Draft
Environmental Impact Report
(Draft EIR)

[State Clearinghouse No. 2012101019]

for

Los Angeles International Airport (LAX)

Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project

(Runway Safety Area Improvements and
Pavement Reconstruction of
Portions of Runway 7L/25R, Taxiway B, and
Apron West of Air Freight Building No. 8)

Volume II

Appendices

City of Los Angeles
Los Angeles World Airports

September 2013

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APPENDIX A

PROJECT SCOPING

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APPENDIX A1

NOTICE OF PREPARATION

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October 5, 2012

NOTICE OF PREPARATION AND NOTICE OF A PUBLIC SCOPING MEETING FOR AN ENVIRONMENTAL IMPACT REPORT

PROJECT NAME: Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)

PROJECT LOCATION/ADDRESS: On the South Airfield of the LAX property in the City of Los Angeles, County of Los Angeles

COMMUNITY PLANNING AREA: LAX Plan

COUNCIL DISTRICT: 11 – Rosendahl

DUE DATE FOR PUBLIC COMMENTS: Monday, November 5, 2012 by 5:00 p.m.

Los Angeles World Airports (LAWA), a proprietary department of the City of Los Angeles, will be the lead agency and will prepare an Environmental Impact Report (EIR) for the project identified above (proposed Project). LAWA requests your comments as to the scope and content of the EIR. The purpose of the scoping meeting, as further described below, is also focused on receiving input from the public as to what areas the EIR should study.

The Project description, requested permits and approvals, and the potentially significant environmental effects of the proposed Project are set forth below. Also included below are the date, time and location of the scoping meeting that will be held in order to solicit input regarding the content of the Draft EIR. The scoping meeting will be in an open house format. A copy of the Initial Study prepared for the proposed Project is available for review at the LAX website at: http://www.ourlax.org and at the locations listed below:

Westchester-Loyola Village Branch Library
7114 W. Manchester Ave.
Los Angeles, CA 90045

El Segundo Library
111 W. Mariposa Avenue
El Segundo, CA 90245

PROJECT DESCRIPTION: The intent of the proposed Project is to comply with the *Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, such as LAX, to meet FAA airport design standards by December 31, 2015. LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway 7L/25R does not meet current airport design standards and improvements to the RSA were needed.

Additionally, Runway 7L/25R , as the primary departure runway on the south airfield, and its connecting taxiways, which provide the main access to both South Airfield runways, handle a large amount of traffic. Due to heavy usage, the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility. It should be noted that the proposed Project would not result in increased or decreased aviation activity at LAX compared to existing conditions.

Specifically, the proposed Project would include: (1) *Runway 7L/25R RSA Improvements* including extending the Runway 7L/25R pavement; grading and compacting the RSA; constructing blast fences west of the Runway 7L extension; several taxiways modifications as necessary; relocating the existing Localizer Antenna and blast fences to the west; replacing the existing Approach Lighting System (ALS) towers with in-pavement lights; and modifying the existing Runway and Taxiway lighting and markings in the newly constructed pavements; (2) *Pavement Reconstruction of the Eastern Portions of Runway 7L/25R and Taxiway B* including connecting taxiways and installation of in-pavement approach lights; (3) *Taxiway C Extension and Demolition of Air Freight Building No. 8* including realigning an existing service road north of Taxiway C; realignment and eastward extension of Taxiway C; and the paving of the Air Freight Building No. 8 site; and (4) *Construction of a GSE Maintenance Facility* which

includes removal and relocation of several temporary structures (trailers) present at the proposed site; removal of existing concrete; grading and excavation; and the installation of utilities.

REQUESTED PERMITS/APPROVALS: LAWA has principal responsibility for approving and carrying out the proposed Project. Approvals required for implementation of the proposed Project may include, but are not limited to, the following: Several Federal Aviation Administration (FAA) approvals and procedures modifications; South Coast Air Quality Management District (SCAQMD) review; Consultation with the California Department of Fish and Game (CDFG); Permits and/or approvals from the California State Water Quality Control Board (SWQCB) and/or the Regional Water Quality Control Board (RWQCB); LAWA LAX Specific Plan Compliance Review; Certification of the Final EIR and associated Mitigation Monitoring and Reporting Program; several permits and/or approvals as needed from the Los Angeles City Department of Public Works including the Bureaus of Sanitation and Engineering, Los Angeles City Fire Department and the Los Angeles City Department of Building and Safety; and other federal, state, or local approvals, permits or actions that may be necessary for the proposed Project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: Aesthetics, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology/Water Quality, Noise, Transportation, and are proposed to be addressed in the EIR.

Impacts to Agricultural Resources, Biological Resources, Cultural Resources, Geology/Soils, Land Use/Planning, Mineral Resources, Population/Housing, Public Services, Recreation, Utilities and Public Systems have been found to be less than significant and through the analysis in the Initial Study and are not proposed for further analysis in the EIR.

PUBLIC SCOPING MEETING: A public Scoping Meeting in an open house format will be held to receive public comments regarding the scope and content of the environmental information to be included in the EIR. LAWA encourages all interested individuals and organizations to attend this meeting. The location, date, and time of the public scoping meeting for the proposed Project are as follows:

Date and Time: **Wednesday, October 17, 2012, 6:00 pm - 8:00 pm**

Arrive any time to speak one-on-one with LAWA staff and consultants.

Location: **Proud Bird Restaurant**
11022 Aviation Boulevard
Los Angeles, CA 90045

LAWA welcomes all comments regarding potential environmental impacts of the Project and the issues to be addressed in the EIR. **All comments will be considered in the preparation of the EIR. Written comments must be submitted to this office by Monday, November 5, 2012.** Written comments will also be accepted at the Scoping Meeting described above.

Please direct your comments to:
Mr. Herb Glasgow, Chief of Airport Planning I
City of Los Angeles, Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045
Telephone: (424) 646-5180
Email: hglasgow@lawa.org

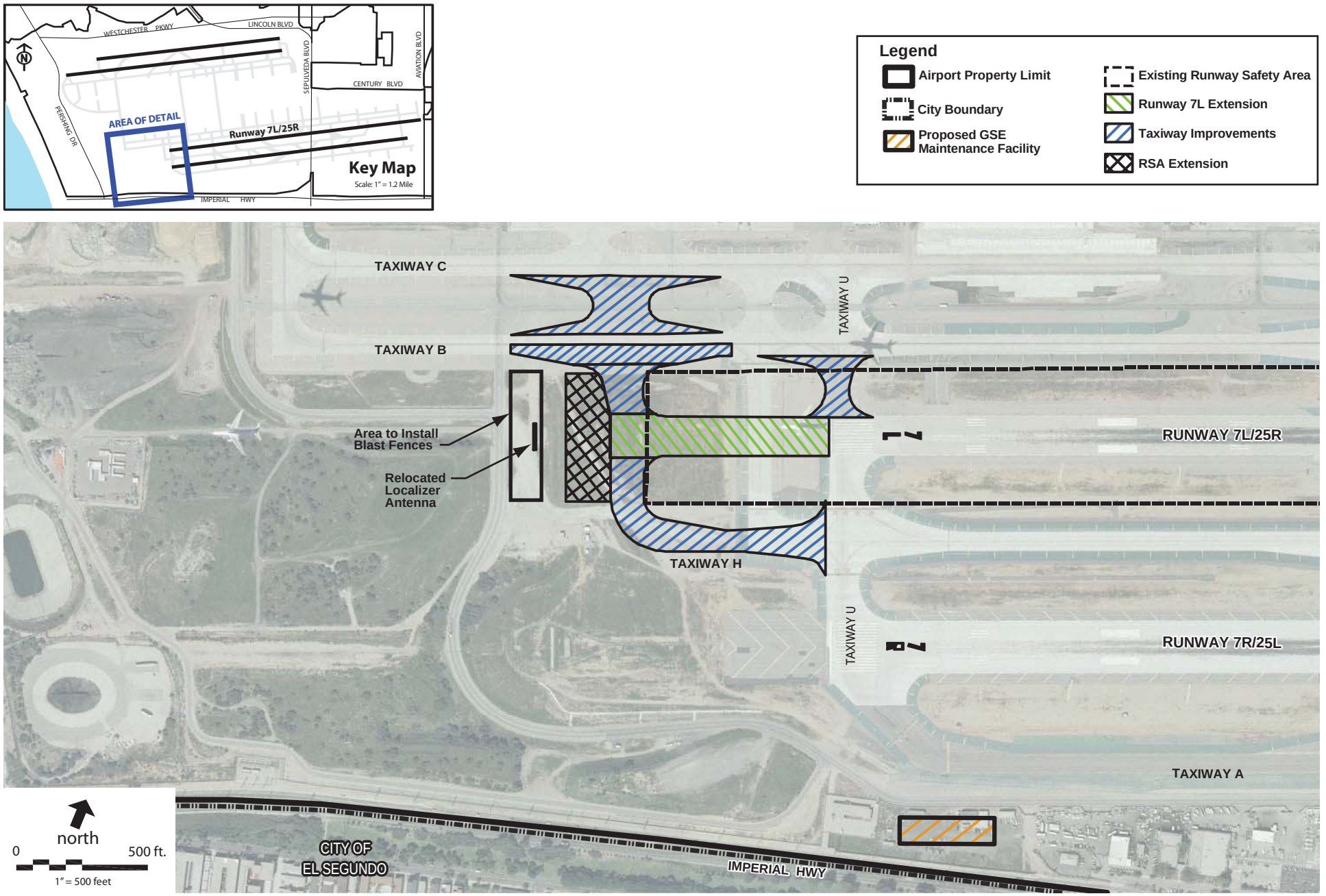
HERB GLASGOW

Chief of Airport Planning I

Enclosures:
Figure 1: Regional Map
Figures 2 & 3: Proposed Project Maps (2)
Figure 4: Scoping Meeting Location Map

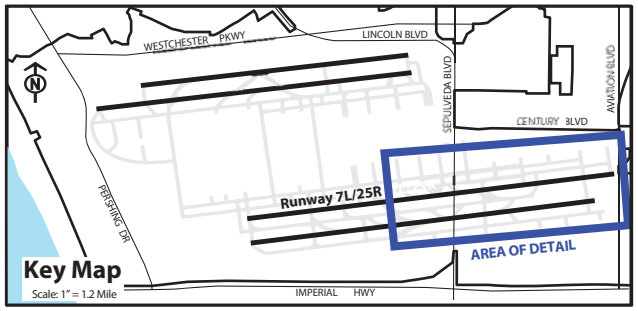
Source: LAWA 2012; ESRI Maps and Data - September 2012; Prepared by: URS Corporation.

