	0.01	0.07	0.08	0.00	0.06	0.07	186.92
Demo Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 2/11/2008-6/11/2008 Active Days: 88	5.39	47.31	24.13	0.00	**87.61**	2.21	**89.82**	**18.30**	2.03	**20.33**	4,029.25
Mass Grading 02/11/2008-06/11/2008	5.39	47.31	24.13	0.00	87.61	2.21	89.82	18.30	2.03	20.33	4,029.25
Mass Grading Dust	0.00	0.00	0.00	0.00	87.60	0.00	87.60	18.29	0.00	18.29	0.00
Mass Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61

Time Slice 6/12/2008-8/12/2008 Active Days: 44	5.39	47.31	24.13	0.00	**87.61**	2.21	**89.82**	**18.30**	2.03	**20.33**	4,029.25
Fine Grading 06/12/2008-08/12/2008	5.39	47.31	24.13	0.00	87.61	2.21	89.82	18.30	2.03	20.33	4,029.25
Fine Grading Dust	0.00	0.00	0.00	0.00	87.60	0.00	87.60	18.29	0.00	18.29	0.00
Fine Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Time Slice 8/13/2008-11/12/2008 Active Days: 66	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching 08/13/2008-11/12/2008	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 11/13/2008-12/31/2008 Active Days: 35	11.11	**63.59**	**141.99**	**0.16**	0.67	**3.38**	4.05	0.24	**3.08**	3.32	**17,841.45**
Building 11/13/2008-02/12/2010	11.11	63.59	141.99	0.16	0.67	3.38	4.05	0.24	3.08	3.32	17,841.45
Building Off Road Diesel	5.10	26.86	14.71	0.00	0.00	1.78	1.78	0.00	1.63	1.63	2,353.89
Building Vendor Trips	2.56	30.34	22.52	0.05	0.17	1.32	1.49	0.06	1.22	1.27	4,732.53
Building Worker Trips	3.45	6.39	104.75	0.11	0.51	0.28	0.79	0.18	0.24	0.42	10,755.03
Time Slice 1/1/2009-12/31/2009 Active Days: 261	10.40	59.80	132.70	**0.16**	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building 11/13/2008-02/12/2010	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building Off Road Diesel	4.87	25.49	14.31	0.00	0.00	1.70	1.70	0.00	1.56	1.56	2,353.89
Building Vendor Trips	2.40	28.47	21.00	0.05	0.17	1.20	1.37	0.06	1.10	1.16	4,732.71
Building Worker Trips	3.13	5.84	97.38	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,750.24
Time Slice 1/1/2010-2/12/2010 Active Days: 31	9.67	55.52	124.02	**0.16**	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building 11/13/2008-02/12/2010	9.67	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building Off Road Diesel	4.59	24.22	13.93	0.00	0.00	1.59	1.59	0.00	1.47	1.47	2,353.89
Building Vendor Trips	2.24	25.95	19.52	0.05	0.17	1.08	1.25	0.06	0.99	1.05	4,732.81
Building Worker Trips	2.85	5.34	90.56	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,747.12

Time Slice 2/15/2010-3/15/2010 Active Days: 21	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Asphalt 02/15/2010-03/15/2010	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Paving Off-Gas	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.98	18.01	10.28	0.00	0.00	1.57	1.57	0.00	1.44	1.44	1,418.44
Paving On Road Diesel	0.18	2.33	0.90	0.00	0.01	0.10	0.11	0.00	0.09	0.09	317.33
Paving Worker Trips	0.07	0.14	2.36	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.89
Time Slice 3/16/2010-5/14/2010 Active Days: 44	**201.51**	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Coating 03/16/2010-05/14/2010	201.51	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Architectural Coating	201.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.26	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77

Phase Assumptions

Phase: Demolition 1/7/2008 - 2/7/2008 - Default Demolition Description

Building Volume Total (cubic feet): 76230.36

Building Volume Daily (cubic feet): 3810.3

On Road Truck Travel (VMT): 44.1

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/12/2008 - 8/12/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 17.5

Maximum Daily Acreage Disturbed: 4.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 2/11/2008 - 6/11/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 17.5

Maximum Daily Acreage Disturbed: 4.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/13/2008 - 11/12/2008 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/15/2010 - 3/15/2010 - Default Paving Description

Acres to be Paved: 4.38

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/13/2008 - 2/12/2010 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

1 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Architectural Coating 3/16/2010 - 5/14/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

12/5/2007 5:03:55 PM

Urbemis 2007 Version 9.2.2

Detail Report for Winter Construction Mitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\alee\Application Data\Urbemis\Version9a\Projects\UCI.urb9

Project Name: UCI East Campus Student Apartments

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Winter Pounds Per Day, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 1/7/2008-2/7/2008 Active Days: 24	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Demolition 01/07/2008-02/07/2008	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Fugitive Dust	0.00	0.00	0.00	0.00	1.60	0.00	1.60	0.33	0.00	0.33	0.00
Demo Off Road Diesel	1.31	8.68	4.91	0.00	0.00	0.68	0.68	0.00	0.62	0.62	700.30
Demo On Road Diesel	0.12	1.61	0.63	0.00	0.01	0.07	0.08	0.00	0.06	0.07	186.92
Demo Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 2/11/2008-6/11/2008 Active Days: 88	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Mass Grading 02/11/2008-06/11/2008	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Mass Grading Dust	0.00	0.00	0.00	0.00	35.78	0.00	35.78	7.47	0.00	7.47	0.00
Mass Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61

Time Slice 6/12/2008-8/12/2008 Active Days: 44	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Fine Grading 06/12/2008-08/12/2008	5.39	47.31	24.13	0.00	35.78	2.21	37.99	7.47	2.03	9.51	4,029.25
Fine Grading Dust	0.00	0.00	0.00	0.00	35.78	0.00	35.78	7.47	0.00	7.47	0.00
Fine Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Time Slice 8/13/2008-11/12/2008 Active Days: 66	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching 08/13/2008-11/12/2008	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 11/13/2008-12/31/2008 Active Days: 35	11.11	**63.59**	**141.99**	**0.16**	0.67	**3.38**	4.05	0.24	**3.08**	3.32	**17,841.45**
Building 11/13/2008-02/12/2010	11.11	63.59	141.99	0.16	0.67	3.38	4.05	0.24	3.08	3.32	17,841.45
Building Off Road Diesel	5.10	26.86	14.71	0.00	0.00	1.78	1.78	0.00	1.63	1.63	2,353.89
Building Vendor Trips	2.56	30.34	22.52	0.05	0.17	1.32	1.49	0.06	1.22	1.27	4,732.53
Building Worker Trips	3.45	6.39	104.75	0.11	0.51	0.28	0.79	0.18	0.24	0.42	10,755.03
Time Slice 1/1/2009-12/31/2009 Active Days: 261	10.40	59.80	132.70	**0.16**	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building 11/13/2008-02/12/2010	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building Off Road Diesel	4.87	25.49	14.31	0.00	0.00	1.70	1.70	0.00	1.56	1.56	2,353.89
Building Vendor Trips	2.40	28.47	21.00	0.05	0.17	1.20	1.37	0.06	1.10	1.16	4,732.71
Building Worker Trips	3.13	5.84	97.38	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,750.24
Time Slice 1/1/2010-2/12/2010 Active Days: 31	9.67	55.52	124.02	**0.16**	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building 11/13/2008-02/12/2010	9.67	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building Off Road Diesel	4.59	24.22	13.93	0.00	0.00	1.59	1.59	0.00	1.47	1.47	2,353.89
Building Vendor Trips	2.24	25.95	19.52	0.05	0.17	1.08	1.25	0.06	0.99	1.05	4,732.81
Building Worker Trips	2.85	5.34	90.56	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,747.12

Time Slice 2/15/2010-3/15/2010 Active Days: 21	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Asphalt 02/15/2010-03/15/2010	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Paving Off-Gas	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.98	18.01	10.28	0.00	0.00	1.57	1.57	0.00	1.44	1.44	1,418.44
Paving On Road Diesel	0.18	2.33	0.90	0.00	0.01	0.10	0.11	0.00	0.09	0.09	317.33
Paving Worker Trips	0.07	0.14	2.36	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.89
Time Slice 3/16/2010-5/14/2010 Active Days: 44	20.39	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Coating 03/16/2010-05/14/2010	20.39	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Architectural Coating	20.12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.26	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/12/2008 - 8/12/2008 - Default Fine Site Grading/Excavation Description
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Mass Grading 2/11/2008 - 6/11/2008 - Default Mass Site Grading/Excavation Description
For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 3/16/2010 - 5/14/2010 - Default Architectural Coating Description
For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 90%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 90%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:
ROG: 90%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:
ROG: 90%

Phase Assumptions

Phase: Demolition 1/7/2008 - 2/7/2008 - Default Demolition Description

Building Volume Total (cubic feet): 76230.36

Building Volume Daily (cubic feet): 3810.3

On Road Truck Travel (VMT): 44.1

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/12/2008 - 8/12/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 17.5

Maximum Daily Acreage Disturbed: 4.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 2/11/2008 - 6/11/2008 - Default Mass Site Grading/Excavation Description

Total Acres Disturbed: 17.5

Maximum Daily Acreage Disturbed: 4.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/13/2008 - 11/12/2008 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/15/2010 - 3/15/2010 - Default Paving Description

Acres to be Paved: 4.38

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/13/2008 - 2/12/2010 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day

1 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Architectural Coating 3/16/2010 - 5/14/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

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Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.2

Detail Report for Winter Construction Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\alee\Application Data\Urbemis\Version9a\Projects\UCI.urb9

Project Name: UCI East Campus Student Apartments

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Winter Pounds Per Day, Unmitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 1/7/2008-2/7/2008 Active Days: 24	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Demolition 01/07/2008-02/07/2008	1.48	10.36	6.75	0.00	1.61	0.75	2.36	0.34	0.69	1.03	1,011.70
Fugitive Dust	0.00	0.00	0.00	0.00	1.60	0.00	1.60	0.33	0.00	0.33	0.00
Demo Off Road Diesel	1.31	8.68	4.91	0.00	0.00	0.68	0.68	0.00	0.62	0.62	700.30
Demo On Road Diesel	0.12	1.61	0.63	0.00	0.01	0.07	0.08	0.00	0.06	0.07	186.92
Demo Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 2/11/2008-6/11/2008 Active Days: 88	5.39	47.31	24.13	0.00	**87.61**	2.21	**89.82**	**18.30**	2.03	**20.33**	4,029.25
Mass Grading 02/11/2008-06/11/2008	5.39	47.31	24.13	0.00	87.61	2.21	89.82	18.30	2.03	20.33	4,029.25
Mass Grading Dust	0.00	0.00	0.00	0.00	87.60	0.00	87.60	18.29	0.00	18.29	0.00
Mass Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61

Time Slice 6/12/2008-8/12/2008 Active Days: 44	5.39	47.31	24.13	0.00	**87.61**	2.21	**89.82**	**18.30**	2.03	**20.33**	4,029.25
Fine Grading 06/12/2008-08/12/2008	5.39	47.31	24.13	0.00	87.61	2.21	89.82	18.30	2.03	20.33	4,029.25
Fine Grading Dust	0.00	0.00	0.00	0.00	87.60	0.00	87.60	18.29	0.00	18.29	0.00
Fine Grading Off Road Diesel	5.34	47.22	22.61	0.00	0.00	2.21	2.21	0.00	2.03	2.03	3,873.64
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.05	0.09	1.52	0.00	0.01	0.00	0.01	0.00	0.00	0.01	155.61
Time Slice 8/13/2008-11/12/2008 Active Days: 66	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching 08/13/2008-11/12/2008	2.37	20.19	9.68	0.00	0.01	1.00	1.01	0.00	0.92	0.92	1,839.12
Trenching Off Road Diesel	2.33	20.12	8.46	0.00	0.00	1.00	1.00	0.00	0.92	0.92	1,714.64
Trenching Worker Trips	0.04	0.07	1.21	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.49
Time Slice 11/13/2008-12/31/2008 Active Days: 35	11.11	**63.59**	**141.99**	**0.16**	0.67	**3.38**	4.05	0.24	**3.08**	3.32	**17,841.45**
Building 11/13/2008-02/12/2010	11.11	63.59	141.99	0.16	0.67	3.38	4.05	0.24	3.08	3.32	17,841.45
Building Off Road Diesel	5.10	26.86	14.71	0.00	0.00	1.78	1.78	0.00	1.63	1.63	2,353.89
Building Vendor Trips	2.56	30.34	22.52	0.05	0.17	1.32	1.49	0.06	1.22	1.27	4,732.53
Building Worker Trips	3.45	6.39	104.75	0.11	0.51	0.28	0.79	0.18	0.24	0.42	10,755.03
Time Slice 1/1/2009-12/31/2009 Active Days: 261	10.40	59.80	132.70	**0.16**	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building 11/13/2008-02/12/2010	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
Building Off Road Diesel	4.87	25.49	14.31	0.00	0.00	1.70	1.70	0.00	1.56	1.56	2,353.89
Building Vendor Trips	2.40	28.47	21.00	0.05	0.17	1.20	1.37	0.06	1.10	1.16	4,732.71
Building Worker Trips	3.13	5.84	97.38	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,750.24
Time Slice 1/1/2010-2/12/2010 Active Days: 31	9.67	55.52	124.02	**0.16**	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building 11/13/2008-02/12/2010	9.67	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
Building Off Road Diesel	4.59	24.22	13.93	0.00	0.00	1.59	1.59	0.00	1.47	1.47	2,353.89
Building Vendor Trips	2.24	25.95	19.52	0.05	0.17	1.08	1.25	0.06	0.99	1.05	4,732.81
Building Worker Trips	2.85	5.34	90.56	0.11	0.51	0.29	0.80	0.18	0.25	0.43	10,747.12