FIGURE 1	REGIONAL MAP	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements



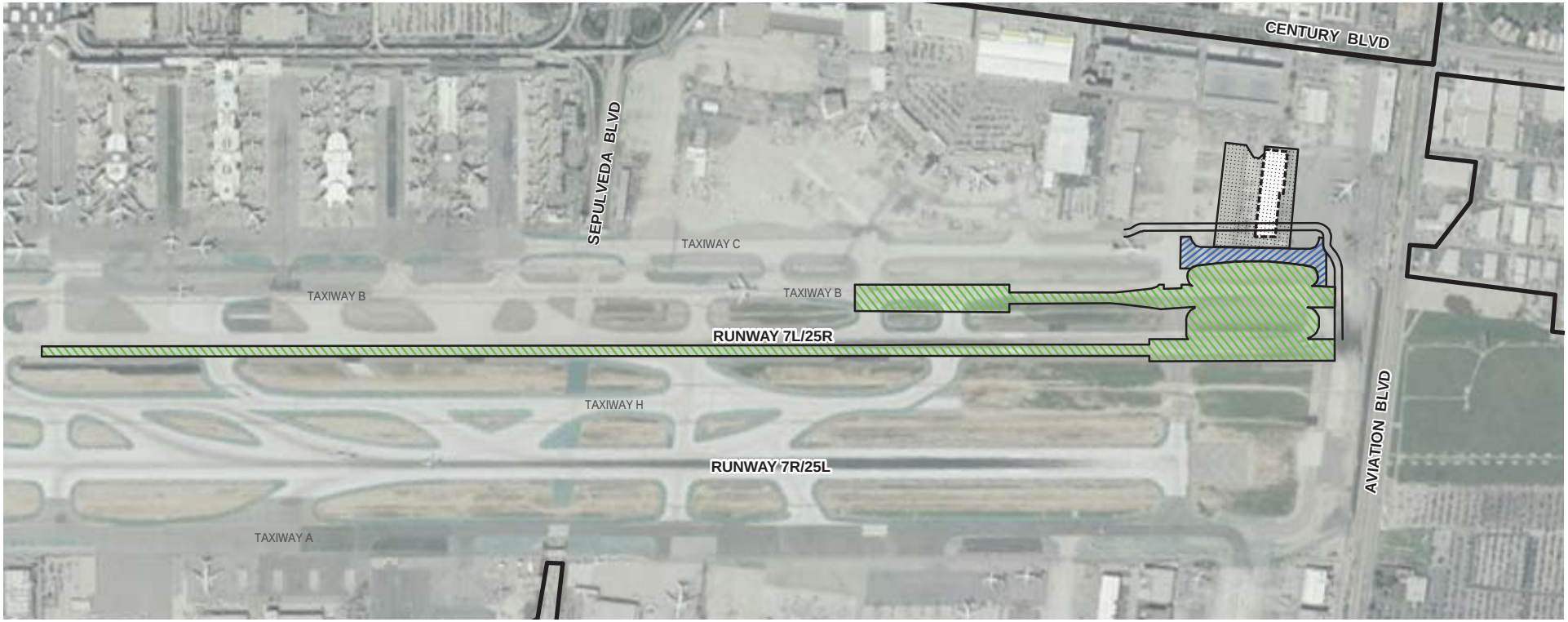
Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); ESRI Maps & Data September 2012 ; Prepared by: URS Corporation.

FIGURE 2	PROPOSED PROJECT WEST END IMPROVEMENTS	Notice of Preparation LAX Runway 7L/25R RSA Project and Associated Improvements



LEGEND

- Airport Property Limit
- Pavement Reconstruction
- Taxiway C Realignment and Extension
- Existing Air Freight Building No. 8 (To Be Demolished)
- New Aircraft Parking Apron
- Relocated Access Road



north

0 1000 ft.

1" = 1000 feet

Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); *Runway 25R & Taxiway B East End Rehabilitation and Taxiway C Extension Preliminary Engineer's Report* (HNTB, 2011); ESRI Maps & Data September 2012 ; Prepared by: URS Corporation.

FIGURE 3	PROPOSED PROJECT EAST END IMPROVEMENTS	Notice of Preparation LAX Runway 7L/25R RSA Project and Associated Improvements

north

0 1000 ft.

1" = 1000 feet

Source: ESRI Maps and Data, September, 2012; Prepared by: URS Corporation.

FIGURE 4	SCOPING MEETING LOCATION THE PROUD BIRD RESTAURANT	Notice of Preparation LAX Runway 7L/25R RSA Project and Associated Improvements

APPENDIX A2

INITIAL STUDY

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1.0 INITIAL STUDY AND CHECKLIST

LEAD AGENCY	COUNCIL DISTRICT	DATE
City of Los Angeles, Los Angeles World Airports (LAWA)	Council District 11	October 5, 2012

RESPONSIBLE AGENCIES: South Coast Air Quality Management District (SCAQMD); SWRCB and/or RWQCB; Los Angeles Bureau of Sanitation; Los Angeles Fire Department; Los Angeles Bureau of Engineering; Los Angeles Department of Building and Safety; Los Angeles Department of Public Works and other agencies as applicable.

PROJECT TITLE/NO.	CASE NO.
LAX Runway 7L/25R RSA Project and Associated Improvements	

PROJECT DESCRIPTION:

The intent of the proposed Project is to comply with the *Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, such as LAX, to meet FAA airport design standards by December 31, 2015. LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway 7L/25R does not meet current airport design standards and improvements to the RSA were needed. Additionally, Runway 7L/25R**,** as the primary departure runway on the south airfield, and its connecting taxiways which provides the main access to both runways, handle a large amount of traffic. Due to heavy usage the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility.

Specifically, the proposed Project would include: (1) Runway 7L/25R Improvements including extending the Runway 7L/25R pavement; grading and compacting the RSA; constructing blast fences west of the Runway 7L extension; several taxiways modifications as necessary; relocating the existing Localizer Antenna and blast fences to the west; replacing the existing Approach Lighting System (ALS) towers with in-pavement lights; and modifying the existing Runway and Taxiway lighting and markings in the newly constructed pavements; (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B including connecting taxiways and installation of in-pavement approach lights; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8 including realigning an existing service road north of Taxiway C; realignment and eastward extension of Taxiway C; and the paving of the Air Freight Building No. 8 site; (4) Construction of a GSE Maintenance Facility including removal and relocation of four temporary structures (trailers) present at the proposed site; removal of existing concrete; grading and excavation; and the installation of utilities. The proposed Project would not result in increased or decreased aviation activity at LAX compared to existing conditions.

ENVIRONMENTAL SETTING:

The proposed Project is located on the south airfield of LAX. Existing adjacent uses include: Airport-related, Commercial and Industrial uses to the east of Aviation Boulevard; Multi-family residential and industrial uses in the City of El Segundo to the south of Imperial Highway; the Los Angeles/El Segundo Dunes and El Segundo Blue Butterfly Habitat Restoration to the west of Pershing Drive; and the Central Terminal Area (CTA) immediately to north of the project site. The south airfield complex includes two parallel runways (7L/25R and 7R/25L), several taxiways, grass infields, airfield lighting and signage, and underground utilities.

PROJECT LOCATION

The proposed Project is located on the South Airfield of LAX in the City of Los Angeles with the CTA and Century Boulevard immediately to the north; Aviation Boulevard to the east; Imperial Highway to the south; and Pershing Drive to the west. The proposed Project site is bordered to the north, south, and east by airport facilities. To the west of the proposed Project site is vacant, open land.

PLANNING DISTRICT	STATUS:
Los Angeles International Airport Plan (LAX Plan) Land Use Designation: Airport Airside)	☐ **PRELIMINARY** ☐ **PROPOSED** ☒ **ADOPTED** December 14, 2004

EXISTING ZONING LAX- A ZONE: Airport Airside Sub-area	**MAX. DENSITY ZONING** N/A	☒ **CONSISTENT WITH EXISTING ZONING, PLANS, AND LAND USE CONTROLS**
PROPOSED PROJECT LAND USE LAX-Airside: Aircrafts, Navigational Aids, Runways, Taxiways, aircraft parking aprons, service roads, and aircraft maintenance	**MAX. DENSITY PLAN** N/A	☐ **NOT CONSISTENT WITH EXISTING ZONING, PLANS, AND LAND USE CONTROLS**
SURROUNDING LAND USES North – Airport Uses; East – Airport Uses, Industrial, and Commercial; South – Airport Uses, Residential and Industrial; West – Open Space	**PROJECT DENSITY** N/A	

DETERMINATION (To be completed by Lead Agency)	
On the basis of this initial evaluation:	
☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions on the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	
☐ I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	
☒ I find 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 earlier analysis as described on attached sheets. An 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, nothing further is required.	
Herbert Glasson	Chief of Airport Planning I
SIGNATURE	**TITLE**

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

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

☒	Aesthetics	☐	Agricultural Resources	☒	Air Quality
☐	Biological Resources	☐	Cultural Resources	☐	Geology/Soils
☒	Greenhouse Gas Emissions	☒	Hazards and 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

ENVIRONMENTAL IMPACTS (Explanations of all potentially and less than significant impacts are required to be attached on separate sheets)

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Would the project:				
a. Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b. 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?	☒	☐	☐	☐
II. AGRICULTURAL AND FORESTRY RESOURCES. Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program in the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined in Public Resource Code section 4526), or timberland-zoned Timberland Production (as defined by Government Code section 51104[g])?	☐	☐	☐	☒
d. Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
III. 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?	☒	☐	☐	☐
IV. BIOLOGICAL RESOURCES. Would the project:				
a. Have a substantial adverse impact, 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 impact 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?	☐	☐	☒	☐
c. Adversely impact federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒
V. CULTURAL RESOURCES. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☒	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☐	☒	☐
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐
d. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☒	☐
VI. 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. Would the project result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
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?	☐	☐	☐	☒
VII. GREENHOUSE GAS EMISSIONS. Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☒	☐	☐	☐
b. Conflict with an application plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☒	☐	☐	☐
VIII. 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 the reasonably foreseeable upset and accident conditions involving the likely 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. Is the project 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	Potentially Significant Unless 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 the risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒
IX. 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 (i.e., 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 that would result in flooding on- or off-site?	☐	☐	☒	☐
e. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☒	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f. Otherwise substantially degrade water quality?	☐	☐	☒	☐
g. Place housing within a 100-year floodplain, 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 floodplain structure that would impede or redirect flood flows?	☐	☐	☐	☒
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?	☐	☐	☐	☒
X. LAND USE AND PLANNING. Would the project:				
a. Physically divide an established community?	☐	☐	☐	☒
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited, to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c. Conflict with any applicable habitat conservation plan or natural community's conservation plan?	☐	☐	☐	☒
XI. 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?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. NOISE. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☒	☐	☐	☐
b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne 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?	☐	☐	☐	☒
XIII. 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?	☐	☐	☐	☒

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. PUBLIC SERVICES. Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of 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?	☐	☐	☐	☒
XV. 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?	☐	☐	☐	☒
b. Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC. Would the project:				
a. Conflict with an application plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☒	☐	☐	☐
d. Substantially increase hazards to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e. Result in inadequate emergency access?	☐	☐	☐	☒
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒
XVII. 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 could 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 federal, state, and local statues and regulations related to solid waste?	☐	☐	☒	☐

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. 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, effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐
c. Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐

2.0 PROJECT DESCRIPTION

2.1 INTRODUCTION

The intent of the proposed Project is to comply with the *Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, such as LAX, to meet FAA airport design standards by December 31, 2015. LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway 7L/25R does not meet current airport design standards and improvements to the RSA were needed. Additionally, Runway 7L/25R**,** as the primary departure runway on the south airfield, and its connecting taxiways which provides the main access to both runways, handle a large amount of traffic. Due to heavy usage the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility. The proposed Project would not increase airport capacity.

2.2 ENVIRONMENTAL SETTING

LAX encompasses approximately 3,660 acres and is situated at the western edge of the City of Los Angeles, as shown in **Figure 1**. The proposed Project is located on the South Airfield of LAX in the City of Los Angeles with the CTA and Century Boulevard immediately no the north; Aviation Boulevard to the east; Imperial Highway to the south; and Pershing Drive to the west. The proposed Project site is bordered to the north, south, and east by airport facilities. To the west of the proposed Project site is vacant, open land (**Figure 2**).

LAX is the largest commercial service airport in Southern California, the fifth-busiest airport in the United States, and the sixth-busiest airport in the world. The FAA's 2011 Terminal Area Forecast (TAF) predicted that LAX would handle approximately 596,194 aircraft operations in 2011. Passenger enplanements at LAX in 2011 were approximately 29,408,216. In addition to passenger service, LAX is also a major center for international air cargo. In 2010, approximately 1,793,871 metric tons of air cargo was handled at LAX.

2.3 LAND USE AND ZONING DESIGNATION

The Project site is located entirely within the City of Los Angeles LAX Plan area, as well as the LAX Specific Plan area, and is designated in the LAX Plan as "Airport Airside." Permitted uses include, but are not limited to, runways, taxiways, aircraft gates, maintenance areas, airfield operation areas, air cargo areas, passenger handling facilities, fire protection facilities, and other ancillary airport facilities. The LAX Specific Plan establishes additional regulations and standards consistent with the LAX Plan for the airport. The LAX Specific Plan designates the Project site as Airport Airside (LAX-A Zone). Permitted uses in LAX-A Zone include, but are not limited to: surface and structured parking lots; aircraft under power; airline maintenance and support; air cargo facilities; commercial passenger vehicle staging and holding area; helicopter operations; navigational aids; runways, taxiways, aircraft parking aprons, and service roads; passenger handling facilities; run-up enclosures; and other ancillary airport facilities. The zoning for the site is "'LAX' Los Angeles International Airport Specific Plan Zone," which incorporates the regulations of the LAX Specific Plan (LAMC §12.19.1.).

Existing adjacent uses include: Airport-related, Commercial and Industrial uses to the east of Aviation Boulevard; Multi-family residential and industrial uses in the City of El Segundo to the south of Imperial Highway; the Los Angeles/El Segundo Dunes and El Segundo Blue Butterfly Habitat Restoration to the west of Pershing Drive; and the Central Terminal Area (CTA) immediately to north of the project site. The south airfield complex includes two parallel runways (7L/25R and 7R/25L), several taxiways, grass infields, airfield lighting and signage, and underground utilities.

2.4 EXISTING PROJECT SITE CONDITIONS

2.4.1 Existing RSAs

The South Airfield includes two parallel runways (7L/25R and 7R/25L), several taxiways, grass infields, airfield lighting and signage, and underground utilities south of the main LAX terminal. Runway 7L/25R, the focus of the proposed Project, is the primary departure runway on the South Airfield. Runway 7L/25R is 12,091 feet long and 150 feet wide, and is served by several taxiways. The RSA for Runway 7L/25R is short at both ends as compared with the FAA's Airport Design Standards length for RSAs The Runway 7L/25R RSA is consistent with FAA RSA design standards (**Figure 3**).

2.4.2 Existing Pavement at Eastern Portions of Runway 7L/25R and Taxiway B

Most aircraft that utilize the South Airfield for departure begin that process on Runway 25R and its connecting taxiways (**Figure 4**). As such, this portion of runway and its associated taxiways handle a large amount of traffic. The Runway 25R pavement and the pavement on the east end of Taxiway B were constructed in 1986. The current Pavement Condition Index (PCI) rating for these pavements varies from 0 to 70, indicating that portions of the runway and taxiway pavements are in a poor (0) to fair (70) condition.

2.4.3 Air Freight Building No. 8 and Site of Proposed Taxiway C Extension

Parallel Taxiway B provides the primary access to the Runway 25R threshold for departing aircraft and is heavily used each day, all day (**Figure 4**). Parallel Taxiway C, provides access to the central and eastern portions of the Century Cargo Complex, but it does not have access the easternmost portion of the Century Cargo Complex. Currently, air cargo aircraft use the easternmost segment of Taxiway B to access the easternmost buildings of the Century Cargo Complex.

The existing Air Freight Building No. 8 is currently used to store and maintain GSE. Air Freight Building No. 8 is bound on the south by a service road to which it has direct access for the transport of GSE as needed during operations (**Figure 4**). The service road is located north and east of the existing eastern terminus of Taxiway C. The proposed Taxiway C extension would require realignment of the service road northward, which would place it on the footprint of the existing Air Freight Building No. 8.

2.4.4 Proposed GSE Maintenance Facility Site

The site of the proposed GSE Maintenance Facility is currently occupied by several non-permanent structures (trailers and sheds) used for offices and other airport-related uses. The site is accessible from Imperial Highway at the Main Street intersection. Controlled access to the service road and South Airfield is provided by a security gate. The site is paved and relatively flat, and a portion of it is currently used for automobile parking, although it has no marked parking spaces (**Figure 5**).

Source: LAWA 2012; ESRI Maps and Data - September 2012; Prepared by: URS Corporation.

FIGURE 1	REGIONAL MAP	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements

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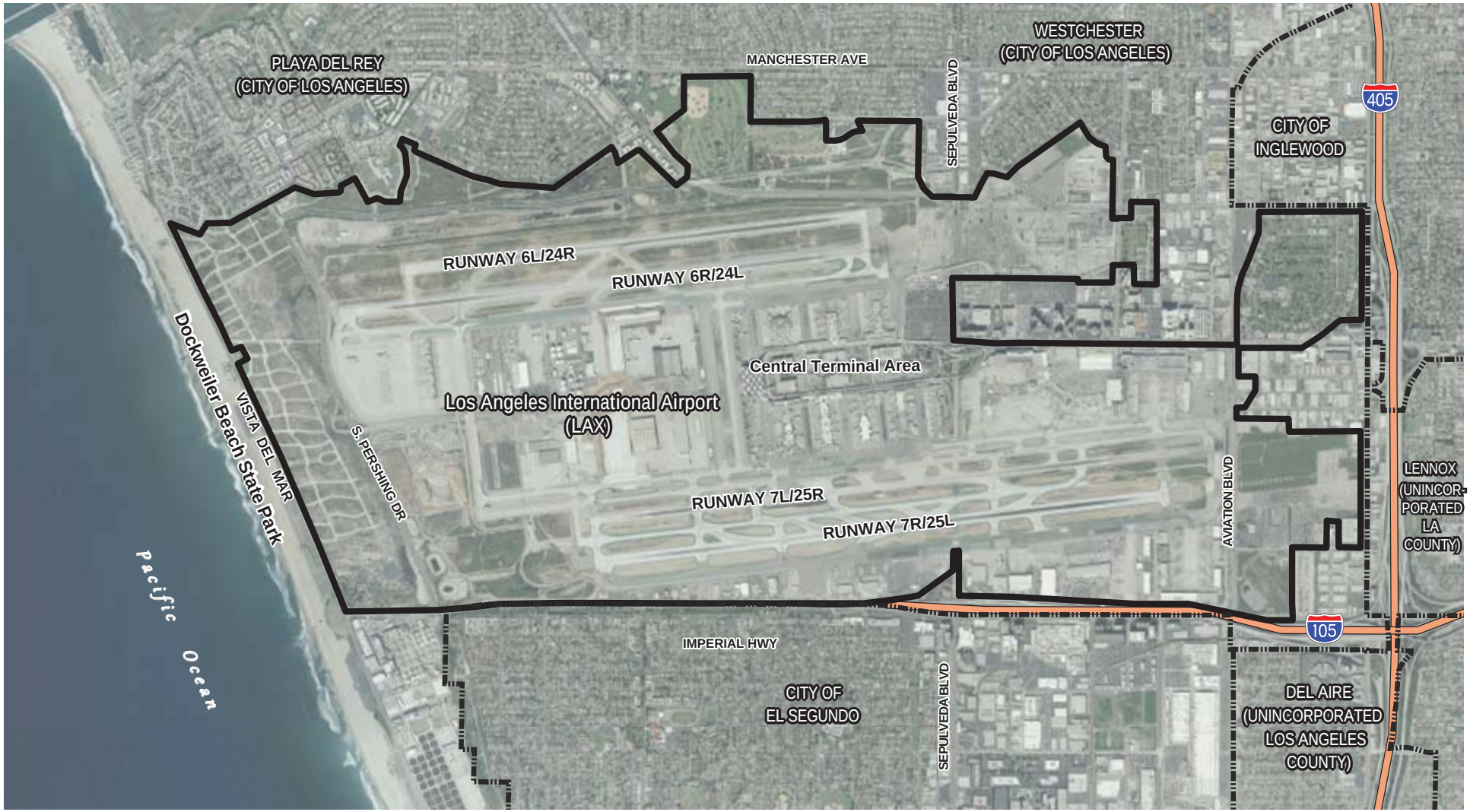

Source: LAWA, 2012; ESRI Maps and Data, January 2012; Prepared by: URS Corporation.

FIGURE 2	AIRPORT LOCATION AND EXISTING LAYOUT	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements

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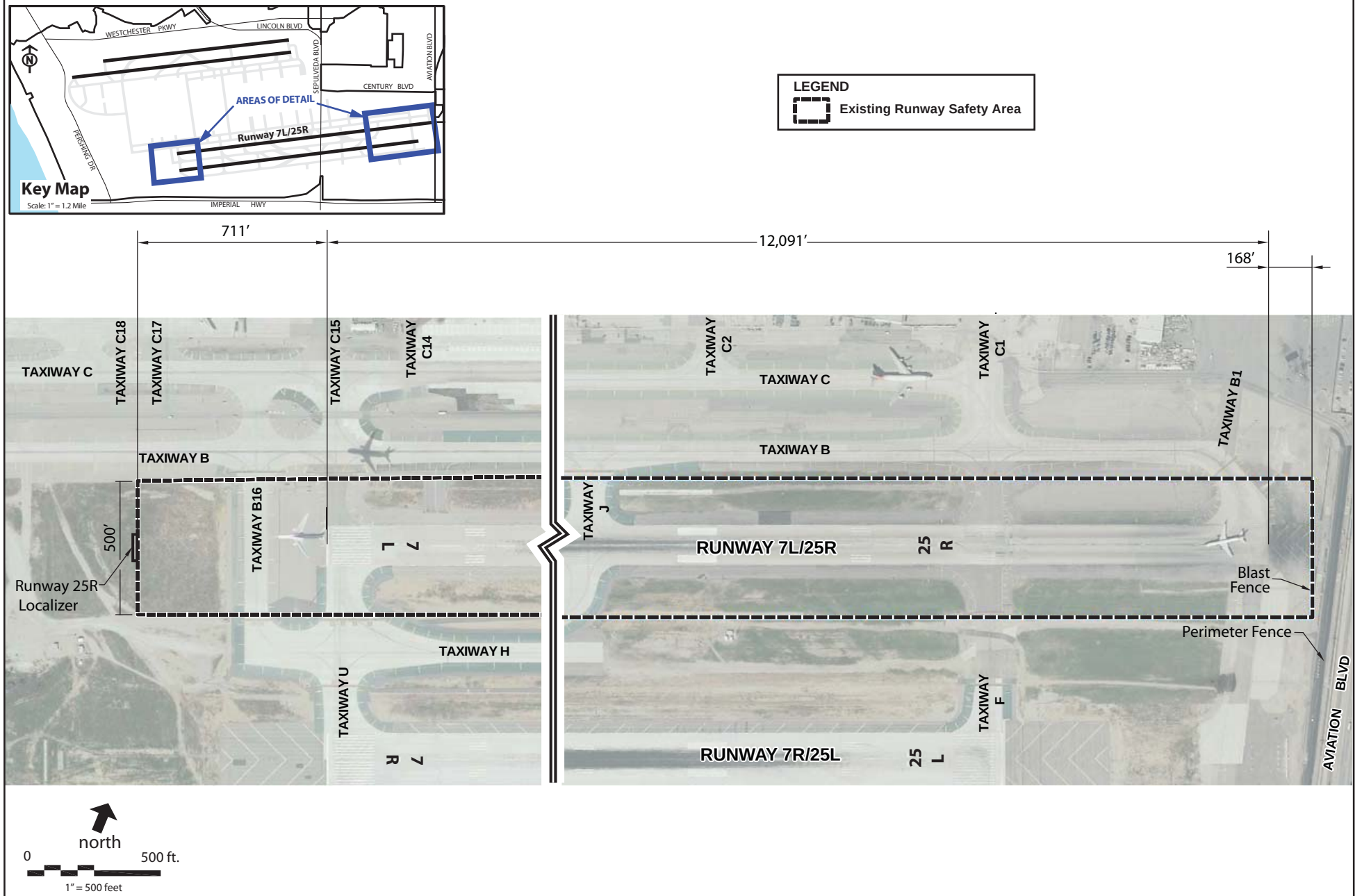

Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); ESRI Maps & Data January 2012 ; Prepared by: URS Corporation.