Time Slice 2/15/2010-3/15/2010 Active Days: 21	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Asphalt 02/15/2010-03/15/2010	3.78	20.48	13.53	0.01	0.02	1.67	1.69	0.01	1.53	1.54	2,015.66
Paving Off-Gas	0.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.98	18.01	10.28	0.00	0.00	1.57	1.57	0.00	1.44	1.44	1,418.44
Paving On Road Diesel	0.18	2.33	0.90	0.00	0.01	0.10	0.11	0.00	0.09	0.09	317.33
Paving Worker Trips	0.07	0.14	2.36	0.00	0.01	0.01	0.02	0.00	0.01	0.01	279.89
Time Slice 3/16/2010-5/14/2010 Active Days: 44	**201.51**	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Coating 03/16/2010-05/14/2010	201.51	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77
Architectural Coating	201.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.26	0.49	8.36	0.01	0.05	0.03	0.07	0.02	0.02	0.04	991.77

Phase Assumptions

Phase: Demolition 1/7/2008 - 2/7/2008 - Default Demolition Description

Building Volume Total (cubic feet): 76230.36

Building Volume Daily (cubic feet): 3810.3

On Road Truck Travel (VMT): 44.1

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 6/12/2008 - 8/12/2008 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 17.5

Maximum Daily Acreage Disturbed: 4.38

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Mass Grading 2/11/2008 - 6/11/2008 - Default Mass Site Grading/Excavation Description
Total Acres Disturbed: 17.5
Maximum Daily Acreage Disturbed: 4.38
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
1 Scrapers (313 hp) operating at a 0.72 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 8/13/2008 - 11/12/2008 - Default Trenching Description
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 2/15/2010 - 3/15/2010 - Default Paving Description
Acres to be Paved: 4.38
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 11/13/2008 - 2/12/2010 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
1 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Pumps (53 hp) operating at a 0.74 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Architectural Coating 3/16/2010 - 5/14/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Urbemis 2007 Version 9.2.2

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\alee\Application Data\Urbemis\Version9a\Projects\UCI.urb9

Project Name: UCI East Campus Student Apartments

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	11.11	63.59	141.99	0.16	87.61	3.38	89.82	18.30	3.08	20.33	17,841.45
2008 TOTALS (lbs/day mitigated)	11.11	63.59	141.99	0.16	35.78	3.38	37.99	7.47	3.08	9.51	17,841.45
2009 TOTALS (lbs/day unmitigated)	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
2009 TOTALS (lbs/day mitigated)	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
2010 TOTALS (lbs/day unmitigated)	201.51	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
2010 TOTALS (lbs/day mitigated)	20.39	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81

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AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	31.43	9.82	26.00	0.00	0.08	0.08	12,302.71
TOTALS (lbs/day, mitigated)	30.50	9.82	26.00	0.00	0.08	0.08	12,302.71
Percent Reduction	2.96	0.00	0.00	NaN	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	24.13	28.40	204.24	0.15	25.73	5.35	16,699.09

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	55.56	38.22	230.24	0.15	25.81	5.43	29,001.80

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

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Urbemis 2007 Version 9.2.2

Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Documents and Settings\alee\Application Data\Urbemis\Version9a\Projects\UCI.urb9

Project Name: UCI East Campus Student Apartments

Project Location: South Coast AQMD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	11.11	63.59	141.99	0.16	87.61	3.38	89.82	18.30	3.08	20.33	17,841.45
2008 TOTALS (lbs/day mitigated)	11.11	63.59	141.99	0.16	35.78	3.38	37.99	7.47	3.08	9.51	17,841.45
2009 TOTALS (lbs/day unmitigated)	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
2009 TOTALS (lbs/day mitigated)	10.40	59.80	132.70	0.16	0.67	3.19	3.86	0.24	2.91	3.15	17,836.84
2010 TOTALS (lbs/day unmitigated)	201.51	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81
2010 TOTALS (lbs/day mitigated)	20.39	55.52	124.02	0.16	0.67	2.97	3.64	0.24	2.71	2.94	17,833.81

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AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	27.80	9.61	4.09	0.00	0.02	0.02	12,269.68
TOTALS (lbs/day, mitigated)	26.87	9.61	4.09	0.00	0.02	0.02	12,269.68
Percent Reduction	3.35	0.00	0.00	NaN	0.00	0.00	0.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	22.85	33.04	209.60	0.15	25.73	5.35	15,311.18

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	50.65	42.65	213.69	0.15	25.75	5.37	27,580.86

Both Area and Operational Mitigation must be turned on to get a combined mitigated total.

APPENDIX B
TRAFFIC STUDY

University of California, Irvine

EAST CAMPUS STUDENT HOUSING

Traffic Study

January 2008

AUSTIN-FOUST ASSOCIATES, INC.

University of California, Irvine

EAST CAMPUS STUDENT HOUSING
Traffic Study

Prepared by:

Austin-Foust Associates, Inc.
2223 East Wellington Avenue, Suite 300
Santa Ana, California 92701-3161
(714) 667-0496

January 8, 2008

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University of California, Irvine
EAST CAMPUS STUDENT HOUSING
Traffic Study

This report summarizes the results of a traffic analysis for the proposed student housing development and supporting parking structure on the east side of the University of California, Irvine, (UCI) main campus.

INTRODUCTION

The project comprises approximately 1,760 beds on two residential sites and a five- to seven-level 1,674-space parking structure and 314 surface parking spaces on a third site serving both student housing communities (see Figure 1). Located north of Adobe Circle North, Site 1 is a 386-unit residential community for married and graduate students providing 562 beds. Site 2, located west of Arroyo Drive, is a 339-unit residential community for single undergraduate students providing 1,198 beds. The parking structure/surface parking serving these two residential communities is centrally located to the two student housing communities in Site 3 just east of California Avenue and is also intended to provide short-term parking needs of the nearby recreation center. Surface parking will also be provided at Sites 1 and 2, 51 and 91 spaces, respectively.

The existing UCI Long Range Development Plan (LRDP) was adopted in 1989 and has been amended eight times, most notably in 1995 when LRDP circulation and open space elements were reconfigured to reflect changes in regional circulation patterns and to address campus and regional habitat and open space planning goals. The LRDP established a land use plan and physical planning framework to accommodate projected enrollment levels, additional academic facilities and housing, and the on-campus circulation system. The LRDP was further updated in 2007, including changes to enrollment, housing, academic uses, and minor changes to the on-site circulation system. The baseline (no-project) condition in this report assumes no growth on the campus beyond the existing (Fall 2007) population and level of development.

The proposed project is within the development limits of the LRDP and hence does not change the findings of prior LRDP analyses. Hence long-range traffic analysis findings would be in conformance

Source: UCI

Figure 1

PROJECT SITES

with those contained in the traffic report for the LRDP. For this reason, no new long-range impact analysis has been carried out for the overall campus roadway system.

ANALYSIS SCOPE AND METHODOLOGY

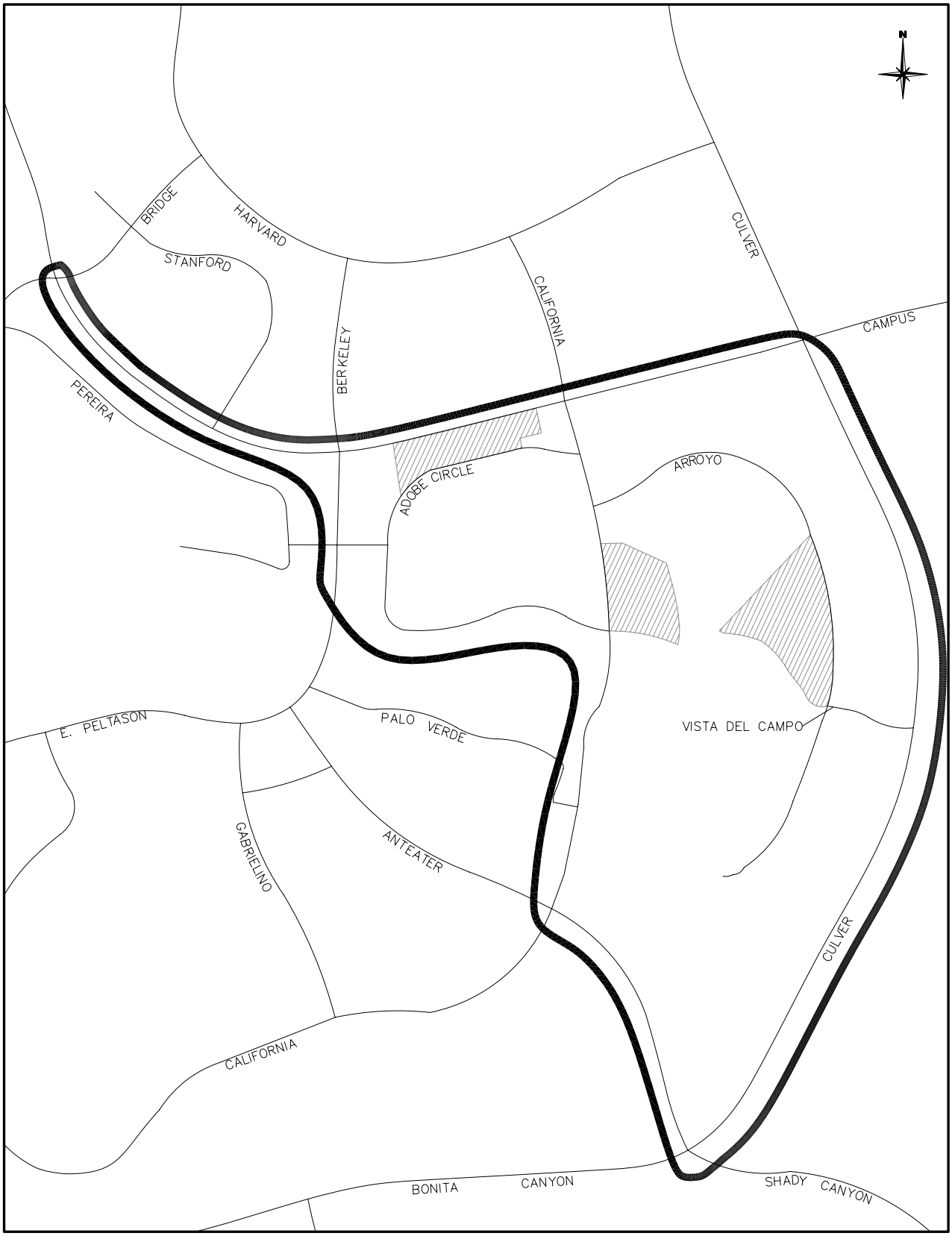
The locations analyzed in this traffic study fall within the area illustrated earlier in Figure 2. Since the project is within the development limits of the adopted LRDP, any necessary mitigation measures required by the project that are identified in this report would be included in the traffic improvement needs for overall campus development identified in the LRDP. The project would contribute to the fee system established in the LRDP for off-campus traffic improvements. The focus of this study is to analyze the project in a short-range time frame thereby helping to identify LRDP traffic improvements that would be needed sooner rather than later. The study area was determined by where the project impact becomes insignificant on a peak hour basis (less than .02 difference).

The short-range time frame used in this analysis represents the amount of growth that is projected to occur in the next three years (referred to as year 2010) with the project built out in two years. Year 2010 baseline (no-project) volumes were formulated using the existing traffic count volumes (which were collected in 2007) as a base, and applying a three percent annual growth factor for three years (nine percent total). Project-generated traffic volumes were then taken from the University of California, Irvine, Main Campus Traffic Model (UCI MCTM) and added to the year 2010 no-project volumes, resulting in the year 2010 with-project volumes.

PERFORMANCE CRITERIA

The traffic analysis utilizes a set of performance criteria for evaluating intersection capacity to determine potential project impacts. Traffic level of service (LOS) is designated “A” through “F” with LOS “A” representing free flow conditions and LOS “F” representing severe traffic congestion. Table 1 summarizes the volume/capacity (V/C) ranges that correspond to LOS “A” through “F”. The V/C ranges are designated in the General Plan for the City of Irvine.

Average daily traffic (ADT) volumes are presented for all study area roadway link locations but only the volume/capacity of off-campus roadways in the study area will be analyzed. The traffic analysis also examines AM and PM peak hour volumes for study area intersections. Volumes and capacities are



Legend

Analysis Boundary

Project Sites

Figure 2

STUDY AREA

Table 1

VOLUME/CAPACITY (V/C) RATIOS AND
LEVEL OF SERVICE (LOS) RANGES

LOS	V/C Value Ranges
A	.00 – .60
B	.61 – .70
C	.71 – .80
D	.81 – .90
E	.91 – 1.00
F	Above 1.00

compared by means of intersection capacity utilization (ICU) values. The intersection capacity analysis examines AM and PM peak hour volumes and ICUs at the intersections being analyzed in the defined study area. Adopted by the City of Irvine in August 2004, this performance criteria is summarized in Table 2.

The target LOS is "D" or better (or LOS "E" for locations in City of Irvine Planning Areas 33 (PA33) and 36 (PA36)), which is equivalent to a maximum V/C or ICU value of .90 (or 1.00 for PA33 and PA36 locations). Since UCI does not have an adopted performance criteria for intersections, the City of Irvine's performance criteria was used for the analysis to identify project impacts. Also, it should be noted that there are no locations in the study area located in PA33 and PA36. Table 3 summarizes the general LOS descriptions for signalized intersections.

PROJECT DESCRIPTION

The project comprises 1,760 beds in two student housing communities. The 1,674-space parking structure and 456 surface parking spaces on all three project sites will provide the parking to accommodate these two housing communities. The parking provided for the project, including the spaces in the parking structure and surface parking located in each site, does not generate trips but the uses that it serves do (i.e., the proposed project and the nearby recreation center). Table 4 summarizes the trip generation characteristics for the proposed project. As can be seen here, when fully utilized, the project will generate approximately 3,364 average daily trips (ADT) of which 199 and 273 (approximately six and eight percent of the ADT) will be in the AM and PM peak hours, respectively.