FIGURE 3	EXISTING RUNWAY 7L/25R RSA	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements

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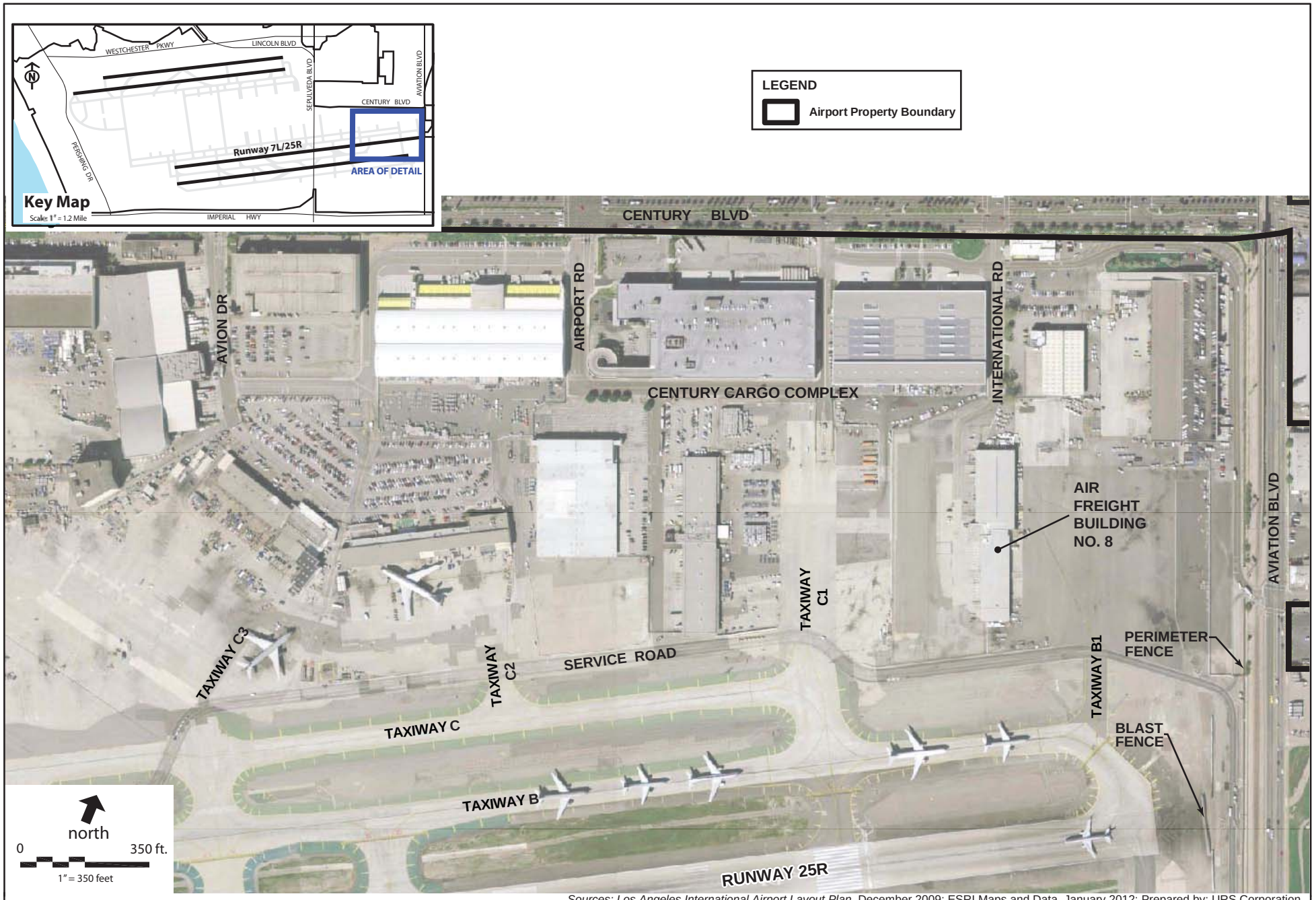

Sources: Los Angeles International Airport Layout Plan, December 2009; ESRI Maps and Data, January 2012; Prepared by: URS Corporation.

FIGURE 4

EXISTING RUNWAY 25R AND CENTURY CARGO COMPLEX

Initial Study
LAX Runway 7L/25R RSA Project and Associated Improvements

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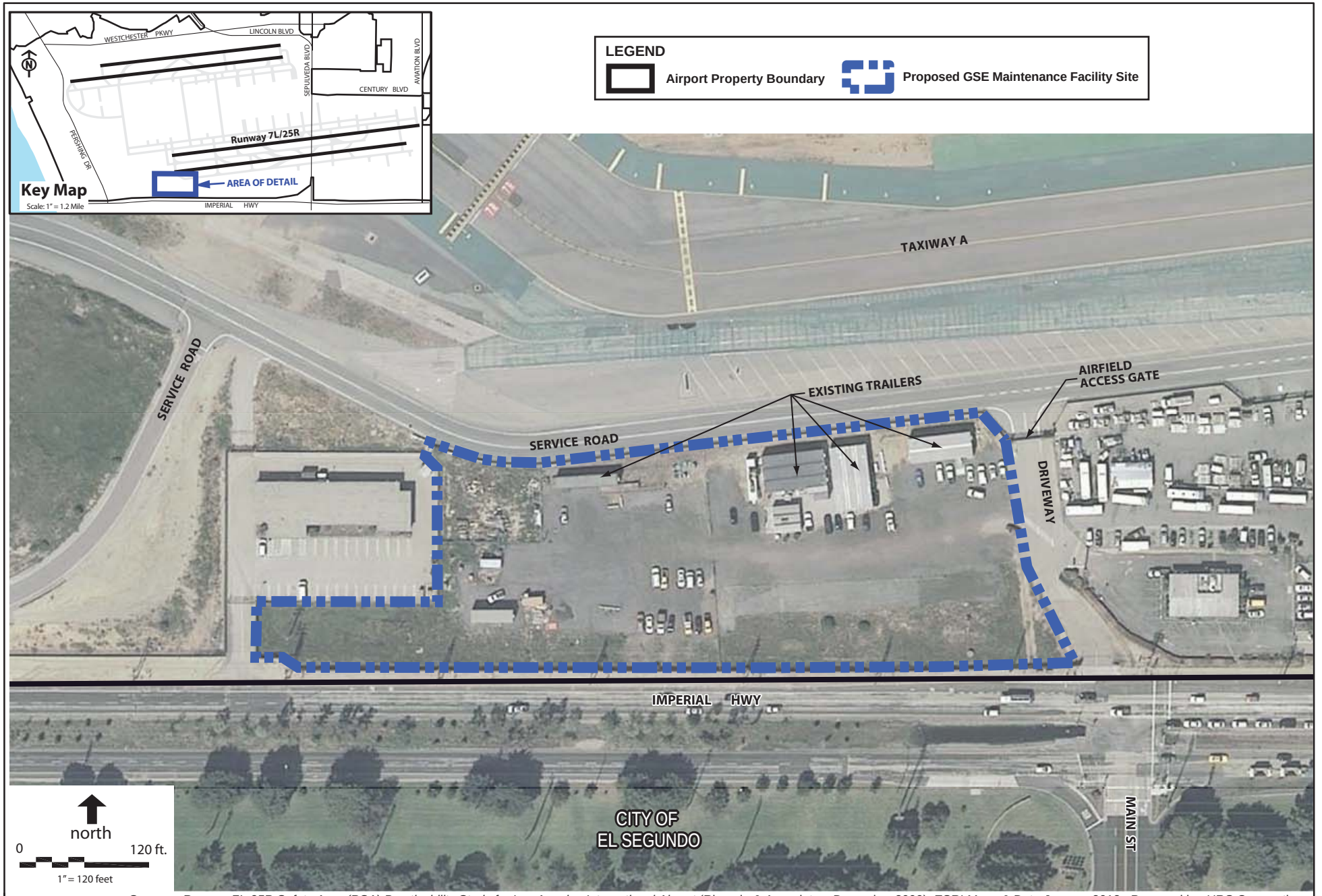

Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); ESRI Maps & Data January 2012 ; Prepared by: URS Corporation.

FIGURE 5	PROPOSED GROUND SUPPORT EQUIPMENT MAINTENANCE FACILITY SITE	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements

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2.5 LAX MASTER PLAN EIR

The 2004 LAX Master Plan is the comprehensive development program for LAX properties, including runway and taxiway system modernization, redevelopment of terminal areas, airport maintenance areas, airport access improvement and passenger safety, security, and convenience enhancements. The proposed Project complies with the LAX Master Plan objectives to improve safety at LAX. The Final EIR for the LAX Master Plan (California State Clearinghouse Project No. 1997061047) included analysis of the environmental impacts of future development at LAX. The LAX Master Plan Final EIR contains Master Plan commitments and mitigation measures that apply to the LAX property, including the Project site.

2.6 LAX RUNWAY 7L/25R RSA PROJECT AND ASSOCIATED IMPROVEMENTS EIR

Consistent with the California Environmental Quality Act (Public Resources Code §21000 et seq., "CEQA") and the CEQA Guidelines (California Code of Regulations title 14, §15000 et seq.), LAWA is preparing a project-level Environmental Impact Report (EIR) to evaluate the environmental impacts of the proposed Project. The LAX Runway 7L/25R RSA Project and Associated Improvements EIR will evaluate the environmental impacts of the proposed Project. This Initial Study Checklist has been prepared for the proposed Project to focus the issues that will be studied in further detail in the EIR by identifying the resource areas that could be subject to significant impacts from the proposed Project, and that would require incorporation of mitigation measures where feasible. The Initial Study also identifies resource areas where the environmental effects of the proposed Project would be less than significant or where no impacts are anticipated. These resource areas will not be evaluated further in the EIR. Based on a preliminary review of the Project site and in consideration of the proposed Project and associated activities, LAWA has determined that potentially significant effects may occur in the following areas: Aesthetics, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, and Transportation/Circulation. These issues will be evaluated further in the EIR.

LAWA has determined that no significant impacts would occur for the following resource areas: Agricultural and Forest Resources, Biological Resources, Cultural Resources, Geology and Soils, Land Use/Planning, Mineral Resources, Population and Housing, Public Services, Recreation, and Utilities and Service Systems. These topics will not be evaluated further in the EIR unless new information affecting these determinations arises during the 30-day scoping period associated with circulation of the Notice of Preparation (NOP) for the EIR.

2.7 PROJECT CHARACTERISTICS

The proposed Project consists of the following four primary components: (1) Runway 7L/25R RSA Improvements; (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8; and (4) Construction of a GSE Maintenance Facility.

2.7.1 Runway 7L/25R RSA Improvements

The Runway 7L/25R RSA improvements primarily involve the west end of Runway 7L (**Figure 6**). The elements of the proposed Runway 7L/25R RSA improvements include the extension of Runway 7L/25R pavement, 832 feet to the west. The Runway 7L threshold will remain at its current location for landings, resulting in an 832-foot displaced threshold. When Runway 7L/25R is extended to the west, the Runway 7L landing threshold location will remain unchanged and will be designated as a displaced threshold. Through the use of the displaced threshold, associated pavement markings, and of in-pavement approach lighting systems, aircraft can begin their runway departure roll at the western-most portion of the extended runway pavement.

Currently, the existing Medium Intensity Approach Light Systems (MALSR) serving Runway 7L comprises a number of light stations on towers that must remain fixed at their current location and configuration (**Figure 7[a]**). Accordingly, portions of the existing tower-mounted light fixtures must be replaced with in-pavement lights when the Runway pavement is extended westward (**Figure 7[b]**). The use of in-pavement lighting will allow Runway 7L departures west of the displaced threshold.

The existing Runway 7L/25R localizer antenna array, a component of the Instrument Landing System that provides runway centerline guidance to landing aircraft, would be relocated while the existing localizer equipment shelter would not need to be relocated because it is outside of the Object Free Area (OFA) for this Runway. New blast fences would be installed west of the extended 7L Runway to protect the existing service road from jet blast.

2.7.2 Pavement Reconstruction of the Eastern Portions of Runway 7L/25R and Taxiway B

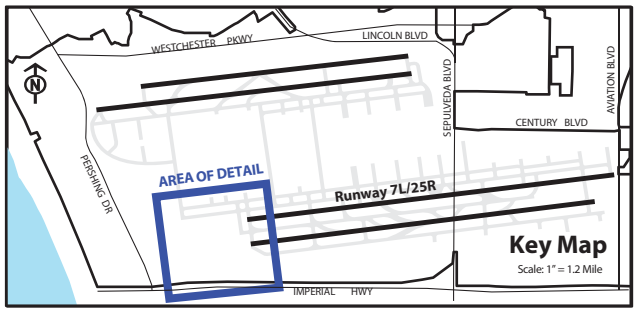
The proposed Project will reconstruct pavement that is in poor condition on the eastern portions of Runway 7L/25R and of Taxiway B. Pavement reconstruction activities may include, but are not limited to, demolition and removal of existing pavement and base materials, placement of new sub-base and/or base materials, installation of new Portland Cement Concrete pavement, application of runway and taxiway markings on the new pavement segments, and the installation of in-pavement approach lights. As both west and east ends of Runway 7L/25R require pavement reconstruction, this work would be synchronized so as to only require one closure of the entire Runway for approximately three (3) months. Because Runway 25R is the primary departure runway on the South Airfield, the proposed closure would require shifting departing aircraft traffic to other runways at LAX. The actual number and frequency of flights shifted to other runways is expected to be determined by LAX Operations and FAA Air Traffic Control.

2.7.3 Taxiway C Extension and Demolition of Air Freight Building No. 8

The Taxiway C Extension will improve aircraft and passenger safety by allowing access to Runway 25R during pavement reconstruction of Taxiway B (**Figure 8**). Demolishing Air Freight Building No. 8 is necessary to meet FAA airport design standards for Taxiway centerline to fixed or movable objects. Long-term benefits of the extension of Taxiway C include access to the easternmost area of the Century Cargo Complex and Runway 25R. Elements of the extension of Taxiway C include demolishing the 72,000 square-foot Air Freight Building No. 8 to accommodate the realigned service road and to comply with FAA airport design standards for Taxiway centerline to fixed or movable objects; paving the site of the demolished Air Freight Building No. 8 site and the area around this site with apron pavement suitable for aircraft parking; realigning a portion of the vehicle service road north of the Taxiway C extension; and realigning and extending Taxiway C eastward to Taxiway B1.

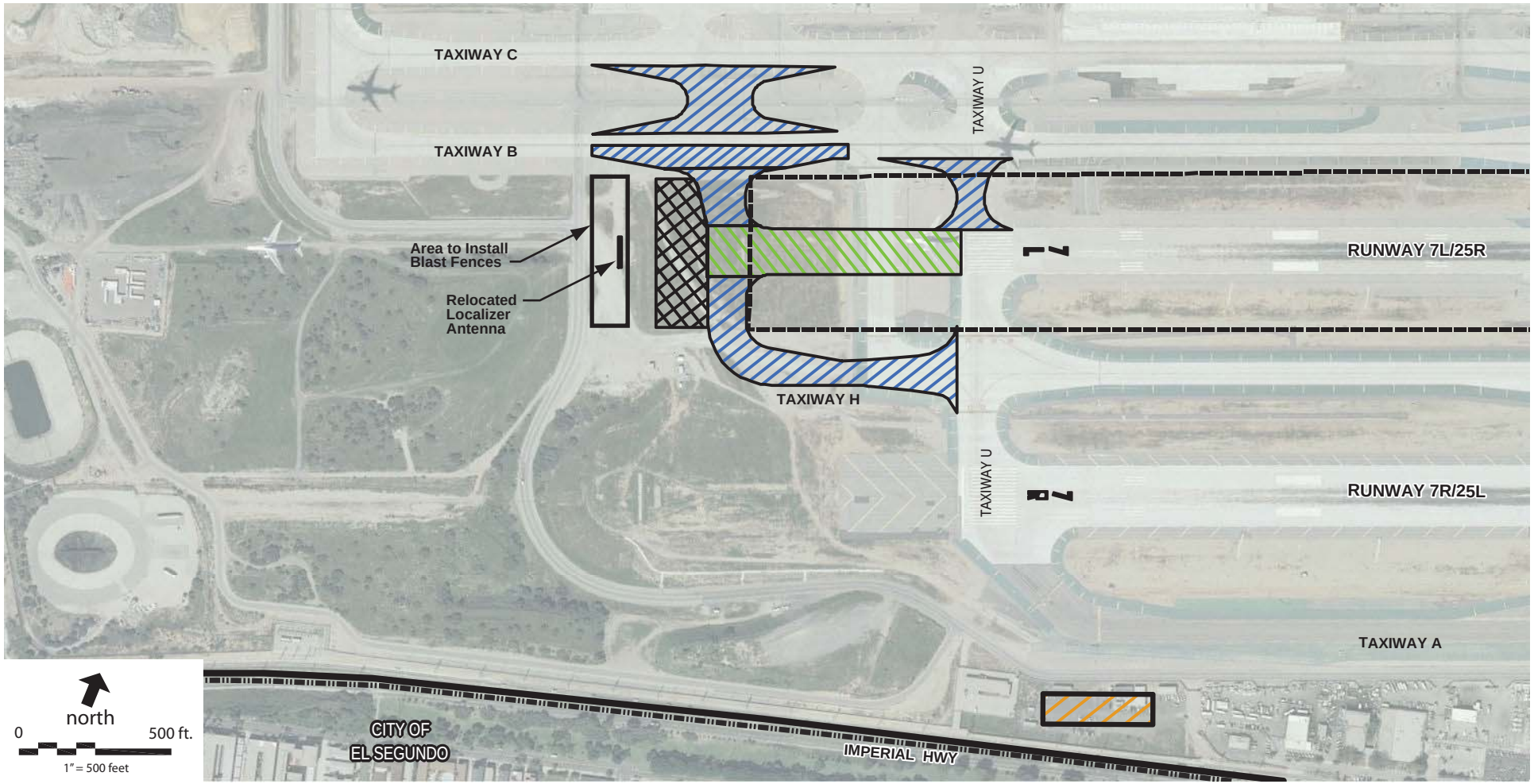
2.7.4 GSE Maintenance Facility

The proposed GSE Maintenance Facility would be constructed prior to vacating and demolishing Air Freight Building No. 8. The construction of a GSE Maintenance Facility will provide a replacement structure to house existing Air Freight Building No. 8 tenants and GSE maintenance operations, while maintaining access to a service road on the South Airfield. The proposed GSE Maintenance Facility would be located on a 2.86-acre site along Imperial Highway (**Figure 6**). Elements of the GSE Maintenance Facility would include removal and relocation of several temporary structures (trailers) present at the proposed GSE Maintenance Facility site; removal of existing concrete; grading and excavation for foundation; installation of utilities; and construction of a 60,000-square-foot, 2-story GSE facility.



Legend

- Airport Property Limit
- City Boundary
- Proposed GSE Maintenance Facility
- Existing Runway Safety Area
- Runway 7L Extension
- Taxiway Improvements
- RSA Extension



Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); ESRI Maps & Data September 2012 ; Prepared by: URS Corporation.

FIGURE 6	PROPOSED PROJECT WEST END IMPROVEMENTS	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements

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a. Existing Approach Light System (Towers) at South Airfield Runway 7L (Looking West).

b. Existing North Airfield Runway 24L (Looking West) In-Pavement Approach Light System, Similar to Proposed Runway 7L In-Pavement Approach Light System.

Source: LAWA 2012; URS Corporation - January 2012; Prepared by: URS Corporation.

FIGURE 7	EXISTING AND PROPOSED AIRFIELD LIGHTING	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements

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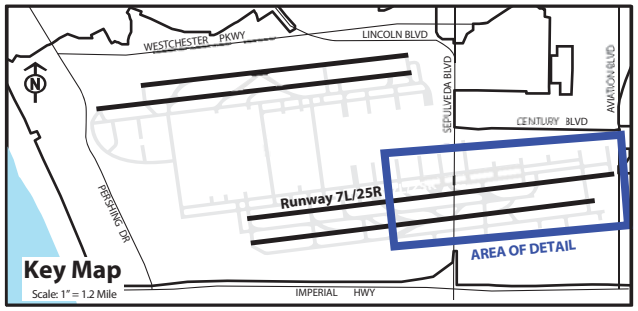

LEGEND

- Airport Property Limit
- Pavement Reconstruction
- Taxiway C Realignment and Extension
- Existing Air Freight Building No. 8 (To Be Demolished)
- New Aircraft Parking Apron
- Relocated Access Road

north

0 1000 ft.

1" = 1000 feet

Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); *Runway 25R & Taxiway B East End Rehabilitation and Taxiway C Extension Preliminary Engineer's Report* (HNTB, 2011); ESRI Maps & Data September 2012 ; Prepared by: URS Corporation.

FIGURE 8	PROPOSED PROJECT EAST END IMPROVEMENTS	Initial Study LAX Runway 7L/25R RSA Project and Associated Improvements

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2.8 PRELIMINARY PROJECT PHASING SCHEDULE

It is anticipated that the proposed Project will be completed over the next two years.

2.9 REQUIRED APPROVALS/CONSULTATIONS

Implementation of the proposed Project would require approvals from and consultation with Federal, State, and regional/local agencies. The EIR will be used by the following agencies in connection with permits and approvals necessary for the construction and operation of the proposed Project. Federal, State, and regional/local agency actions required for the construction and operation of the proposed Project may include, but are not limited to, those described below. The EIR may also be used in connection with other Federal, State, or regional/local approvals, permits, or actions that may be deemed necessary for the proposed Project, but which are not specifically identified below.

2.9.1 Federal

U.S. Department of Transportation Federal Aviation Administration (FAA): Approval of an FAA Notice of Construction or Alteration, to ensure safe and efficient use of navigable airspace with consideration of the proposed Project and during the construction of the proposed Project. LAWA and its selected contractor would submit a FAA Form 7460-1 "Notice of Proposed Construction or Alteration."

2.9.2 State

South Coast Air Quality Management District (SCAQMD): Review of any permits required under the Clean Air Act for stationary sources

State Water Resources Control Board (SWRCB) and Los Angeles Regional Water Quality Control Boards (LARWQCB): Permits or approvals required from the SWRCB and/or RWQCB may include but are not be limited to: (1) General Construction Storm Water Permit; (2) Standard Urban Stormwater Mitigation Plan; and (3) Submittal of a Recycled Water Report to the RWQCB for the use of recycled water as a dust control measure for construction; Approval of a National Pollutant Discharge Elimination System (NPDES) Industrial Activities Storm Water Permit (i.e., if modification of the existing permit for LAX is required as a result of the proposed Project), a General Construction Activity NPDES Storm Water Permit (2009-0009-DWQ) for construction activities, and issuance of a Section 401 Permit (Water Quality Certification or Waiver).

2.9.3 Regional/Local

- LAX Specific Plan Compliance Review in accordance with Section 7 of the Specific Plan;
- Preparation of a Project-Specific Storm Water Management Plan or Standard Urban Storm Water Mitigation Plan for approval by the Bureau of Sanitation, Watershed Protection Division;
- Los Angeles Fire Department approval;
- Grading permits, building permits, and other permits issued by the Department of Building and Safety for the Project and any associated Department of Public Works permits for infrastructure improvements; and
- Other Federal, State, or local approvals, permits, or actions that may be deemed necessary for the Project.

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3.0 EXPLANATION OF INITIAL STUDY CHECKLIST DETERMINATIONS

The following analysis provides supporting documentation for the determinations presented in the Initial Study Checklist presented in Section 2 of this document. Each response provided below evaluates how the proposed Project as defined in the Project Description may affect existing environmental conditions at the Project site and in the surrounding area. The EIR will further evaluate topics where the potential for a significant impact has been identified. The EIR will analyze the identified potentially significant impacts and, where appropriate, identify mitigation measures, and explain how such measures would reduce significant impacts.

The proposed Project is located within the LAX property, and is subject to the requirements and mitigation measures of several LAX plans and CEQA documents, including but not limited to: (1) the 2005 LAX Street Frontage & Landscape Development Plan Update; (2) the 2004 Los Angeles International Airport Proposed Master Plan Improvements (LAX Master Plan); and (3) the 2004 Final EIS/EIR for the Los Angeles International Airport Master Plan Proposed Improvements (SCH #1997061047). Where necessary to support the conclusions made in this Initial Study, the information, requirements and mitigation measures from these documents are referenced in the Initial Study responses, as is information from other relevant CEQA documents and technical studies associated with other LAWA projects at LAX.