Figure 3 presents the project trip distribution for the conditions analyzed here. The trip distribution was derived from the Irvine Transportation Analysis Traffic Model (ITAM) and is based on ADT volumes. These percentages differ slightly in the peak hours, and the traffic model uses the individual peak distributions to assign peak hour trips.

EXISTING TRAFFIC CONDITIONS

The existing arterial highway system in the study area is illustrated in Figure 4 and the current ADT volumes are illustrated in Figure 5. The ADT counts were collected in 2007.

Table 2

PERFORMANCE CRITERIA FOR LOCATIONS ANALYZED WITHIN THE STUDY AREA

I. Arterial Roads

V/C Calculation Methodology

Level of service based on average daily traffic (ADT) volume/capacity (V/C) ratios and calculated using the following capacities:

City of Irvine

Major Arterial	8 lanes	72,000
	6 lanes	54,000
Primary Arterial	4 lanes	32,000
Secondary Arterial	4 lanes	28,000
Commuter	2 lanes	13,000

UCI

Campus Primary	4 lanes	37,500
Campus Collector	4 lanes	25,000
Campus Collector	2 lanes	12,500
Campus Local	2 lanes	12,500

As required by the City of Irvine Link Capacity Analysis guidelines, arterial deficiencies identified based on ADT V/C ratios are to be further examined using peak hour data.

Performance Standard

City of Irvine

Arterials in Irvine Planning Area 33 (Spectrum 1) and Planning Area 36 (Irvine Business Complex/IBC): Level of Service "E" (peak hour V/C less than or equal to 1.00). All other arterials: Level of Service "D" (peak hour V/C less than or equal to 0.90).

UCI

No performance standard specified for ADT V/C ratios.

Mitigation Requirement

For arterial roads with a V/C greater than the acceptable level of service, mitigation of the project contribution is required to bring link location back to acceptable level of service where the deficiency is caused by the project or to no-project conditions or better for locations where the project adds to a deficient condition by .02 or greater for locations in the City of Irvine. Without a performance standard, no mitigation is required for arterial roads in UCI.

Table 2 (cont.)
PERFORMANCE CRITERIA FOR LOCATIONS ANALYZED WITHIN THE STUDY AREA

II. Intersections

V/C Calculation Methodology

Level of service based on peak hour intersection capacity utilization (ICU) values and calculated using the following assumptions:

City of Irvine, UCI

Saturation Flow Rate: 1,700 vehicles/hour/lane
Clearance Interval: .05
Right-Turn-On-Red Utilization Factor*: .75

* "De-facto" right-turn lane is assumed in the ICU calculation if 19 feet from edge to outside of through-lane exists and parking is prohibited during peak periods.

Performance Standard

Intersections in Irvine Planning Area 36 (Irvine Business Complex/IBC): Level of Service "E" (peak hour ICU less than or equal to 1.00). All other intersections: Level of Service "D" (peak hour ICU less than or equal to .90).

Mitigation Requirement

For ICU greater than the acceptable level of service, mitigation of the project contribution is required to bring intersection back to acceptable level of service where the deficiency is caused by the project or to no-project conditions or better for locations where the project adds to a deficient condition by .02 or greater for locations in the City of Irvine and UCI.

Table 3

LEVEL OF SERVICE DESCRIPTIONS – SIGNALIZED INTERSECTIONS

Levels of service (LOS) for signalized intersections are defined in terms of control delay as follows:

LOS	DESCRIPTION	DELAY PER VEHICLE (secs)
A	LOS "A" describes operations with low control delay, up to 10 seconds per vehicle. This LOS occurs when progression is extremely favorable and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.	< 10
B	LOS "B" describes operations with control delay greater than 10 and up to 20 seconds per vehicle. This level generally occurs with good progression, short cycle lengths, or both. More vehicles stop than the LOS "A", causing higher levels of delay.	10 – 20
C	LOS "C" describes operations with control delay greater than 20 and up to 35 seconds per vehicle. These higher delays may result from only fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level. Cycle failure occurs when a given green phase does not serve queued vehicles, and overflows occur. The number of vehicles stopping is significant at this level, though many still pass through the intersection without stopping.	20 – 35
D	LOS "D" describes operations with control delay greater than 35 and up to 55 seconds per vehicle. At LOS "D", the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, and high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.	35 – 55
E	LOS "E" describes operations with control delay greater than 55 and up to 80 seconds per vehicle. These high delay values generally indicate poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent.	55 – 80
F	LOS "F" describes operations with control delay in excess of 80 seconds per vehicle. This level, considered unacceptable to most drivers, often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of lane groups. It may also occur at high V/C ratios with many individual cycle failures. Poor progression and long cycle lengths may also contribute significantly to high delay levels.	> 80

Source: Highway Capacity Manual 2000, Transportation Research Board, National Research Council

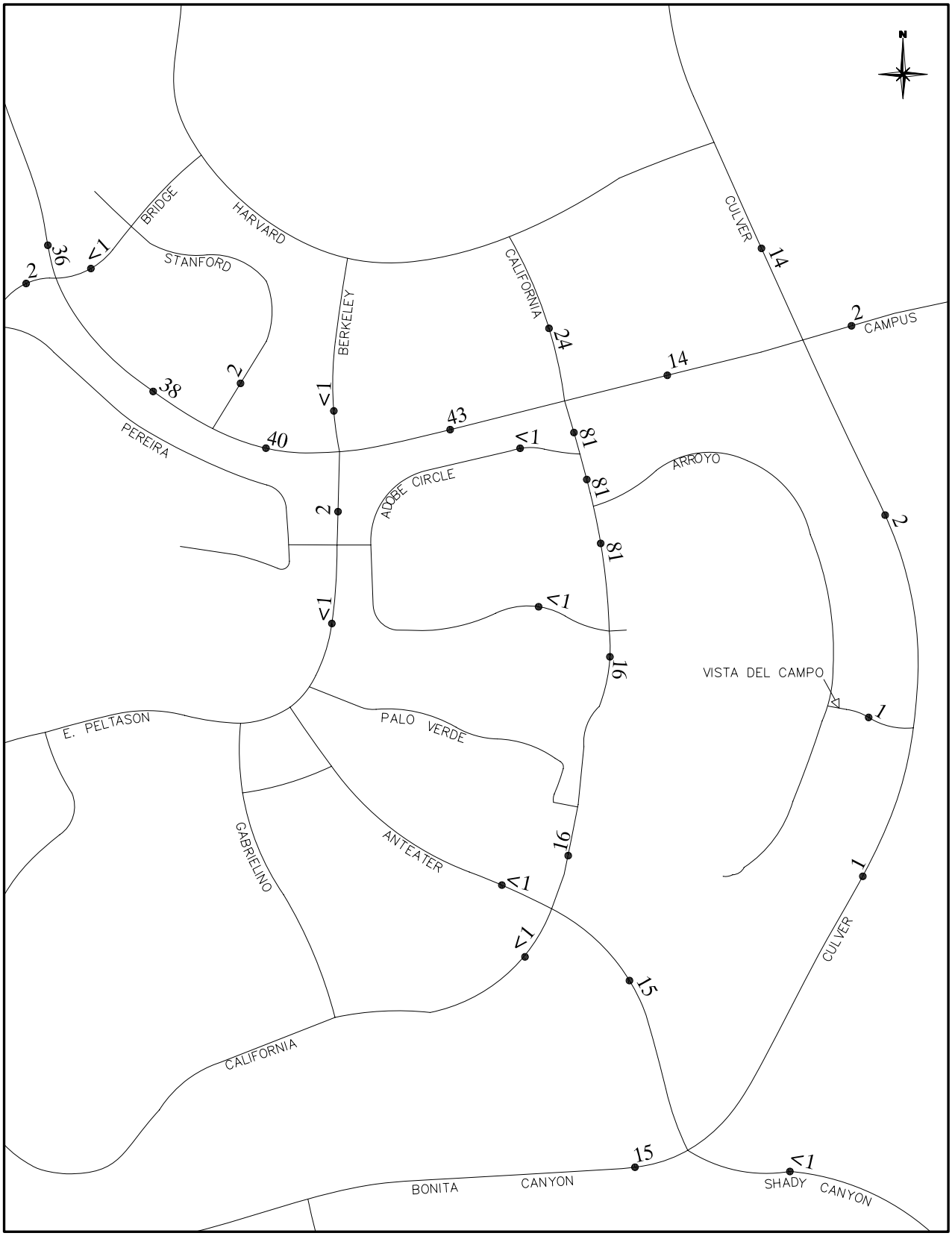
Table 4

PROJECT LAND USE AND TRIP GENERATION SUMMARY

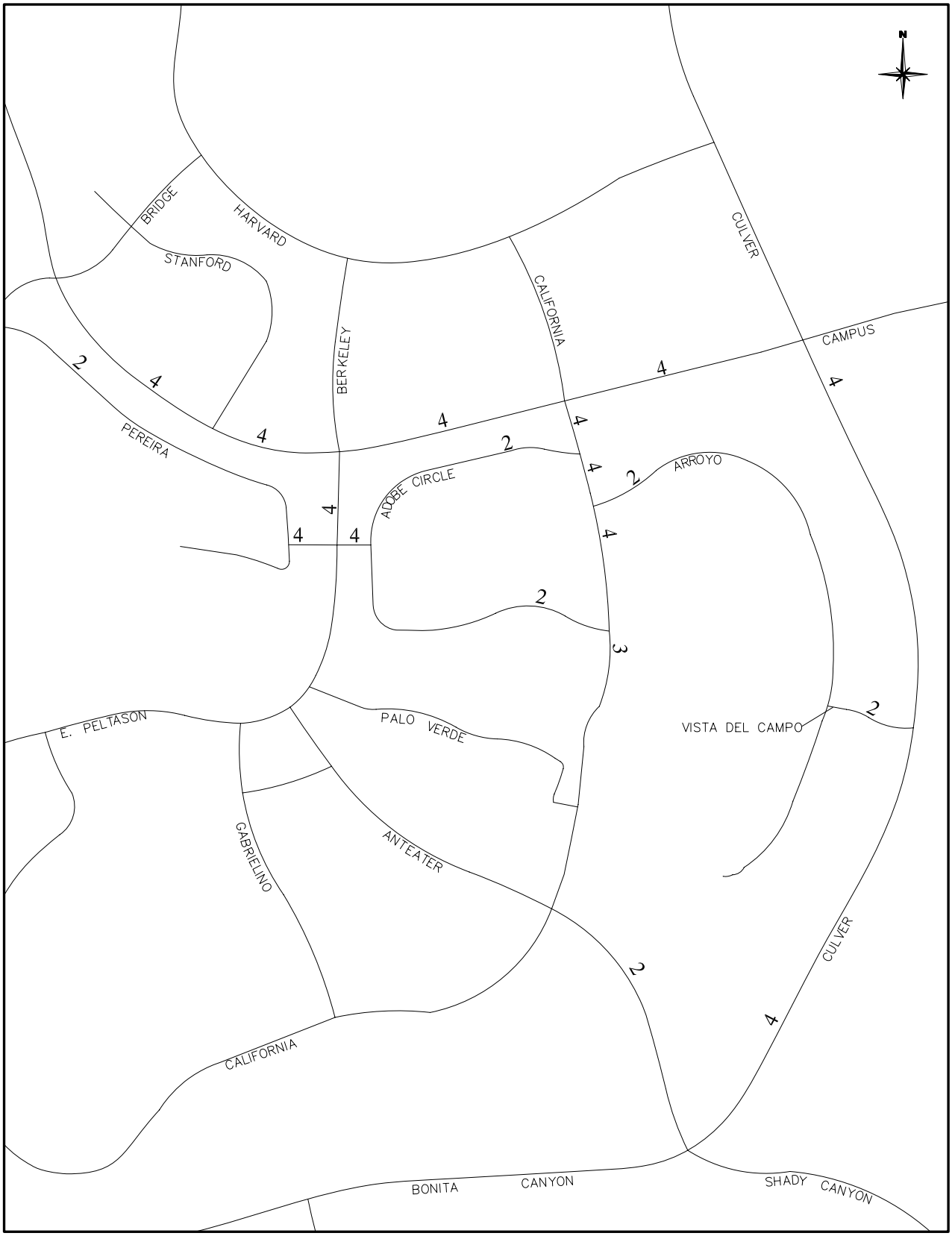
Land Use	Amount /Unit	AM Peak Hour			PM Peak Hour			ADT
		In	Out	Total	In	Out	Total	
Trip Rates								
Married/Graduate Housing	Beds	.011	.109	.119	.094	.071	.165	2.125
Single Undergraduate Housing	Beds	.017	.093	.110	.093	.057	.150	1.811
Proposed Project								
Site 1								
Married/Graduate Housing	562 Beds	6	61	67	53	40	93	1,194
Site 2								
Single Undergraduate Housing	1,198 Beds	20	112	132	112	68	180	2,170
Total Sites 1 and 2	**1,760 Beds**	**26**	**173**	**199**	**165**	**108**	**273**	**3,364**

Abbreviations: ADT – average daily trips

Note: Project parking is provided by the parking structure and surface parking lots which do not generate trips. However, the uses that the parking serves do. The trips for the project are distributed where parking is provided.