I. AESTHETICS

Would the project:

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

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

Ia and Ib. No Impact. The Project site is located on the South Airfield Complex at LAX, an area that has been extensively disturbed and is developed with industrial uses. The Pacific Ocean is the only scenic vista in the vicinity of the Project site and the primary vista-related sensitive uses are residences located to the north and south of the Airport property. As the runway and taxiway improvements associated with the proposed Project are on the ground and those elements already exist on the Project site, there will be no impacts to viewsheds. The demolition of Air Freight Building No. 8 would change the site to apron pavement and therefore would have no impacts to viewsheds. The proposed GSE Maintenance Facility is expected to be two-stories high; however, the new building would not be located within the residences' line of sight of the Pacific Ocean and views to the site are already blocked by topography and mature trees along Imperial Highway. ***Therefore, no impacts related to scenic vistas would occur, this topic will not be evaluated further in the EIR, and no mitigation is required***.

The Project site is not located within a state scenic corridor and would not damage any scenic resources. Vista Del Mar, a City of Los Angeles-designated scenic highway, is located 0.95 miles west of the Project site[1]; however, the Project site is not located within or visible from Vista Del Mar and views of the Project site from Vista Del Mar are blocked by the Los Angeles/El Segundo Dunes. The Project site also does not contain scenic resources, such as trees, rock outcroppings, historic buildings, or other locally recognized desirable aesthetic features. ***Therefore, no impacts would occur to scenic vistas or to scenic resources within a city-designated highway and this topic will not be evaluated further in the EIR and no mitigation is required.***

[1] City of Los Angeles Planning Department, *Transportation Element of the Los Angeles City General Plan*, adopted September 1999.

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

Ic. Less Than Significant Impact. The runway and taxiway improvements associated with the proposed Project will not change the visual character of the Project site and are consistent with the existing industrial character of LAX and the surrounding area. While the Project site has several small patches of vegetation, there are no landscaping or other features of aesthetic value on site to be affected.

Air Freight Building No. 8 is located within the Century Cargo Complex within airport boundaries and it is surrounded by other like buildings and the airfield. The demolition of Air Freight Building No. 8 would reduce the number of buildings in the Century Cargo Complex but would not significantly alter the massing or scale of the remaining buildings as it currently is placed apart from other buildings. Demolition of the building would not involve visibly inconsistent alterations of landforms (excessive grading and filling) and, consequently, would not change the visual character of the Century Cargo Complex.

The construction and operation of the proposed GSE Maintenance Facility would be consistent in visual character with existing uses along Imperial Highway. Although the proposed GSE Maintenance Facility would be located across the street from residential uses, Imperial Boulevard and the greenway lined with mature trees between the southern side of Imperial Boulevard and Imperial Avenue serve as a buffer between the residences and the new building. The construction would be designed and constructed to adhere with applicable LAX Street Frontage & Landscape Development Plan Update[2] requirements and the LAX Master Plan[3] commitments and mitigation measures designed to ensure aesthetic and visual compatibility with adjacent development and public streets. Compliance with applicable policies and LAX Master Plan commitments and mitigation measures would ensure that Project construction activities and the operation of the proposed GSE Maintenance Facility incorporate the necessary screening, buffering, landscaping, and other design measures to avoid significant adverse aesthetics impacts to the City of El Segundo neighborhoods to the south.

- **LAX Street Frontage & Landscape Development Plan Update Policy 1.3:** Parking areas should be landscaped in accordance with LAWA standards and shall comply with the requirements of Airport Security. Areas should be screened from streets by 3-to 8-foot high decorative walls, berms, landscaping, or other appropriate screening mechanisms, as feasible and practical.
- **LAX Street Frontage & Landscape Development Plan Update Policy 1.4:** Storage and industrial uses such as fueling, loading, and maintenance at cargo areas shall comply with the requirements of Airport Security, and should be screened from streets by decorative walls, berms, and/or appropriate landscaping, as feasible and practical.
- **LAX Street Frontage & Landscape Development Plan Update Policy 1.5:** Open areas not used for buildings, driveways, or parking lots should be planted, irrigated, and/or maintained on a regular basis.
- **LAX Street Frontage & Landscape Development Plan Update Policy 1.7:** Vegetation should be used to soften solid screening walls as feasible and practical, and shall comply with the requirements of Airport Security.
- **LAX Street Frontage & Landscape Development Plan Update Policy 6.2:** Perimeter landscape areas shall comply with the City of Los Angeles Landscape Ordinance as outlined by the LAX Specific Plan and all other applicable local codes and regulations, as feasible and practical.

[2] City of Los Angeles, Los Angeles World Airports (LAWA), *LAX Street Frontage & Landscape Development Plan Update*, March 2005.
[3] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.

- **LAX Street Frontage & Landscape Development Plan Update Section 6.1.7 (Surface Parking Areas and Parking Structures Standards):** Landscape setbacks surrounding surface parking areas and parking structures require planting, irrigation and security fencing or walls. The minimum setback for all parking facilities shall be 15 feet from the street right of way line unless otherwise specified. These areas shall be screened from adjacent streets or highways by solid walls in residential areas and berms, fencing with planting or walls in commercial, open space or other uses. At least 4 percent of the parking lot interior (not including setback areas) shall be permanently landscaped. Tree species shall be selected to create shade, reduce glare and heat. Care shall be taken to assure that trees do not drop sticky flowers or fruits onto paved surfaces or vehicles. Trees shall not be weak wooded or prone to wind damage. Trees shall have a minimum planted area of 50-square feet when surrounded by paving or walls. Long term parking areas shall be fenced or walled on all perimeters to maintain security as required by the Airport Security requirements. Employee parking areas may be unfenced. In cases where parking facilities adjoin the AOA, the perimeter security barrier fence shall be required. Parking lots shall conform to the applicable sections of the City of Los Angeles Landscape Ordinance as authorized by the LAX Specific Plan. This ordinance establishes standards to reduce glare, ambient temperatures and water use in parking lot and landscape areas
- **LAX Master Plan Mitigation Measure MM-DA-1. Construction Fencing:** Construction fencing and pedestrian canopies shall be installed by LAWA to the degree feasible to ensure maximum screening of areas under construction along major public approach and perimeter roadways, including Sepulveda Boulevard, Century Boulevard, Westchester Parkway, Pershing Drive, and Imperial Highway west of Sepulveda Boulevard. Along Century Boulevard, Sepulveda Boulevard, and in other areas where the quality of public views are a high priority, provisions shall be made by LAWA for treatment of the fencing to reduce temporary visual impacts.

Therefore, impacts related to substantially degrading the existing visual character or quality of the site or its surroundings would be less than significant, and this topic will not be evaluated further in the EIR and no additional mitigation is required.

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

Id. Potentially Significant Impact. The FAA maintains requirements for airfield and terminal area lighting aids and navigational systems for all U.S. airports. The proposed Project would include installation of additional lighting aids that support approach/landing, takeoff, and taxiing operations at night and during adverse weather conditions. However, the lighting associated with the airfields is generally low to the ground, and of low intensity. Any incremental increase in lighting would be small given the light levels already existing in the area and light-sensitive residential land uses to the south are separated from the runway by Imperial Highway, Imperial Avenue, and a 7.35-acre open-space corridor that parallels Imperial Highway. Due to the non-linear topography of the City of El Segundo, some residences do overlook the runway, but little if any increase in lighting would be visible given the intervening features and existing lighting conditions. However, the proposed GSE Maintenance Facility along Imperial Highway would locate these uses closer to the residences in the City of El Segundo. Operations at the proposed GSE Maintenance Facility may be 24 hours, so a new source of lighting associated with the GSE Maintenance Facility and new vehicles would be present at the site. Even with the existing high ambient lighting levels from city street lights, buffering along Imperial Highway, and landscaping along the perimeter of the proposed GSE Maintenance Facility, it is anticipated that impacts related to nighttime lighting during operations of the proposed GSE Maintenance Facility on the Imperial Highway site would occur. ***Therefore, this topic will be evaluated further in the EIR.***

II. AGRICULTURAL AND FORESTRY RESOURCES

Would the project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program in the California Resources Agency, to non-agricultural use?

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined in Public Resource Code section 4526), or timberland-zoned Timberland Production (as defined by Government Code section 51104[g])?

d. Result in the loss of forest land or conversion of forest land to non-forest use?

e. Involve other changes in the existing environment which, due to their location or nature, could individually or cumulatively result in loss of Farmland to non-agricultural use or conversion of forest land to non-forest use?

IIa through IIe. No Impact. The Project site is located within a fully-developed airport, is surrounded by airport-related uses, and has been extensively disturbed and paved. There are no farmlands that are considered prime, unique or of statewide or local importance in the vicinity of the Project site. No agricultural resources or operations currently exist, or have existed in the recent past on the Project site or the vicinity of the Project site.[4] Furthermore, there are no Williamson Act contracts in effect on the Project site or surrounding areas. Additionally, no forest or timberland resources exist at the Project site or in the vicinity of the Project site. Consequently, the proposed Project would not conflict with existing zoning for, or cause rezoning of, forest land or timberland (including timberland zoned as Timberland Production) or result in the loss or conversion of forest land to non-forest use. ***Therefore, no impacts to agricultural and forestry resources would occur, this topic will not be evaluated further in the EIR and no mitigation is required.***

III. 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?

IIIa through IIIe. Potentially Significant Impact. The project site is located within the South Coast Air Basin (Basin) which is under the jurisdiction of the South Coast Air Quality Management District (SCAQMD). At the federal level, the Basin is designated as a nonattainment area for ozone (O_3), respirable particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead (Pb). At the state level, the Basin is designated as nonattainment for O_3, PM_{10}, $PM_{2.5}$, Pb and nitrogen dioxide (NO_2). The nearest

[4] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.

existing receptors are residential uses located along the south side of Imperial Highway in the City of El Segundo, 300 feet to the south. Emissions from construction of the proposed Project are expected to exceed the SCAQMD CEQA thresholds. These results are expected even after including the extensive air emissions control measures that LAWA currently employs and the measures mandated and recommended by SCAQMD. Furthermore, closure of Runway 7L/25R for three months during pavement reconstruction would impact airport operations by increasing aircraft delay/taxi times, thereby potentially increasing operational air pollutant emissions, exacerbating the proposed Project emissions impacts.

The construction equipment would be used entirely within the airport property and would not produce substantial offsite pollutant concentrations given their low release heights. In addition, the nature of soil disturbance caused by tires and tracked equipment and of particle dispersions from moving vehicles would not produce substantial off-site impact. However, depending on the location of the off-road equipment and the extent of calm wind periods, there remains the potential for incidental exceedance of air quality standards offsite. The exceedance would be short-term and likely not continuous, given the daily construction schedule and sequence. The nearest sensitive receptors include, but are not limited to, residential areas, schools, and places of worship and are located approximately 300 feet southeast from the proposed GSE Maintenance Facility site. Analyses performed by the California Air Resource Board (CARB) indicate that providing a separation of 1,000 feet from diesel sources and high traffic areas substantially reduces diesel particulate concentrations and public exposure.[5] ***Therefore, because of potential significant impacts, this topic will be evaluated further in the EIR.***

IV. BIOLOGICAL RESOURCES

Would the project:

a. Have a substantial adverse impact, 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 impact 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?

IV.a and IV.b. ***Less Than Significant Impact.*** LAX and the area surrounding the Project site have been extensively studied for the presence of species and habitats of special concern. According to previous studies and field research, no species or habitats of special concern have been found or observed in the Project site. The Project site primarily contains non-native grassland and disturbed/bare ground land cover types that are modified and maintained by LAX in order to comply with FAA mandates for safe airport operations.[6] Maintenance activities include elimination of standing water, controlling and reducing vegetation through mowing and disking, and reducing wildlife attractants.

El Segundo Blue Butterfly

The El Segundo Blue Butterfly, a federally-listed endangered wildlife species, is not present within the footprint of the proposed Project.[7] The species is found on coastal dunes of the entire Los Angeles/El Segundo Dunes and in the El Segundo Blue Butterfly Habitat Restoration Area approximately 3,345 feet west of the Project site. There is no critical habitat for this species within the Project site. Indirect impacts to the El Segundo Blue Butterfly Habitat Restoration Area would not occur from air, noise, and light emissions from construction of the proposed Project. Activities that have the potential to result in

[5] California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, 2005.
[6] Federal Aviation Administration, in cooperation with the U.S. Department of Agriculture, Animal and Plant Health Inspection Service, Wildlife Services. Wildlife Hazard Management at Airports. Second edition. July 2005.
[7] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.

disposition of fugitive dust within the occupied habitat of the El Segundo Blue Butterfly would be avoided with implementation of the standard dust control measures and Best Management Practices (BMPs). Operational emissions resulting from the proposed Project are not expected to affect the El Segundo Blue Butterfly because the proposed Project would not increase aircraft capacity at LAX. The Runway is currently 3,345 feet from the Habitat Restoration Area for the El Segundo Blue Butterfly. The proposed Project would provide an FAA-compliant extended runway safety area 832 feet closer to the Los Angeles/El Segundo Dunes at the western (7L) end of the Runway; however, aircraft operations would remain at least 2,470 feet from the Habitat Restoration Area. As such, operational impacts would be less than significant. Additional field lighting associated with construction and operation of the proposed Project would not impact the El Segundo Blue Butterfly due to the distance between the Project site and the Habitat Restoration Area. According to the Biological Assessment prepared for the Draft Environmental Assessment (EA) for the proposed Project, no significant impacts to the El Segundo Blue Butterfly or its habitat are anticipated.[8] Therefore, no impacts to this species as a result of the proposed Project would occur.

Riverside Fairy Shrimp

The proposed Project is located approximately 650 feet from ephemerally wetted (EW) areas (i.e., wetlands) containing cysts of the Riverside fairy shrimp, a federally-listed endangered species. In the past, Riverside fairy shrimp cysts have been found in soil samples taken during dry-season sampling at nine EW areas within the LAX Airport Operations Area (AOA).[6] Two of the EW areas (identified as EW 15 and EW 16) are located approximately 650 feet southwest of the Project site. Although Riverside fairy shrimp cysts have been identified within the LAX AOA, current conditions do not support the hydrologic needs of water chemistry, temperature, and water depth necessary to support their complete life cycle. The creation of standing pools of water that must remain for up to 2 months to permit the Riverside fairy shrimp cysts to hatch and complete their life cycle would attract various species of animals and birds that would be a hazard to aviation; as such, the elimination of standing water is a part of the bird hazard reduction program at LAX. Wet-season surveys conducted at LAX determined that the adult Riverside fairy shrimp was absent within the LAX AOA boundaries.[9] On April 12, 2005, the USFWS excluded LAX from critical habitat for Riverside fairy shrimp because the primary constituent elements required for the Riverside fairy shrimp to complete its life cycle are not met at LAX.[10] In the Biological Assessment prepared for the Draft EA for the proposed Project, no significant impacts were determined for the critical habitat for the Riverside fairy shrimp.[11] Therefore, no impacts to this species as a result of the proposed Project would occur.

In summary, no impacts to federally-listed endangered species would occur. Furthermore, the LAX Master Plan contains Master Plan commitments and mitigation measures a number of which are applicable to the proposed Project that would minimize dust, light/glare and noise effects, including effects in the Habitat Restoration Area, including:

- **LAX Master Plan Mitigation Measure MM-AQ-2. Mitigation Plan for Air Quality - Construction- Related Mitigation Measures.** This measure describes numerous specific actions to reduce fugitive dust emissions and exhaust emissions from on-road and off-road mobile and stationary sources used in construction. These actions are listed in the table below.

[8] Federal Aviation Administration and Los Angeles World Airports, *LAX Runway 7L/25R Runway Safety Area Project and Associated Improvements Draft Environmental Assessment*, September 2012.
[9] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.
[10] *Ibid*.
[11] Federal Aviation Administration and Los Angeles World Airports, *LAX Runway 7L/25R Runway Safety Area Project and Associated Improvements Draft Environmental Assessment*, September 2012.

Measure	Type of Measure
Post a publically visible sign with the telephone number and person to contact regarding dust complaints; this person shall respond and take corrective action within 24 hours.	Fugitive Dust
Prior to final occupancy, the applicable demonstrates that all ground surfaces are covered or treated sufficiently to minimize fugitive dust emissions.	Fugitive Dust
All roadways, driveways, sidewalks, etc., being installed as part of the project should be completed as soon as possible; in addition, building pads should be laid as soon as possible after grading.	Fugitive Dust
Pave all construction access roads at least 100 feet on to the site from the main road.	Fugitive Dust
To the extent feasible, have construction employees' work/commute during off-peak hours	On-Road Mobile
Make available on-site lunch trucks during construction to minimize off-site worker vehicle trips.	On-Road Mobile
Prohibit staging and parking of construction vehicles (including workers' vehicles) on streets adjacent to sensitive receptors such as schools, daycare centers, and hospitals.	Non-road Mobile
Prohibit construction vehicle idling in excess of ten minutes.	Non-road Mobile
Utilize on-site rock crushing facility, where feasible, during construction to reuse rock/concrete and minimize off-site truck haul trips.	Non-road Mobile
Specify combination of electricity from power poles and portable diesel- or gasoline-fuel generators using "clan burning diesel" fuel and exhaust emission controls	Stationary Point Source Controls
Suspend use of all construction equipment during a second-stage smog alert in the immediate vicinity of LAX.	Mobile and Stationary
Utilize construction equipment having the minimum practical engine size (i.e., lowest appropriate horsepower rating for intended job).	Mobile and Stationary
Require that all construction equipment working on-site is properly maintained (including engine tuning) at all times in accordance with manufacturers' specifications and schedules.	Mobile and Stationary
Prohibit tampering with construction equipment to increase horsepower or to defeat emission control devices.	Mobile and Stationary
The contractor or builder shall designate a person or persons to ensure the implementation of all components of the construction-related measure through direct inspections, record reviews, and investigations of complaints.	Administrative

- **LAX Mitigation Measure MM-ET-3. El Segundo Blue Butterfly Conservation – Dust Control.** To reduce the transport of fugitive dust particles related to construction activities, soil stabilization, watering or other dust control measures, as feasible and appropriate, shall be implemented with a goal to reduce fugitive dust emissions by 90 to 95 percent during construction activities within 2,000 feet of the El Segundo Blue Butterfly Habitat Restoration Area. In addition, to the extent feasible, no

grading or stockpiling for construction activities should take place within 100 feet of occupied habitat of the El Segundo Blue Butterfly.

- **LAX Mitigation Measure MM-DA-1. Construction Fencing.** Construction fencing and pedestrian canopies shall be installed by LAWA to the degree feasible to ensure maximum screening of areas under construction along major public approach and perimeter roadways, including Sepulveda Boulevard, Century Boulevard, Westchester Parkway, Pershing Drive, and Imperial Highway west of Sepulveda Boulevard. Along Century Boulevard, Sepulveda Boulevard, and in other areas where the quality of public views are a high priority, provisions shall be made by LAWA for treatment of the fencing to reduce temporary visual impacts.
- **LAX Mitigation Measure LI-3. Light Controls.** Prior to final approval of plans for new lighting, LAWA will conduct reviews of lighting type and placement to ensure that lighting will not interfere with aeronautical lights or otherwise impair Airport Traffic Control Tower or pilot operations. Plan reviews will also ensure, where feasible, that lighting is shielded and focused to avoid glare or unnecessary light spillover. In addition, LAWA or its designee will undertake consultation in selection of appropriate lighting type and placement, where feasible, to ensure that new lights or changes in lighting will not have an adverse effect on the natural behavior of sensitive flora and fauna within the Habitat Restoration Area.
- **LAX Master Plan Mitigation Measure MM-N-10. Construction Scheduling:** The timing and/or sequence of the noisiest on-site construction activities shall avoid sensitive times of the day, as feasible (9 p.m. to 7 a.m. Monday - Friday; 8 p.m. to 6 a.m. Saturday; anytime on Sunday or Holidays).
- **LAX Master Plan Commitment N-1. Maintenance of Applicable Elements of Existing Aircraft Noise Abatement Program:** All components of the current airport noise abatement program that pertain to aircraft noise will be maintained.

c. Adversely impact federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) either individually or in combination with the known or probable impacts of other activities through direct removal, filling, hydrological interruption, or other means?

IV.c. ***No Impact.*** There are no federally protected wetlands in the Project site. A number of small ephemeral wetlands (EW) areas exist within the LAX boundaries that are subject to the U.S. Army Corps of Engineers' (USACOE) jurisdiction in the western portion of the north and south airfields.[12] According to the LAX Master Plan Final EIS/EIR, wetlands near the Project site include areas EW 15 and EW 16, which are located approximately 650 feet to the southwest of the Project site. EW 15 and EW 16 are located on top of fill material and are separated from the Project site. ***Therefore, no impacts related to wetland areas would occur.***

d. Interfere substantially with the movement of any resident or migratory fish or wildlife species or with established resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

IV.d. ***Less Than Significant Impact***. Based on previous analysis, it is not expected that the proposed Project would substantially interfere with the movement of any resident or migratory fish or wildlife species, established resident or migratory wildlife corridors, and/or impede the use of wildlife nursery sites.[13] The proposed site contains non-native grassland and disturbed/bare ground land cover types that

[12] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.

[13] 70 Federal Register 19154. Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Riverside Fairy Shrimp (*Streptocephalus woottoni*). Final Rule: April 12, 2005.

are modified and maintained by LAX in order to comply with FAA mandates for safe airport operations.[14] As such, the proposed Project area only contains marginal habitat for wildlife species that utilize open grassland habitat and does not support fisheries or nursery site habitats.[15] Although LAX is in the migratory pathway of the Pacific Flyway,[16] maintenance activities at LAX include the reduction of wildlife attractants which limits the number of resident wildlife species present within the AOA. To this end, a bird hazard reduction program is implemented at LAX. In addition, the proposed Project would not increase aircraft capacity at LAX. ***Therefore, impacts related to migratory species and corridors would be less than significant.***

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

IV.e. ***No Impact.*** The proposed Project site contains non-native grassland and disturbed/bare ground land cover types that are modified and maintained by LAX through regular mowing and disking of vegetation in order to comply with FAA mandates for safe airport operations.[17] As a result, marginal habitat to support common biological resources occurs and no suitable habitat to support special-status plant or wildlife species or sensitive vegetation communities exists within the proposed Project area. ***As such, the proposed Project will not conflict with any local policies or ordinances protecting biological resources and, therefore, no impacts related to local policies or ordinances protecting biological resources would occur.***

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional, or state habitat conservation plan?

IV.f. ***No Impact***. The proposed Project is not located within any areas designated under a Habitat Conservation Plan, Natural Communities Conservation Plan, or any other approved local, regional, or state habitat conservation plan. Consequently, no impact to these resources would occur***. Therefore, no impacts related to local, regional, or state habitat conservation plans would occur.***

As impacts related to Biological Resources would be less than significant, this topic will not be evaluated further in the EIR and no mitigation is required.