Legend	Figure 3
XX Percent of project trip distribution	PROJECT TRIP DISTRIBUTION

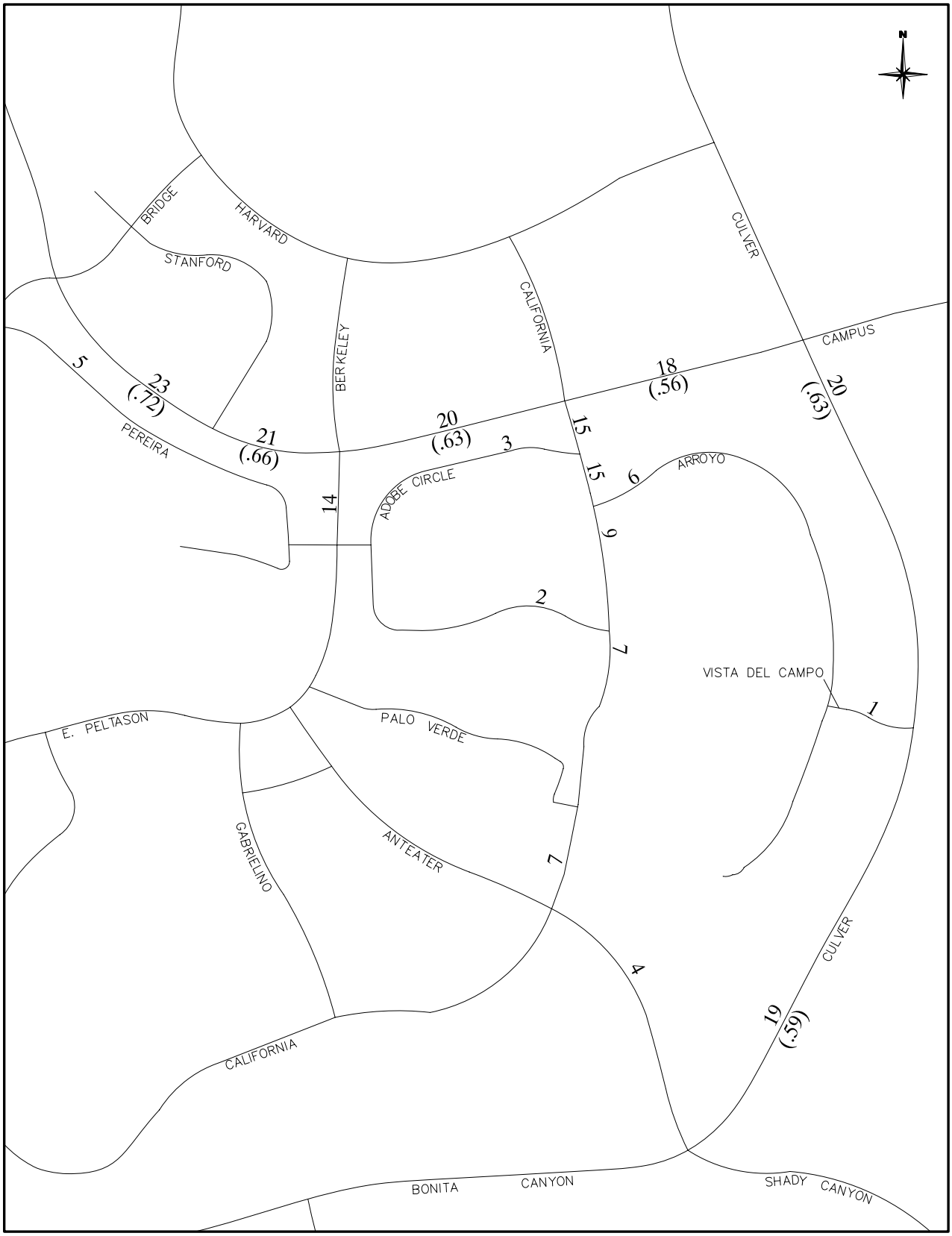


Legend

X Midblock Lanes

Figure 4

CIRCULATION SYSTEM (PROJECT VICINITY)



Legend

XX (.YY) — ADT Volume (000s) / Volume/Capacity Ratio (Off-Campus Only)

Figure 5

EXISTING (2007) ADT VOLUMES

Peak hour intersection turn movement counts collected in 2007 are presented in Figures 6 and 7 for the AM and PM peak hour, respectively, for the intersection locations shown in Figure 8. The ICU values for these counts are summarized in Table 5. The lane configurations assumed in these ICU calculations can be found in Appendix A. The target LOS for intersections is LOS "D" (maximum ICU = .90). According to this criteria, all intersections in the study area are at or below the target LOS.

PROJECT IMPACT ANALYSIS

As discussed earlier, the short-range time frame used in this analysis represents the amount of growth that is projected to occur in the next three years with the proposed project built out in two years, and is referred to as year 2010. Year 2010 no-project volumes were formulated using the existing traffic count volumes (which were collected in 2007) as a base, and applying a three percent annual growth factor for three years (nine percent total). Project-generated traffic volumes were then taken from the UCI MCTM traffic model and added to the year 2010 no-project volumes, resulting in the year 2010 with-project volumes. The no-project conditions assume that there is no change in the existing land use conditions at UCI between now and year 2010.

Figure 9 presents the year 2010 no-project ADT volumes, and Figure 10 shows the corresponding volumes with the addition of project-generated traffic. All off-campus roadway link locations are forecast to operate at acceptable level. The ADT increases due to the project are minor and do not cause adverse impacts on the off-campus roadways.

The peak hour volumes for year 2010 no-project and with-project for the intersections analyzed in the study area are presented in Figures 11 through 14. Table 6 summarizes the corresponding peak hour ICU values (see Appendix A for actual ICU calculation worksheets) for short-range (year 2010) with project conditions and shows that all locations are operating at an acceptable level of service of LOS "D" or better with the exception of Culver Drive/Bonita Canyon Drive at Anteater Drive/Shady Canyon Drive which is expected to operate deficiently in the AM peak hour (i.e., the LOS is worse than the adopted LOS performance standard) with or without the project. This may indicate that the widening improvement along the westbound direction of Bonita Canyon Drive would need to be accelerated to accommodate future traffic. The project does not contribute measurable traffic at the intersection (i.e., the project ICU does not increase by .02 or more compared to no-project). Therefore, no location is adversely impacted by the project.

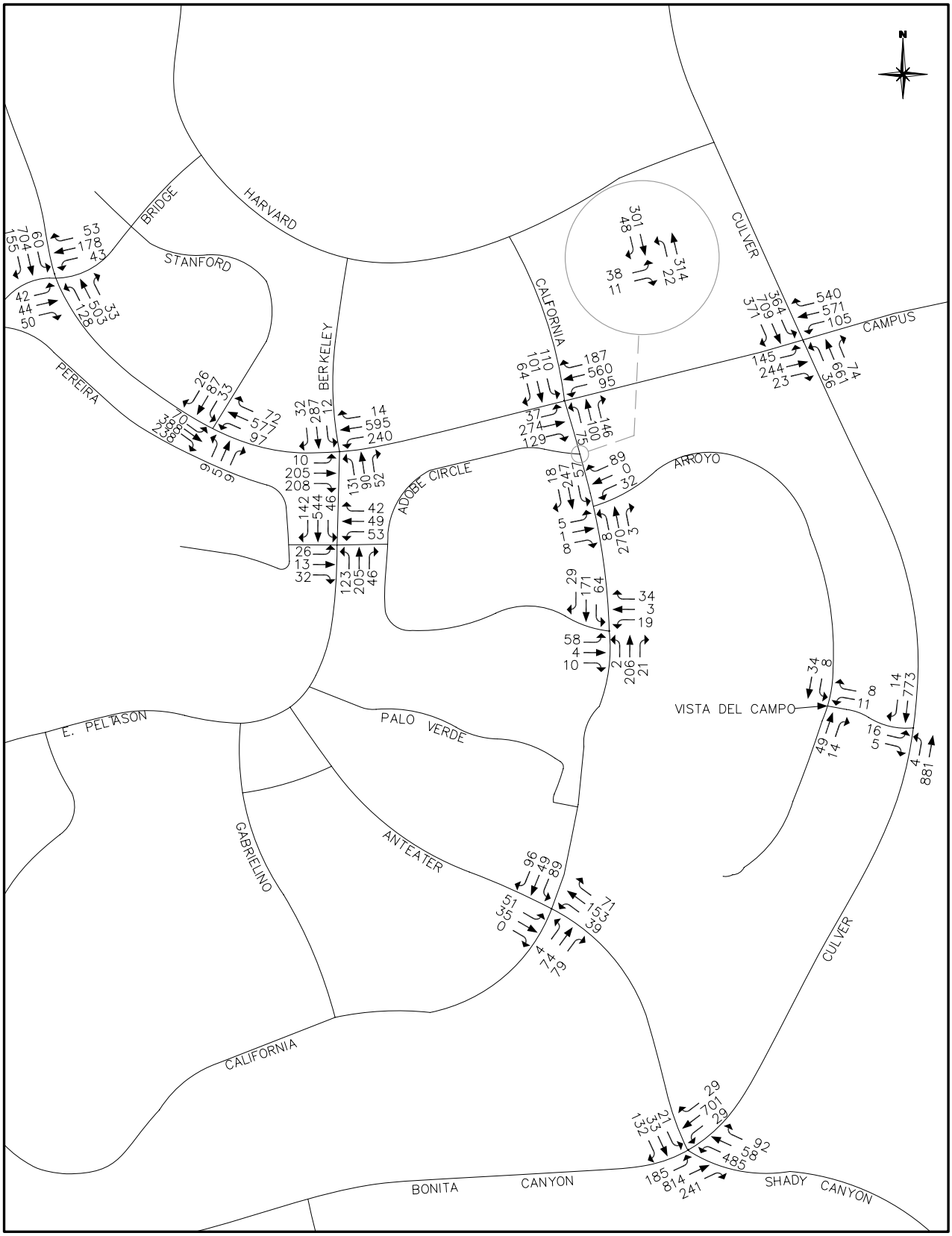


Figure 6

EXISTING (2007) AM PEAK HOUR VOLUMES

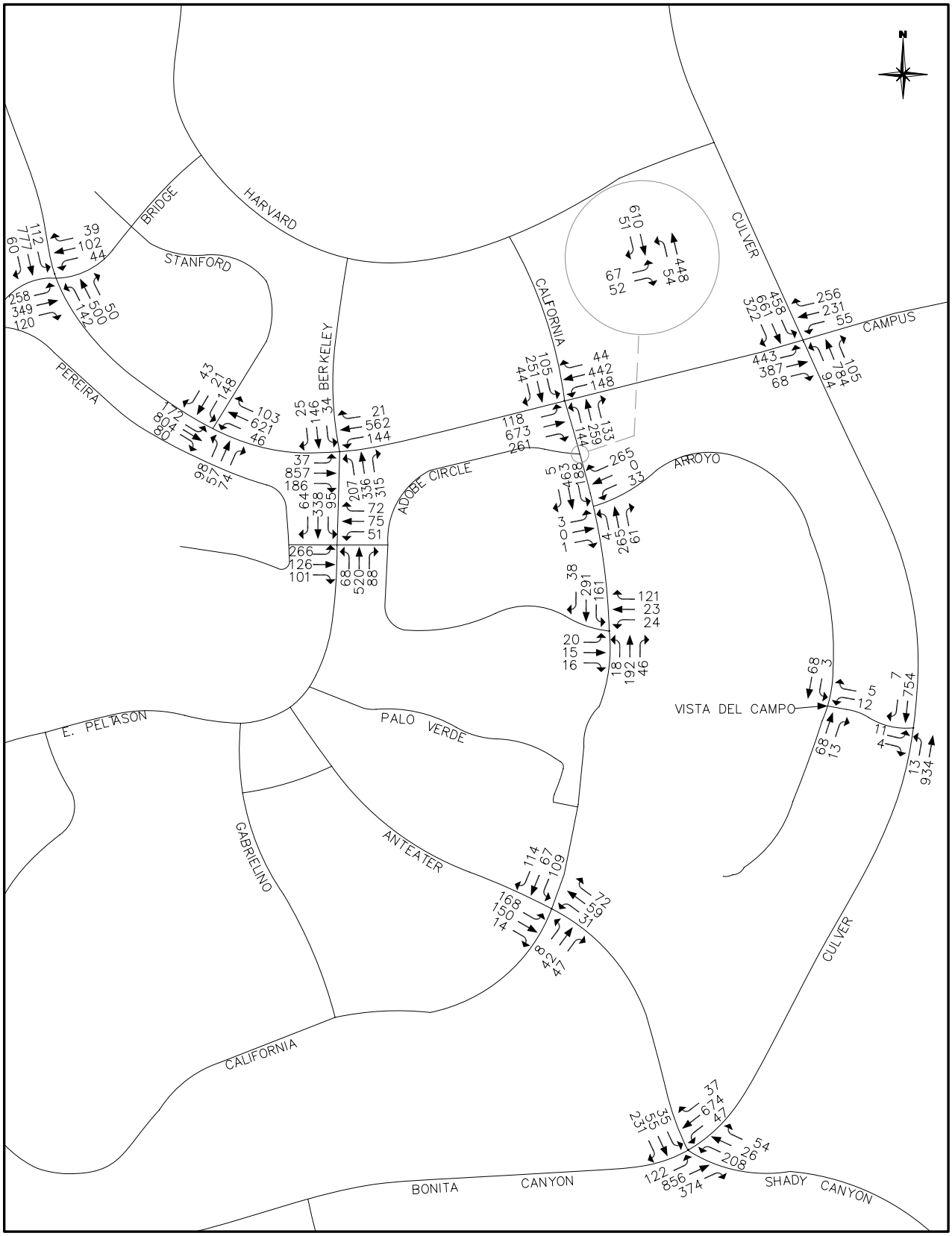
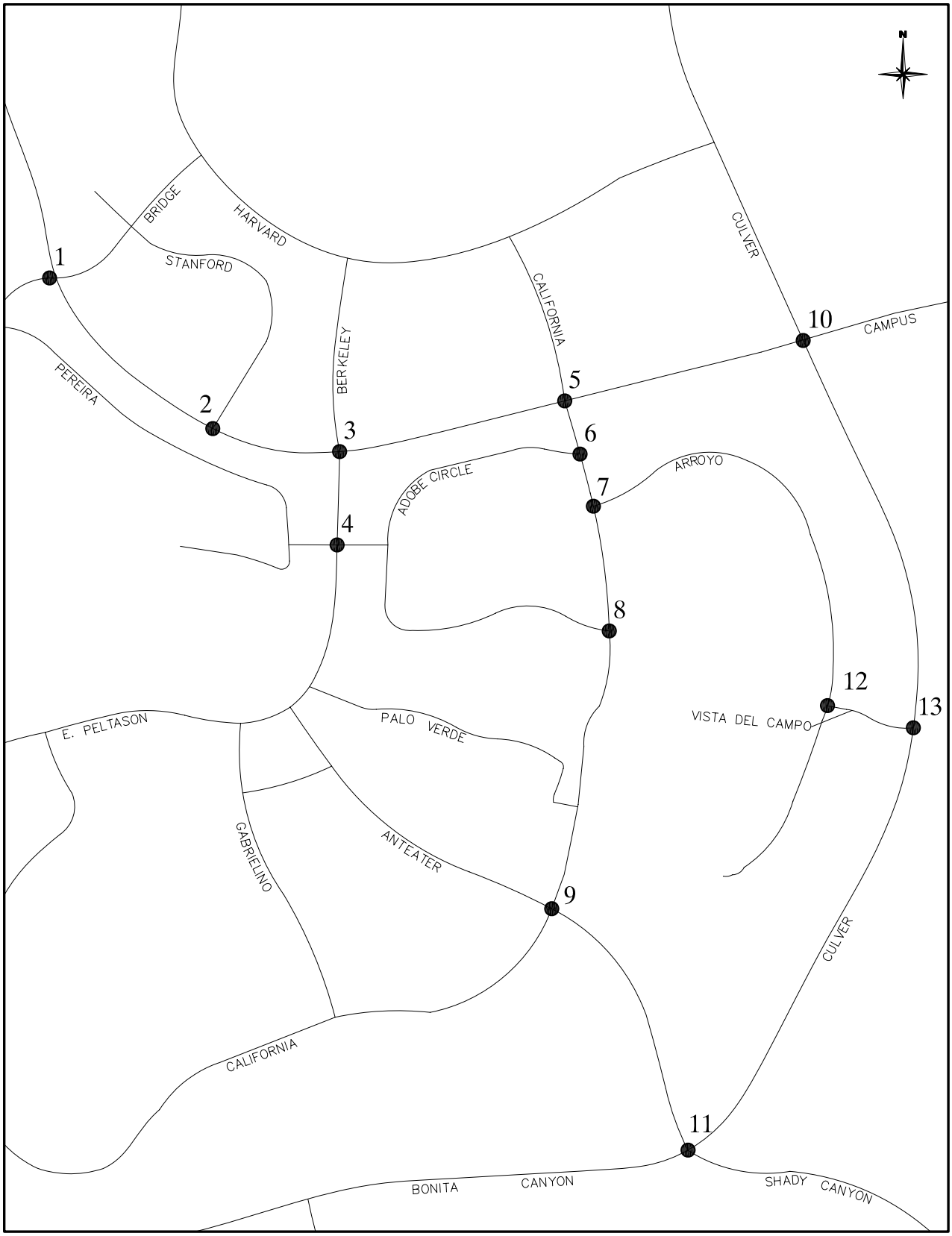


Figure 7

EXISTING (2007) PM PEAK HOUR VOLUMES



Legend

XX Intersection location and reference number

Figure 8

INTERSECTION LOCATION MAP

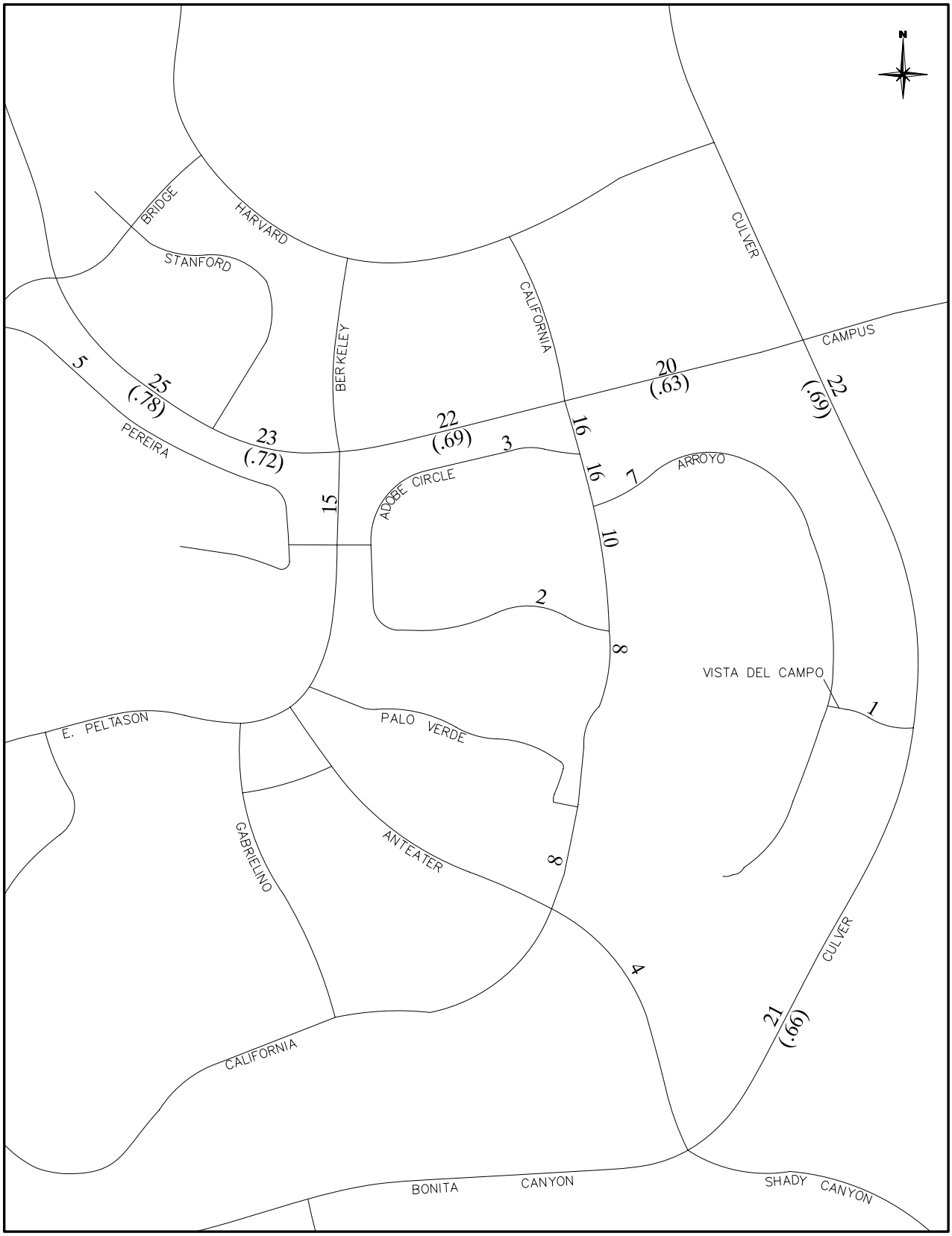
Table 5

EXISTING (2007) INTERSECTION LOS SUMMARY

Intersection	AM Peak Hour		PM Peak Hour	
	ICU	**LOS**	**ICU**	**LOS**
1. Campus & Bridge/Peltason	.46	A	.62	B
2. Stanford & Campus	.35	A	.53	A
3. Berkeley/Peltason & Campus	.48	A	.65	B
4. Peltason & Pereira	.38	A	.51	A
5. California & Campus	.41	A	.64	B
6. California & Adobe Circle N	.19	A	.34	A
7. California & Arroyo	.23	A	.44	A
8. California & Adobe Circle S	.22	A	.34	A
9. California & Anteater	.35	A	.34	A
10. Culver & Campus	.58	A	.55	A
11. Culver/Bonita Cyn & Anteater	.87	D	.73	C
12. Arroyo & Vista Del Campo	.10	A	.11	A
13. Culver & Vista Del Campo	.32	A	.33	A

Level of service ranges: .00 - .60 A
.61 - .70 B
.71 - .80 C
.81 - .90 D
.91 – 1.00 E
Above 1.00 F

Abbreviations: ICU – intersection capacity utilization
LOS – level of service

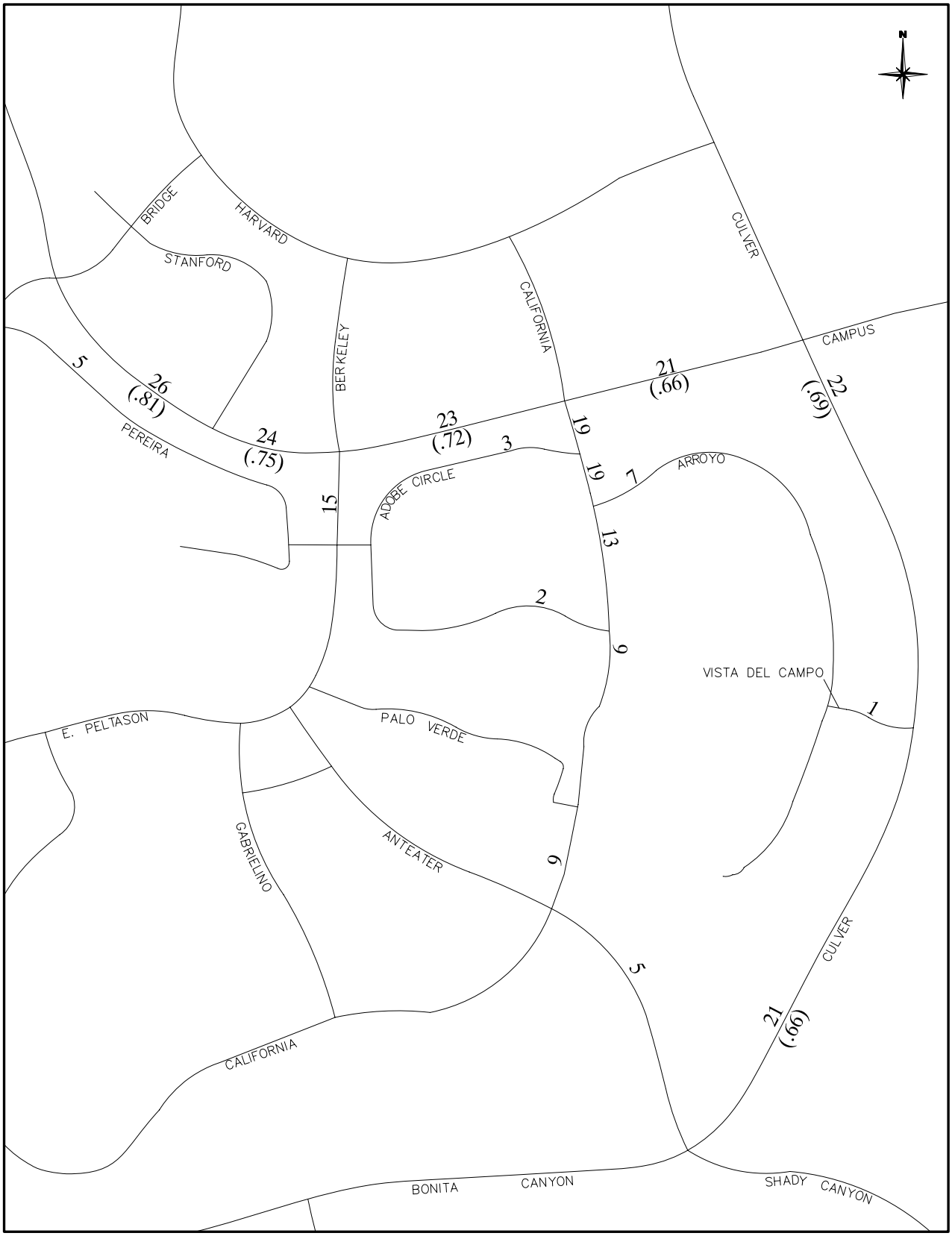


Legend

XX (.YY) — ADT Volume (000s) / Volume/Capacity Ratio (Off-Campus Only)

Figure 9

2010 NO-PROJECT ADT VOLUMES



Legend

XX / (.YY) — ADT Volume (000s) / Volume/Capacity Ratio (Off-Campus Only)

Figure 10

2010 WITH-PROJECT ADT VOLUMES (000s)

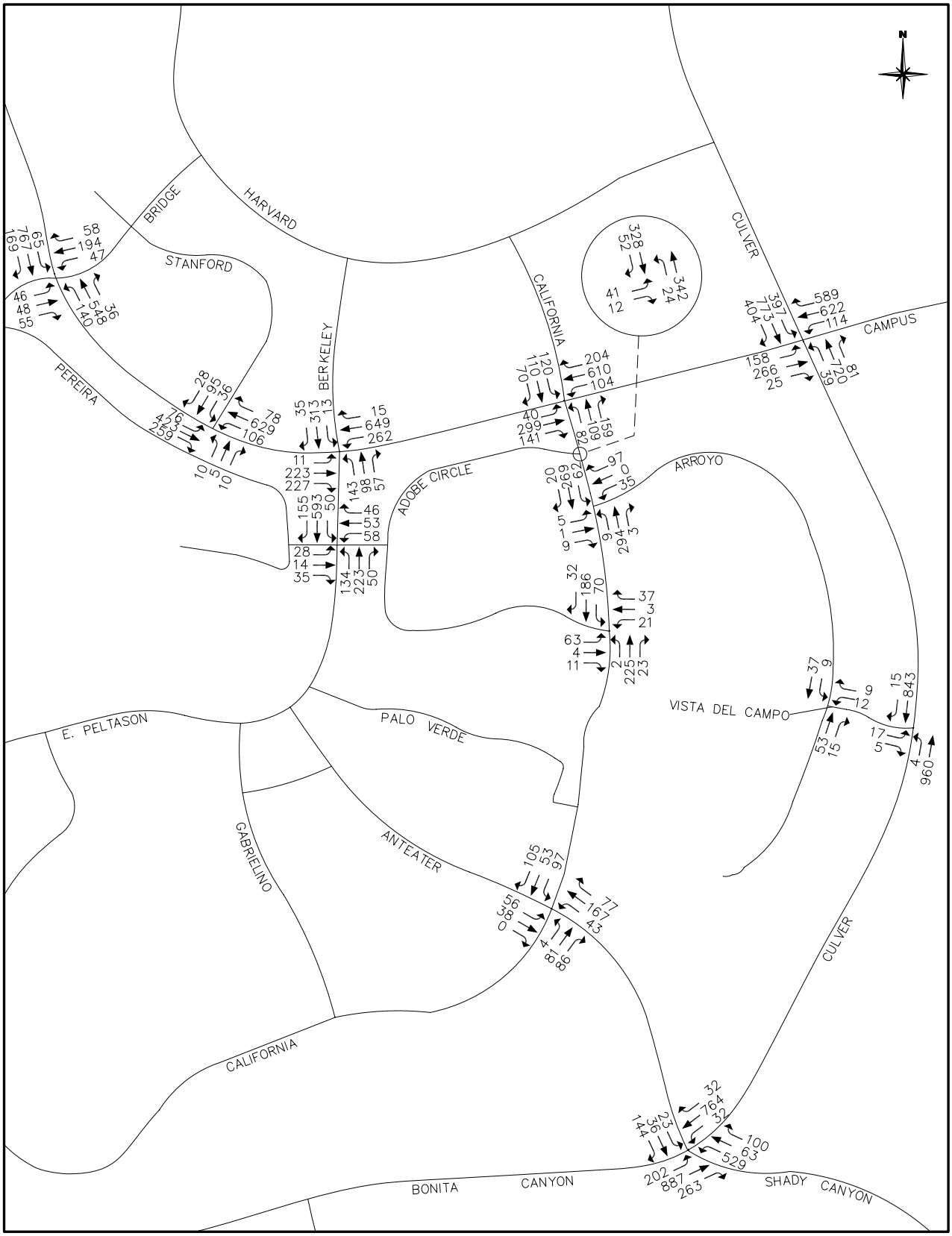


Figure 11

2010 NO-PROJECT AM PEAK HOUR VOLUMES

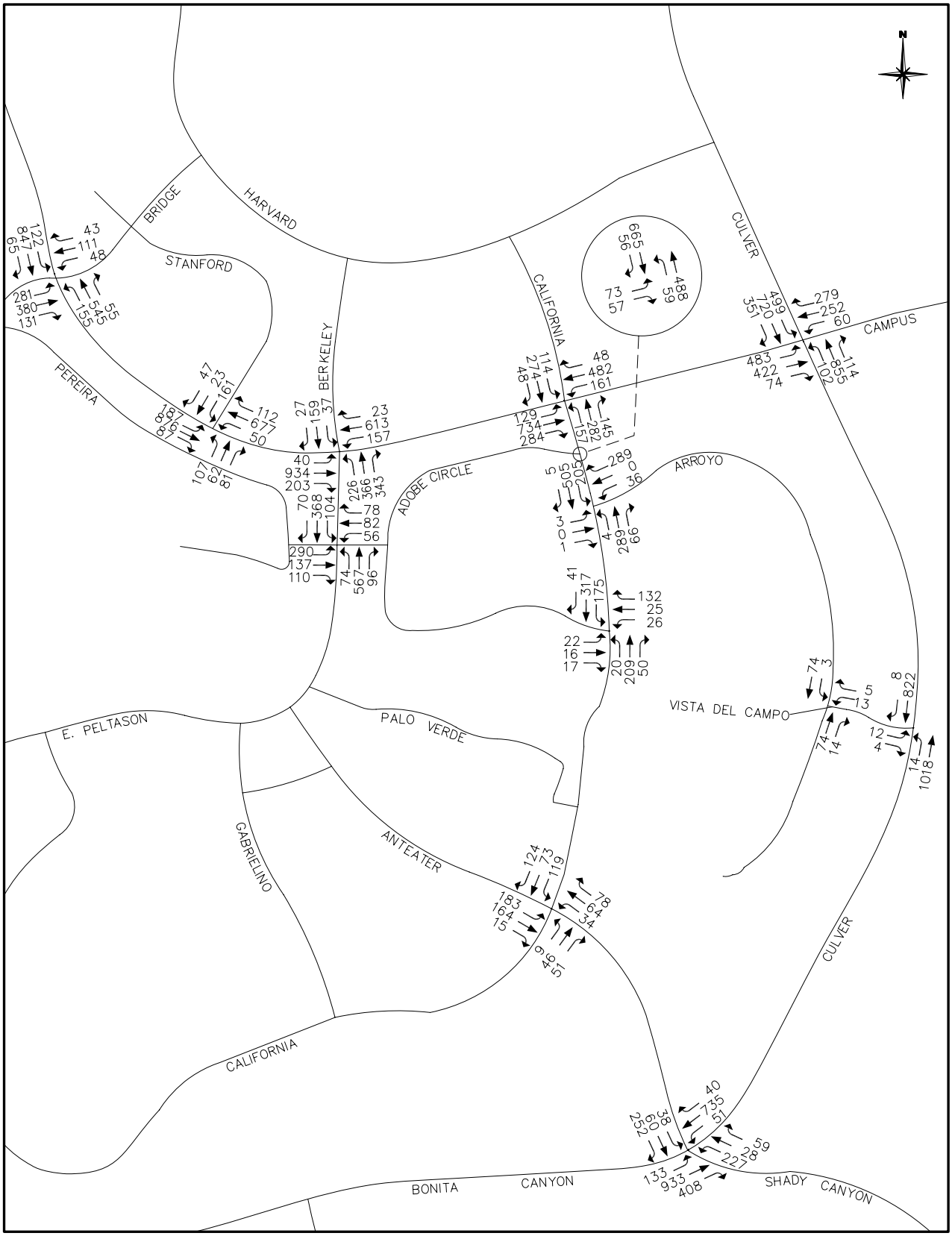


Figure 12

2010 NO-PROJECT PM PEAK HOUR VOLUMES

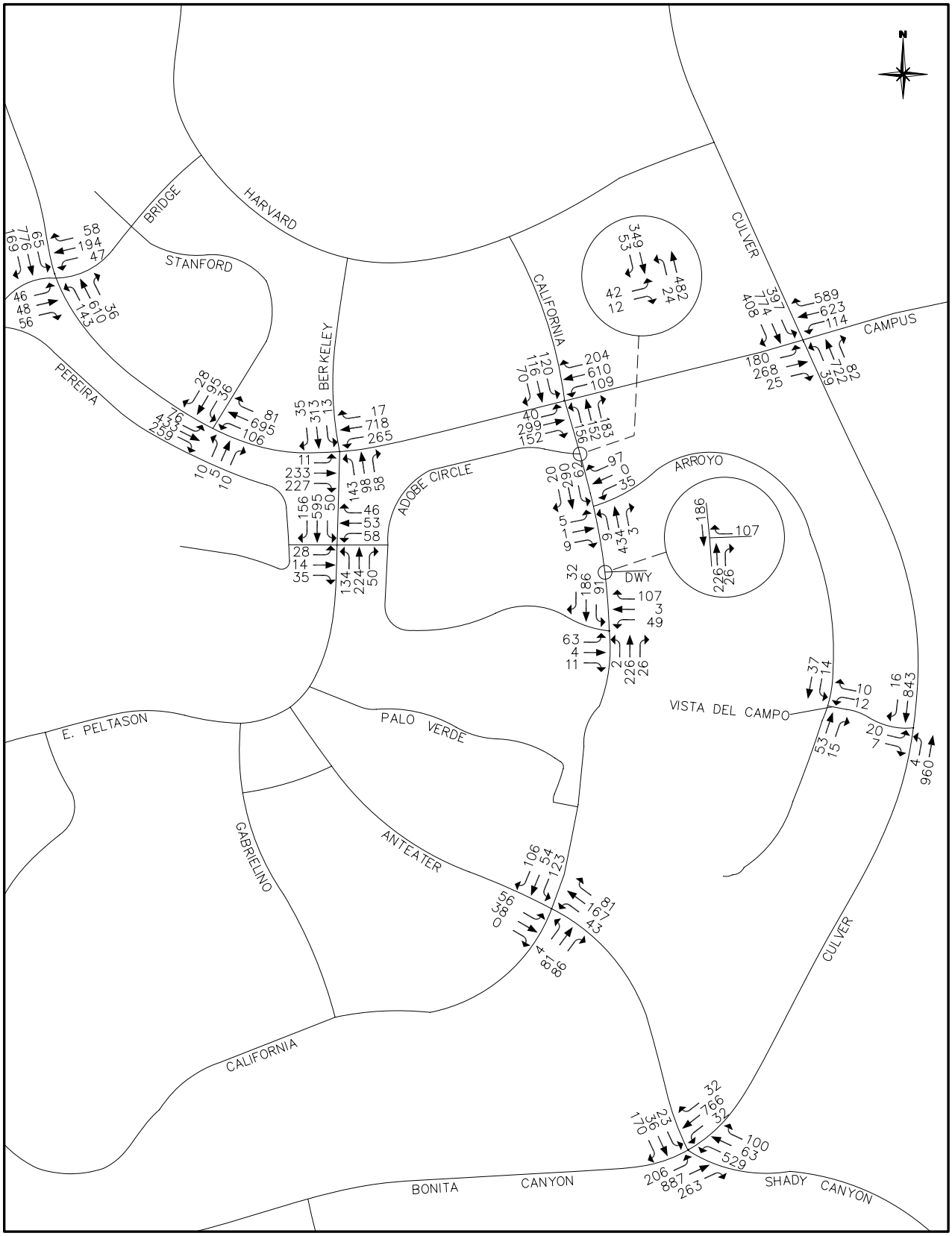


Figure 13

2010 WITH-PROJECT AM PEAK HOUR VOLUMES

Figure 14

2010 WITH-PROJECT PM PEAK HOUR VOLUMES

Table 6

YEAR 2010 INTERSECTION LOS SUMMARY

	No-Project				With-Project			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**	**ICU**	**LOS**
1. Campus & Bridge/Peltason	.49	A	.66	B	.49	A	.68	B
2. Stanford & Campus	.38	A	.56	A	.39	A	.58	A
3. Berkeley/Peltason & Campus	.51	A	.70	B	.53	A	.72	C
4. Peltason & Pereira	.42	A	.54	A	.42	A	.54	A
5. California & Campus	.44	A	.69	B	.47	A	.79	C
6. California & Adobe Circle N	.20	A	.37	A	.22	A	.41	A
7. California & Arroyo	.26	A	.47	A	.30	A	.49	A
8. California & Adobe Circle S	.24	A	.37	A	.30	A	.46	A
9. California & Anteater	.38	A	.37	A	.40	A	.40	A
10. Culver & Campus	.64	B	.60	A	.64	B	.61	B
11. Culver/Bonita Cyn & Anteater	.94	E	.78	C	.94	E	.79	C
12. Arroyo & Vista Del Campo	.11	A	.11	A	.11	A	.11	A
13. Culver & Vista Del Campo	.34	A	.36	A	.34	A	.36	A

Level of service ranges: .00 - .60 A
.61 - .70 B
.71 - .80 C
.81 - .90 D
.91 – 1.00 E
Above 1.00 F

Abbreviations: ICU – intersection capacity utilization
LOS – level of service

CONCLUSIONS

Traffic generated by the proposed project does not cause the performance criteria to be exceeded at any of the intersections and off-campus roadway links analyzed within the study area. Therefore with no significant traffic impacts, project mitigation measures are not required. The circulation system analyzed for year 2010 conditions has adequate capacity to accommodate the proposed project land use. In addition, the assumptions and conclusions of this traffic study are consistent with the findings and conclusions in previous LRDP Amendment analyses (1989 and 1995) including the one that was recently approved.

REFERENCES

1. "University of California, Irvine, Long Range Development Plan 2007 Update Traffic Study," Austin-Foust Associates, Inc., May 2007.

2. "University of California, Irvine, LRDP Circulation and Open Space Amendment Traffic Study," Austin-Foust Associates, Inc., August 1995.

3. "Traffic Impact Analysis Guidelines," City of Irvine Public Works Department, Adopted August 24, 2004.

Appendix
Intersection Capacity Utilization (ICU) Worksheets

This appendix summarizes information pertaining to the intersection analysis presented in this traffic report.

ICU Calculation Methodology

The ICU calculation procedure is based on a critical movement methodology that shows the amount of capacity utilized by each critical movement at an intersection. A capacity of 1,700 vehicles per hour per lane is assumed together with a .05 clearance interval. A "de-facto" right-turn lane is used in the ICU calculation for cases where a curb lane is wide enough to separately serve both through and right-turn traffic (typically with a width of 19 feet or more from curb to outside of through-lane with parking prohibited during peak periods). Such lanes are treated the same as striped right-turn lanes during the ICU calculations, but they are denoted on the ICU calculation worksheets using the letter "d" in place of a numerical entry for right-turn lanes.

The methodology also incorporates a check for right-turn capacity utilization. Both right-turn-on-green (RTOG) and right-turn-on-red (RTOR) capacity availability are calculated and checked against the total right-turn capacity need. If insufficient capacity is available, then an adjustment is made to the total capacity utilization value. The following example shows how this adjustment is made.

Example for Northbound Right

1. Right-Turn-On-Green (RTOG)

If NBT is critical move, then:
RTOG = V/C (NBT)
Otherwise,
RTOG = V/C (NBL) + V/C (SBT) - V/C (SBL)

2. Right-Turn-On-Red (RTOR)

If WBL is critical move, then:
RTOR = V/C (WBL)
Otherwise,
RTOR = V/C (EBL) + V/C (WBT) - V/C (EBT)

3. Right-Turn Overlap Adjustment

If the northbound right is assumed to overlap with the adjacent westbound left, adjustments to the RTOG and RTOR values are made as follows:

RTOG = RTOG + V/C (WBL)
RTOR = RTOR - V/C (WBL)

4. Total Right-Turn Capacity (RTC) Availability For NBR

RTC = RTOG + factor x RTOR
Where factor = RTOR saturation flow factor (0% for County intersections, 75% for intersections in all other jurisdictions within the study area)

Right-turn adjustment is then as follows: Additional ICU = V/C (NBR) – RTC

A zero or negative value indicates that adequate capacity is available and no adjustment is necessary. A positive value indicates that the available RTOR and RTOG capacity does not adequately accommodate the right-turn V/C, therefore the right-turn is essentially considered to be a critical movement. In such cases, the right-turn adjustment is noted on the ICU worksheet and it is included in the total capacity utilization value. When it is determined that a right-turn adjustment is required for more than one right-turn movement, the word "multi" is printed on the worksheet instead of an actual right-turn movement reference, and the right-turn adjustments are cumulatively added to the total capacity utilization value. In such cases, further operational evaluation is typically carried out to determine if under actual operational conditions, the critical right-turns would operate simultaneously, and therefore a right-turn adjustment credit should be applied.

Shared Lane V/C Methodology

For intersection approaches where shared usage of a lane is permitted by more than one turn movement (e.g., left/through, through/right, left/through/right), the individual turn volumes are evaluated to determine whether dedication of the shared lane is warranted to any one given turn movement. The following example demonstrates how this evaluation is carried out:

Example for Shared Left/Through Lane

1. Average Lane Volume (ALV)

$$ALV = \frac{\text{Left-Turn Volume + Through Volume}}{\text{Total Left + Through Approach Lanes (including shared lane)}}$$

2. ALV for Each Approach

$$\text{ALV (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Lanes (including shared lane)}}$$

$$\text{ALV (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Lanes (including shared lane)}}$$

3. Lane Dedication is Warranted

If ALV (Left) is greater than ALV then full dedication of the shared lane to the left-turn approach is warranted. Left-turn and through V/C ratios for this case are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (including shared lane)}}$$

$$\text{V/C (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Capacity (excluding shared lane)}}$$

Similarly, if ALV (Through) is greater than ALV then full dedication to the through approach is warranted, and left-turn and through V/C ratios are calculated as follows:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Left Approach Capacity (excluding shared lane)}}$$

$$\text{V/C (Through)} = \frac{\text{Through Volume}}{\text{Through Approach Capacity (including shared lane)}}$$

4. Lane Dedication is not Warranted

If ALV (Left) and ALV (Through) are both less than ALV, the left/through lane is assumed to be truly shared and each left, left/through or through approach lane carries an evenly distributed volume of traffic equal to ALV. A combined left/through V/C ratio is calculated as follows:

$$\text{V/C (Left/Through)} = \frac{\text{Left-Turn Volume + Through Volume}}{\text{Total Left + Through Approach Capacity (including shared lane)}}$$

This V/C (Left/Through) ratio is assigned as the V/C (Through) ratio for the critical movement analysis and ICU summary listing.

If split phasing has not been designated for this approach, the relative proportion of V/C (Through) that is attributed to the left-turn volume is estimated as follows:

If approach has more than one left-turn (including shared lane), then:

V/C (Left) = V/C (Through)

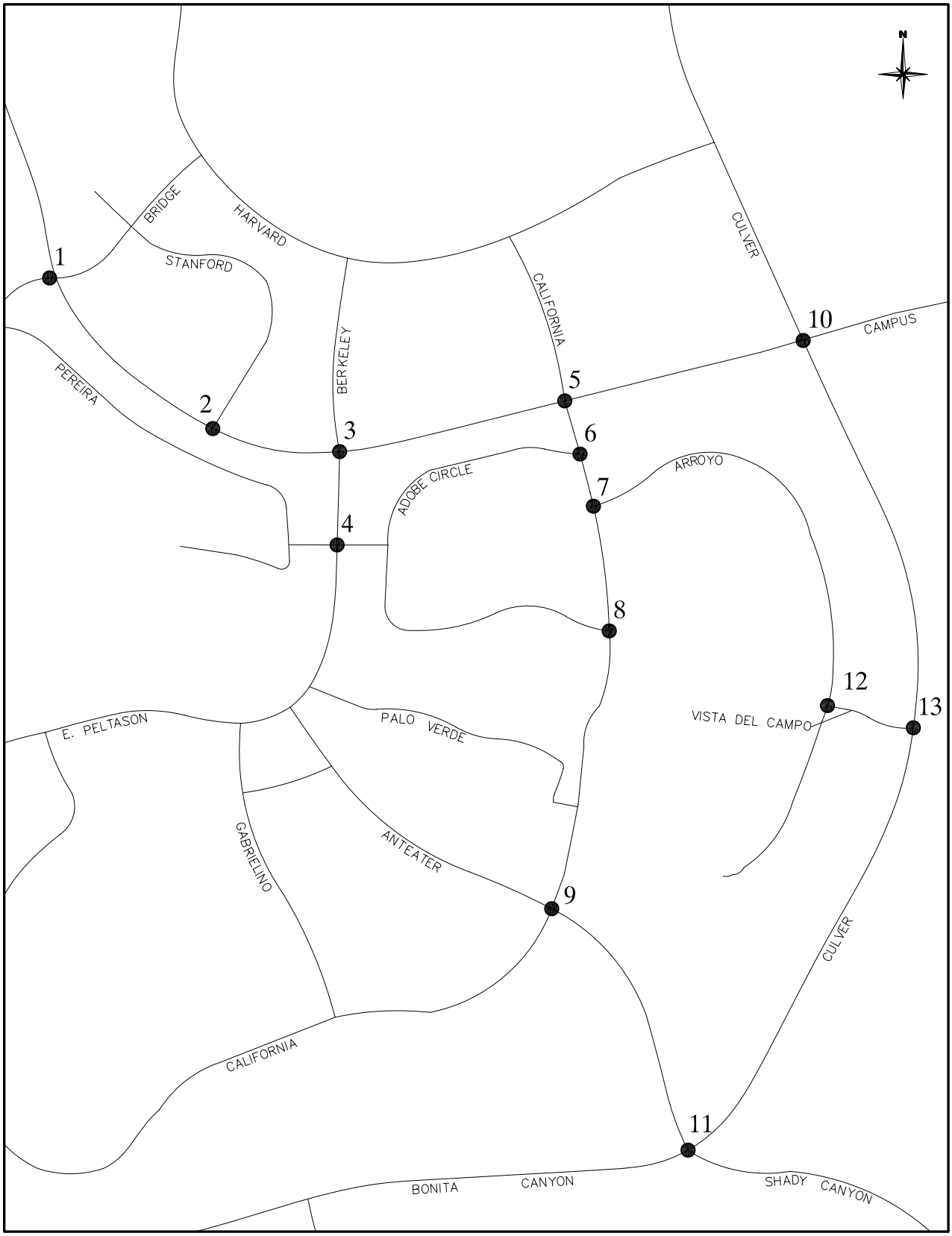
If approach has only one left-turn lane (shared lane), then:

$$\text{V/C (Left)} = \frac{\text{Left-Turn Volume}}{\text{Single Approach Lane Capacity}}$$

If this left-turn movement is determined to be a critical movement, the V/C (Left) value is posted in brackets on the ICU summary printout.

These same steps are carried out for shared through/right lanes. If full dedication of a shared through/right lane to the right-turn movement is warranted, the right-turn V/C value calculated in step three is checked against the RTOR and RTOG capacity. When an approach contains more than one shared lane (e.g., left/through and through/right), steps one and two listed above are carried out for the three turn movements combined. Step four is carried out if dedication is not warranted for either of the shared lanes. If dedication of one of the shared lanes is warranted to one movement or another, step three is carried out for the two movements involved, and then steps one through four are repeated for the two movements involved in the other shared lane.

Figure A-1 illustrates the intersections that were analyzed in this study, and the AM and PM peak hour ICU worksheets for existing and year 2010 then follow.



Legend

XX Intersection location and reference number

Figure A-1

INTERSECTION LOCATION MAP

1. Campus & Bridge/Peltason

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	128	.08*	142	.08*
NBT	2	3400	503	.16	500	.16
NBR	0	0	33		50	
SBL	1	1700	60	.04	112	.07
SBT	2	3400	704	.25*	777	.25*
SBR	0	0	155		60	
EBL	2	3400	42	.01*	258	.08
EBT	1	1700	44	.03	349	.21*
EBR	1	1700	50	.03	120	.07
WBL	1	1700	43	.03	44	.03*
WBT	2	3400	178	.07*	102	.04
WBR	0	0	53		39	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.46**		**.62**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	140	.08*	155	.09*
NBT	2	3400	548	.17	545	.18
NBR	0	0	36		55	
SBL	1	1700	65	.04	122	.07
SBT	2	3400	767	.28*	847	.27*
SBR	0	0	169		65	
EBL	2	3400	46	.01*	281	.08
EBT	1	1700	48	.03	380	.22*
EBR	1	1700	55	.03	131	.08
WBL	1	1700	47	.03	48	.03*
WBT	2	3400	194	.07*	111	.05
WBR	0	0	58		43	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.49**		**.66**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	143	.08*	157	.09*
NBT	2	3400	610	.19	584	.19
NBR	0	0	36		55	
SBL	1	1700	65	.04	122	.07
SBT	2	3400	776	.28*	906	.29*
SBR	0	0	169		65	
EBL	2	3400	46	.01*	281	.08
EBT	1	1700	48	.03	380	.22*
EBR	1	1700	56	.03	134	.08
WBL	1	1700	47	.03	48	.03*
WBT	2	3400	194	.07*	111	.05
WBR	0	0	58		43	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.49**		**.68**

2. Stanford & Campus

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	9	.01*	98	.06
NBT	1	1700	5	.01	57	.08*
NBR	0	0	9		74	
SBL	1	1700	33	.02	148	.09*
SBT	1	1700	87	.05*	21	.01
SBR	1	1700	26	.02	43	.03
EBL	1	1700	70	.04	172	.10*
EBT	2	3400	388	.18*	804	.26
EBR	0	0	238		80	
WBL	1	1700	97	.06*	46	.03
WBT	2	3400	577	.19	621	.21*
WBR	0	0	72		103	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.35**		**.53**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	10	.01*	107	.06
NBT	1	1700	5	.01	62	.08*
NBR	0	0	10		81	
SBL	1	1700	36	.02	161	.09*
SBT	1	1700	95	.06*	23	.01
SBR	1	1700	28	.02	47	.03
EBL	1	1700	76	.04	187	.11*
EBT	2	3400	423	.20*	876	.28
EBR	0	0	259		87	
WBL	1	1700	106	.06*	50	.03
WBT	2	3400	629	.21	677	.23*
WBR	0	0	78		112	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.38**		**.56**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	10	.01*	107	.06
NBT	1	1700	5	.01	62	.08*
NBR	0	0	10		81	
SBL	1	1700	36	.02	164	.10*
SBT	1	1700	95	.06*	23	.01
SBR	1	1700	28	.02	47	.03
EBL	1	1700	76	.04*	187	.11*
EBT	2	3400	433	.20	939	.30
EBR	0	0	259		87	
WBL	1	1700	106	.06	50	.03
WBT	2	3400	695	.23*	718	.24*
WBR	0	0	81		114	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.39**		**.58**

3. Berkeley/Peltason & Campus

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	131	.08*	207	.12
NBT	2	3400	90	.04	336	.19*
NBR	0	0	52		315	
SBL	1	1700	12	.01	34	.02*
SBT	2	3400	287	.09*	146	.05
SBR	0	0	32		25	
EBL	1	1700	10	.01	37	.02
EBT	2	3400	205	.12*	857	.31*
EBR	0	0	208	.12	186	
WBL	1	1700	240	.14*	144	.08*
WBT	2	3400	595	.18	562	.17
WBR	0	0	14		21	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.48**		**.65**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	143	.08*	226	.13
NBT	2	3400	98	.05	366	.21*
NBR	0	0	57		343	
SBL	1	1700	13	.01	37	.02*
SBT	2	3400	313	.10*	159	.05
SBR	0	0	35		27	
EBL	1	1700	11	.01	40	.02
EBT	2	3400	223	.13*	934	.33*
EBR	0	0	227	.13	203	
WBL	1	1700	262	.15*	157	.09*
WBT	2	3400	649	.20	613	.19
WBR	0	0	15		23	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.51**		**.70**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	143	.08*	226	.13
NBT	2	3400	98	.05	366	.21*
NBR	0	0	58		346	
SBL	1	1700	13	.01	39	.02*
SBT	2	3400	313	.10*	159	.05
SBR	0	0	35		27	
EBL	1	1700	11	.01	40	.02
EBT	2	3400	233	.14*	1000	.35*
EBR	0	0	227		203	
WBL	1	1700	265	.16*	159	.09*
WBT	2	3400	718	.22	656	.20
WBR	0	0	17		24	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.53**		**.72**

4. Peltason & Pereira

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	123	.07*	68	.04
NBT	2	3400	205	.07	520	.18*
NBR	0	0	46		88	
SBL	1	1700	46	.03	95	.06*
SBT	2	3400	544	.20*	338	.12
SBR	0	0	142		64	
EBL	1	1700	26	.02*	266	.16*
EBT	1	1700	13	.03	126	.13
EBR	0	0	32		101	
WBL	0.5		53		51	
WBT	1.5	3400	49	.04*	75	.06*
WBR	0		42		72	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.38**		**.51**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	134	.08*	74	.04
NBT	2	3400	223	.08	567	.20*
NBR	0	0	50		96	
SBL	1	1700	50	.03	104	.06*
SBT	2	3400	593	.22*	368	.13
SBR	0	0	155		70	
EBL	1	1700	28	.02*	290	.17*
EBT	1	1700	14	.03	137	.15
EBR	0	0	35		110	
WBL	0.5		58		56	
WBT	1.5	3400	53	.05*	82	.06*
WBR	0		46		78	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.42**		**.54**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	134	.08*	74	.04
NBT	2	3400	224	.08	569	.20*
NBR	0	0	50		96	
SBL	1	1700	50	.03	104	.06*
SBT	2	3400	595	.22*	369	.13
SBR	0	0	156		71	
EBL	1	1700	28	.02*	291	.17*
EBT	1	1700	14	.03	137	.15
EBR	0	0	35		110	
WBL	0.5		58		56	
WBT	1.5	3400	53	.05*	82	.06*
WBR	0		46		78	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.42**		**.54**

5. California & Campus

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	75	.04	144	.08*
NBT	2	3400	100	.06*	259	.12
NBR	0	0	146	.09	133	
SBL	1	1700	110	.06*	105	.06
SBT	1	1700	101	.06	251	.15*
SBR	1	1700	64	.04	44	.03
EBL	1	1700	37	.02*	118	.07
EBT	2	3400	274	.12	673	.27*
EBR	0	0	129		261	
WBL	1	1700	95	.06	148	.09*
WBT	2	3400	560	.22*	442	.14
WBR	0	0	187		44	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.41**		**.64**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	82	.05	157	.09*
NBT	2	3400	109	.06*	282	.13
NBR	0	0	159	.09	145	
SBL	1	1700	120	.07*	114	.07
SBT	1	1700	110	.06	274	.16*
SBR	1	1700	70	.04	48	.03
EBL	1	1700	40	.02*	129	.08
EBT	2	3400	299	.13	734	.30*
EBR	0	0	141		284	
WBL	1	1700	104	.06	161	.09*
WBT	2	3400	610	.24*	482	.16
WBR	0	0	204		48	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.44**		**.69**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	156	.09*	203	.12*
NBT	2	3400	152	.09	309	.14
NBR	0	0	183	.11	160	
SBL	1	1700	120	.07	114	.07
SBT	1	1700	116	.07*	315	.19*
SBR	1	1700	70	.04	48	.03
EBL	1	1700	40	.02*	129	.08
EBT	2	3400	299	.13	734	.32*
EBR	0	0	152		355	
WBL	1	1700	109	.06	184	.11*
WBT	2	3400	610	.24*	482	.16
WBR	0	0	204		48	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.47**		**.79**

6. California & Adobe Circle N

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	22	.01*	54	.03*
NBT	2	3400	314	.09	448	.13
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	301	.10*	610	.19*
SBR	0	0	48		51	
EBL	0	0	38		67	
EBT	1	1700	0	.03*	0	.07*
EBR	0	0	11		52	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.19** **.34**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	24	.01*	59	.03*
NBT	2	3400	342	.10	488	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	328	.11*	665	.21*
SBR	0	0	52		56	
EBL	0	0	41		73	
EBT	1	1700	0	.03*	0	.08*
EBR	0	0	12		57	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.20** **.37**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	24	.01	59	.03*
NBT	2	3400	482	.14*	575	.17
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	349	.12	799	.25*
SBR	0	0	53		57	
EBL	0	0	42		74	
EBT	1	1700	0	.03*	0	.08*
EBR	0	0	12		57	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.22** **.41**

7. California & Arroyo

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0.5		8		4	
NBT	1.5	3400	270	.08*	265	.10*
NBR	0		3		61	
SBL	1	1700	57	.03*	188	.11*
SBT	2	3400	247	.08	463	.14
SBR	0	0	18		5	
EBL	0	0	5		3	
EBT	1	1700	1	.01	0	.00
EBR	0	0	8		1	
WBL	0	0	32		33	
WBT	1	1700	0	.07*	0	.18*
WBR	0	0	89		265	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.23**		**.44**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0.5		9		4	
NBT	1.5	3400	294	.09*	289	.11*
NBR	0		3		66	
SBL	1	1700	62	.04*	205	.12*
SBT	2	3400	269	.09	505	.15
SBR	0	0	20		5	
EBL	0	0	5		3	
EBT	1	1700	1	.01	0	.00
EBR	0	0	9		1	
WBL	0	0	35		36	
WBT	1	1700	0	.08*	0	.19*
WBR	0	0	97		289	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.26**		**.47**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0.5		9		4	
NBT	1.5	3400	434	.13*	376	.13*
NBR	0		3		66	
SBL	1	1700	62	.04*	205	.12*
SBT	2	3400	290	.09	639	.19
SBR	0	0	20		5	
EBL	0	0	5		3	
EBT	1	1700	1	.01	0	.00
EBR	0	0	9		1	
WBL	0	0	35		36	
WBT	1	1700	0	.08*	0	.19*
WBR	0	0	97		289	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.30**		**.49**

8. California & Adobe Circle S

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	18	.01*
NBT	2	3400	206	.07*	192	.07
NBR	0	0	21		46	
SBL	1	1700	64	.04*	161	.09
SBT	1	1700	171	.10	291	.17*
SBR	1	1700	29	.02	38	.02
EBL	0	0	58	{.03}*	20	{.01}*
EBT	1	1700	4	.04	15	.03
EBR	0	0	10		16	
WBL	0	0	19		24	
WBT	1	1700	3	.03*	23	.10*
WBR	0	0	34		121	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.22**		**.34**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	20	.01*
NBT	2	3400	225	.07	209	.08
NBR	0	0	23		50	
SBL	1	1700	70	.04	175	.10
SBT	1	1700	186	.11*	317	.19*
SBR	1	1700	32	.02	41	.02
EBL	0	0	63	{.04}*	22	{.01}*
EBT	1	1700	4	.05	16	.03
EBR	0	0	11		17	
WBL	0	0	21		26	
WBT	1	1700	3	.04*	25	.11*
WBR	0	0	37		132	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.24**		**.37**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	20	.01
NBT	2	3400	226	.07*	216	.08*
NBR	0	0	26		69	
SBL	1	1700	91	.05*	309	.18*
SBT	1	1700	186	.11	317	.19
SBR	1	1700	32	.02	41	.02
EBL	0	0	63	{.04}*	22	{.01}*
EBT	1	1700	4	.05	16	.03
EBR	0	0	11		17	
WBL	0	0	49		43	
WBT	1	1700	3	.09*	25	.14*
WBR	0	0	107		175	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.30**		**.46**

9. California & Anteater

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	8	.00
NBT	1	1700	74	.09*	42	.05
NBR	0	0	79		47	
SBL	1	1700	89	.05*	109	.06
SBT	1	1700	49	.09	67	.11*
SBR	0	0	96		114	
EBL	1	1700	51	.03*	168	.10*
EBT	1	1700	35	.02	150	.10
EBR	0	0	0		14	
WBL	1	1700	39	.02	31	.02
WBT	1	1700	153	.13*	59	.08*
WBR	0	0	71		72	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.35**		**.34**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	9	.01
NBT	1	1700	81	.10*	46	.06*
NBR	0	0	86		51	
SBL	1	1700	97	.06*	119	.07*
SBT	1	1700	53	.09	73	.12
SBR	0	0	105		124	
EBL	1	1700	56	.03*	183	.11*
EBT	1	1700	38	.02	164	.11
EBR	0	0	0		15	
WBL	1	1700	43	.03	34	.02
WBT	1	1700	167	.14*	64	.08*
WBR	0	0	77		78	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.38**		**.37**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	9	.01
NBT	1	1700	81	.10*	47	.06*
NBR	0	0	86		51	
SBL	1	1700	123	.07*	135	.08*
SBT	1	1700	54	.09	74	.12
SBR	0	0	106		124	
EBL	1	1700	56	.03*	183	.11*
EBT	1	1700	38	.02	164	.11
EBR	0	0	0		15	
WBL	1	1700	43	.03	34	.02
WBT	1	1700	167	.15*	64	.10*
WBR	0	0	81		103	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.40**		**.40**

10. Culver & Campus

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	36	.02	94	.06
NBT	3	5100	661	.14*	784	.17*
NBR	0	0	74		105	
SBL	2	3400	364	.11*	458	.13*
SBT	2	3400	709	.21	661	.19
SBR	1	1700	371	.22	322	.19
EBL	2	3400	145	.04*	443	.13*
EBT	2	3400	244	.08	387	.13
EBR	0	0	23		68	
WBL	1	1700	105	.06	55	.03
WBT	2	3400	571	.17*	231	.07*
WBR	1	1700	540	.32	256	.15
Right Turn Adjustment			WBR	.07*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.58**		**.55**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	39	.02	102	.06
NBT	3	5100	720	.16*	855	.19*
NBR	0	0	81		114	
SBL	2	3400	397	.12*	499	.15*
SBT	2	3400	773	.23	720	.21
SBR	1	1700	404	.24	351	.21
EBL	2	3400	158	.05*	483	.14*
EBT	2	3400	266	.09	422	.15
EBR	0	0	25		74	
WBL	1	1700	114	.07	60	.04
WBT	2	3400	622	.18*	252	.07*
WBR	1	1700	589	.35	279	.16
Right Turn Adjustment			WBR	.08*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.64**		**.60**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	39	.02	102	.06
NBT	3	5100	722	.16*	856	.19*
NBR	0	0	82		115	
SBL	2	3400	397	.12*	499	.15*
SBT	2	3400	774	.23	722	.21
SBR	1	1700	408	.24	372	.22
EBL	2	3400	180	.05*	497	.15*
EBT	2	3400	268	.09	423	.15
EBR	0	0	25		74	
WBL	1	1700	114	.07	61	.04
WBT	2	3400	623	.18*	254	.07*
WBR	1	1700	589	.35	279	.16
Right Turn Adjustment			WBR	.08*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.64**		**.61**

11. Culver/Bonita Cyn & Anteater/Shady Cyn

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	185	.11*	122	.07*
NBT	2	3400	814	.24	856	.25
NBR	1	1700	241	.14	374	.22
SBL	1	1700	29	.02	47	.03
SBT	1	1700	701	.41*	674	.40*
SBR	2	3400	29	.01	37	.01
EBL	1	1700	21	.01	35	.02
EBT	2	3400	33	.01*	55	.02*
EBR	1	1700	132	.08	231	.14
WBL	1	1700	485	.29*	208	.12*
WBT	1	1700	58	.03	26	.02
WBR	1	1700	92	.05	54	.03
Right Turn Adjustment					EBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.87**		**.73**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	202	.12*	133	.08*
NBT	2	3400	887	.26	933	.27
NBR	1	1700	263	.15	408	.24
SBL	1	1700	32	.02	51	.03
SBT	1	1700	764	.45*	735	.43*
SBR	2	3400	32	.01	40	.01
EBL	1	1700	23	.01	38	.02
EBT	2	3400	36	.01*	60	.02*
EBR	1	1700	144	.08	252	.15
WBL	1	1700	529	.31*	227	.13*
WBT	1	1700	63	.04	28	.02
WBR	1	1700	100	.06	59	.03
Right Turn Adjustment					EBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.94**		**.78**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	206	.12*	158	.09*
NBT	2	3400	887	.26	935	.28
NBR	1	1700	263	.15	408	.24
SBL	1	1700	32	.02	51	.03
SBT	1	1700	766	.45*	736	.43*
SBR	2	3400	32	.01	40	.01
EBL	1	1700	23	.01	38	.02
EBT	2	3400	36	.01*	60	.02*
EBR	1	1700	170	.10	268	.16
WBL	1	1700	529	.31*	227	.13*
WBT	1	1700	63	.04	28	.02
WBR	1	1700	100	.06	59	.03
Right Turn Adjustment					EBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				**.94**		**.79**

12. Arroyo & Vista Del Campo

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1700	49	.04*	68	.05*
NBR	0	0	14		13	
SBL	0	0	8		3	
SBT	1	1700	34	.02	68	.04
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	11	.01*	12	.01*
WBT	0	0	0		0	
WBR	1	1700	8	.00	5	.00
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.10** **.11**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1700	53	.04*	74	.05
NBR	0	0	15		14	
SBL	0	0	9	{.01}*	3	
SBT	1	1700	37	.03	74	.05*
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	12	.01*	13	.01*
WBT	0	0	0		0	
WBR	1	1700	9	.01	5	.00
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.11** **.11**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	1	1700	53	.04*	74	.05
NBR	0	0	15		14	
SBL	0	0	14	{.01}*	6	
SBT	1	1700	37	.03	74	.05*
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	12	.01*	13	.01*
WBT	0	0	0		0	
WBR	1	1700	10	.01	10	.01
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.11** **.11**

13. Culver & Vista Del Campo

Existing Count (2007)

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	13	.01
NBT	2	3400	881	.26*	934	.27*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	773	.23	754	.22
SBR	0	0	14		7	
EBL	1	1700	16	.01*	11	.01*
EBT	0	0	0		0	
EBR	1	1700	5	.00	4	.00
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.32** **.33**

2010 No-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	14	.01
NBT	2	3400	960	.28*	1018	.30*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	843	.25	822	.24
SBR	0	0	15		8	
EBL	1	1700	17	.01*	12	.01*
EBT	0	0	0		0	
EBR	1	1700	5	.00	4	.00
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.34** **.36**

2010 With-Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	16	.01
NBT	2	3400	960	.28*	1018	.30*
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	843	.25	822	.25
SBR	0	0	16		11	
EBL	1	1700	20	.01*	14	.01*
EBT	0	0	0		0	
EBR	1	1700	7	.00	5	.00
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION **.34** **.36**