V. CULTURAL RESOURCES

Would the project:

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

V.a., ***Less Than Significant Impact.*** The proposed Project is not expected to cause a substantial adverse change in the significance of a historical resource or of an archaeological resource. Runway 7L/25R and Air Freight Building No. 8 are the two major structures located in the Project site that would be considered for historic significance. However, neither structure meets the requirements for eligibility for historic registration.[18,19] The nearest known historic resources to the proposed Project are: 1) the Theme Building north of the Runway, which is eligible for placement on the National Register, and 2) Hangar One south of the Runway, which is on the National Register of Historic Places. Both these properties are located approximately 0.30 miles from the closest points of the Project site. The proposed Project is not

[14] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvement, SCH#1997061047*, April 2004.
[15] *Ibid.*
[16] *Ibid.*
[17] *Ibid.*
[18] *Ibid.*
[19] Federal Aviation Administration and Los Angeles World Airports, *LAX Runway 7L/25R Runway Safety Area Project and Associated Improvements Draft Environmental Assessment*, September 2012.

expected to cause any construction- or operations-related effects to these resources. ***Therefore, less than significant impacts related to historic resources would occur.***

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

V.b. ***Less Than Significant Impact.*** There are three documented archaeological sites and one isolate[20] located in the vicinity of the Project site.[21] These sites include CA-LAN-1118, which consists of a shell midden[22] with lithic debitage;[23] CA-LAN-691, which consists of a shell scatter;[24] CA-LAN-*1H, consisting of a wide scatter of historic debris; and Isolate 1, a prehistoric tool made of felsite porphyry. These sites have all been recorded; however it was determined that they are ineligible for federal, state, and local protection designations.[25] While these documented archaeological sites would not be affected by construction of the proposed Project, there remains potential for disturbance of unknown archaeological/cultural resources within the Project site, particularly given the excavation requirements (10 feet) for the foundation of the proposed GSE Maintenance Facility. However, the Cultural Resources Evaluation Report prepared for the Draft EA for the proposed Project did not find evidence of archaeological resources at this site.[26] Should disturbance or destruction of potentially significant undiscovered archaeological resources occur during excavation or grading activities, LAX Master Plan EIR commitments and mitigation measures that are applicable to the proposed Project would be implemented.[27] These LAX Master Plan EIR commitments include:

- **LAX Master Plan Mitigation Measure MM-HA-4. Discover**: Long-term protection and proper treatment of unexpected archeological discoveries of federal, state, and/or local significance under an FAA-prepared archeological treatment plan (ATP).
- **LAX Master Plan Mitigation Measure MM-HA-5. Monitoring**: LAWA will retain a qualified project archeologist who will monitor excavation and grading activities within areas that have not been identified as containing re-deposited fill material or as having been previously disturbed. The project archeologist shall be empowered to halt construction in the immediate area if potentially significant resources are identified.
- **LAX Master Plan Mitigation Measure MM-HA-6. Excavation and Recovery**: Any excavation, testing, and recovery of identified resources shall be performed by the qualified project archeologist using techniques and requirements stipulated in the ATP.
- **LAX Master Plan Mitigation Measure MM-HA-7. Administration**: Where known resources are present, all grading and construction plans shall be clearly imprinted with all of the archeological/cultural mitigation measures. All site workers shall be informed in writing by the on-site archeologist of the restrictions regarding disturbance and removal, as well as procedures to follow, should a resource deposit be detected.
- **LAX Master Plan Mitigation Measure MM-HA 8. Archaeological/Cultural Monitor Report**: This is preparation of a report by the archeological/cultural monitor upon completion of grading and

[20] An Isolate is defined as one or two artifacts occurring by themselves and not associated with an archaeological site.
[21] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.
[22] A Midden is defined as a dump for domestic waste, and typically consists of artifacts associated with past human occupation.
[23] Debitage is defined as waste material produced during lithic reduction and production of chipped stone tools.
[24] Shell Scatter includes shells and shell fragments found distributed over the ground surface.
[25] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.
[26] Federal Aviation Administration and Los Angeles World Airports, *LAX Runway 7L/25R Runway Safety Area Project and Associated Improvements Draft Environmental Assessment,* September 2012.
[27] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.

excavation activities in the vicinity of known archeological resources. The draft report will be submitted to FAA, LAWA, and City of Los Angeles Cultural Affairs Department, and a final report that addresses all comments would be issued.

- **LAX Master Plan Mitigation Measure MM-HA-9. Artifact Curation**: All artifacts, notes, photographs, and other project-related materials recovered during the monitoring program shall be curated at a facility meeting federal and state standards.
- **LAX Master Plan Mitigation Measure MM-HA-10. Archaeological Notification**: If human remains are found, all grading and activities in the vicinity would cease and the appropriate LAWA authority would be notified. LAWA would then ensure compliance with applicable procedures in the State Health and Safety Code and the Public Resources Code. In addition, steps outlined in Section 150645.5(e) of the CEQA Guidelines would be implemented.

Should archaeological resources be encountered during excavation, implementation of these commitments would result in impacts related to archaeological resources that are less than significant. ***Therefore, this topic would not be evaluated further in the EIR***.

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

V.c. ***Less than Significant Impact.*** As indicated in the LAX Master Plan EIR, the LAX property lies in the northwestern portion of the Los Angeles Basin, a broad structural syncline with a basement of older igneous and metamorphic rocks overlain by thick younger marine and terrestrial deposits. The LAX Master Plan EIR identified the presence of five vertebrate fossil occurrences within the vicinity of the Project site and one within two miles from the center of the LAX property. These fossils were found at depths ranging from 13 to 70 feet.[28]

The proposed Project would require excavation to a depth of approximately six feet for most project elements and would be located in areas that have been previously disturbed. Although, construction of the proposed GSE Maintenance Facility would require deeper excavation (10 feet) for its foundation and, therefore, could potentially have impacts to paleontological resources, the Cultural Resources Evaluation Report prepared for the Draft EA for the proposed Project did not identify this site as particularly sensitive for paleontological resources. To prevent any disturbance or destruction of potentially significant undiscovered paleontological resources during excavation or grading activities, LAX Master Plan commitments have been made applicable to the proposed Project.[29] These LAX Master Plan EIR commitments include:

- **LAX Master Plan Mitigation Measure MM-PA-1. Paleontological Qualification and Treatment Plan**: A qualified paleontologist shall be retained by LAWA to develop an acceptable monitoring and fossil remains treatment plan (that is, a Paleontological management Treatment Place – PMTP) for construction-related activities that could disturb potential unique paleontological resources within the project area. This plan shall be implemented and enforced by the project proponent during the initial phase and full phase of construction development. The selection of the paleontologist and the development of the monitoring and treatment plan shall be subject to approval by the Vertebrate Paleontology Section of the Natural History Museum of Los Angeles County to comply with paleontological requirements, as appropriate.

[28] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements,SCH#1997061047,* April 2004, 2005.
[29] *Ibid*.

- **LAX Master Plan Mitigation Measure MM-PA-2. Paleontological Authorization**: The paleontologist shall be authorized by LAWA to halt, temporarily divert, or redirect grading in the area of an exposed fossil to facilitate evaluation and, if necessary, salvage. No known or discovered fossils shall be destroyed without the written consent of the project paleontologist.
- **LAX Master Plan Mitigation Measure MM-PA-3. Paleontological Monitoring Specifications**: Specifications for paleontological monitoring shall be included in construction contracts for all LAX projects involving excavation activities deeper than six feet.
- **LAX Master Plan Mitigation Measure MM-PA-4. Paleontological Resources Collection**: Because some fossils are small, it will be necessary to collect sediment samples of promising horizons discovered during grading or excavation monitoring for processing through fine mesh screens. Once the samples have been screened, they shall be examined microscopically for small fossils.
- **LAX Master Plan Mitigation Measure MM-PA-5. Fossil Preparation**: Fossils shall be prepared to the point of identification and catalogued before they are donated to their final repository.
- **LAX Master Plan Mitigation Measure MM-PA-6. Fossil Donation**: All fossils collected shall be donated to a public, nonprofit institution with a research interest in the materials, such as the Los Angeles County Museum of Natural History.
- **LAX Master Plan Mitigation Measure MM-PA-7. Paleontological Reporting**: A report detailing the results of these efforts, listing the fossils collected, and naming the repository shall be submitted to the lead agency at the completion of the project.

With implementation of the LAX Master Plan commitments, impacts related to paleontological resources would be reduced to less than significant. ***Therefore, this topic will not be evaluated further in the EIR.***

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

V.d. ***Less Than Significant Impact.*** The proposed Project is not located within any known formal cemeteries and most of the proposed Project elements would not require excavation deeper than six feet. However, construction of the proposed GSE Maintenance Facility would require deeper excavation (10 feet) for its foundation. Given the settling patterns around LAX, it is unlikely that human remains would be encountered. In the event, however, that unanticipated human remains are encountered, LAWA will comply with Health and Safety Code § 7050.5 and Public Resources Code § 5097.98. Upon discovery of human remains, these statutes require LAWA to cease all excavation and disturbance of the site, to contact the coroner, to contact the Native American Heritage Commission (NAHC), if necessary, and to provide for appropriate treatment of the remains. ***Upon complying with the above mentioned codes, impacts related to human remains would be less than significant. Therefore, this topic will not be evaluated further in the EIR.***

As impacts related to Cultural Resources would be less than significant, this topic will not be evaluated further in the EIR and no mitigation is required.

VI. 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?

VI.a.i. ***Less than Significant Impact***. Fault rupture is the surface displacement that occurs along the surface of a fault during an earthquake. While the Project site is located within the seismically active Southern California region, it is not located within an Alquist-Priolo Special Study Zone.[30] Geotechnical literature indicates the Charnock Fault, a potentially active fault, may be located near or through the eastern portions of the LAX property. However, recent evaluation indicates that the Charnock Fault is considered to have low potential for surface rupture independently or in conjunction with movement of the Newport-Inglewood Fault Zone, which is located approximately three miles east of LAX.[31] ***Therefore, impacts related to rupture of a known earthquake fault would be less than significant.***

VI.a.ii. ***Less than Significant Impact.*** The Project site is located in the seismically active Southern California region; however, there is no evidence of faulting at the Project site, and the Project site is not located within an Alquist-Priolo Special Study Zone.[32] Nevertheless, all construction would be designed in accordance with the provisions of the FAA Advisory Circulars 150/5300-13, 5320-6E, and 5370-10E, regarding seismic construction materials and methods. Furthermore, the construction of the GSE Maintenance Facility would comply with the Los Angeles Building Code (LABC), which has strict requirements for structures located in earthquake zones. ***Therefore, impacts related to strong seismic ground shaking would be less than significant.***

VI.a.iii. ***No Impact.*** Liquefaction is a seismic hazard that occurs when strong ground shaking causes saturated granular soil to liquefy and lose strength. The susceptibility of soil to liquefy tends to decrease as the density of the soil increases and the intensity of ground shaking decreases. The depth to groundwater at LAX is generally greater than 90 feet, which would indicate that the Project site has a very low susceptibility to liquefaction. However, perched groundwater[33] conditions have been noted in the upper 20 feet to 60 feet at some locations at LAX, and the density of sand deposits in the upper 30 feet is generally considered to be low to medium dense. Although liquefaction could occur in isolated localized areas, the overall potential for liquefaction at LAX is considered low.[34]

Seismically induced ground shaking can also cause slope-related hazards through various processes including slope failure, lateral spreading,[35] flow liquefaction, and ground lurching.[36] Because existing slopes in the LAX vicinity are relatively small in area and of low angle and height (less than 15 feet) the overall potential for such failures is considered to be low.[37] The California Department of Conservation

[30] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.
[31] *Ibid*.
[32] *Ibid*.
[33] Groundwater, generally shallow, that is isolated and not connected to an aquifer.
[34] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.

(CDC) is mandated by the Seismic Hazards Act of 1990[38] to identify and map the state's most prominent earthquake hazards in order to help avoid damage resulting from earthquakes. The CDC's Seismic Hazard Zone Mapping Program charts areas prone to liquefaction and earthquake-induced landslides throughout California's principal urban and major growth areas. According to the Seismic Hazard Map for the Inglewood Quadrangle, no potential liquefaction zones are located within the LAX area. Isolated zones of potential seismic slope instability are identified near the western edge of the Airport, within the dune area.[39] Since the project site has generally leveled topography, it would not be subject to slope instability.

Finally, the proposed Project would comply with the FAA Advisory Circulars 150/5300-13, 5320-6E, and 5370-10E, regarding seismic construction materials and methods, and with the LABC for the GSE Maintenance Facility. ***Therefore, no impacts related to liquefaction would occur.***

VI.a.iv. ***No Impact.*** The Project site and vicinity are relatively flat and are primarily surrounded by the Airport and urban development. Furthermore, the "Landslide Inventory and Hillside Areas in the City of Los Angeles" map does not identify any areas in the vicinity of the Project site that contain unstable slopes which may be prone to seismically produced landslides.[40] As the GSE Maintenance Facility is built along Imperial Highway, it would be located approximately 200 feet from the nearest hillside in the City of El Segundo. The proposed building would be buffered by Imperial Highway from landslides. ***Therefore, no impacts related to landslides would occur.***

b. Would the project result in substantial soil erosion or the loss of topsoil?

VI.b. ***Less than Significant Impact.*** The potential for soil erosion on the Project site is low due to its generally level topography. Construction of the proposed Project would include grading, excavation, and use of fill during construction. Conformance with City of Los Angeles Building Code (LABC) 7000 Sections 91.7001 – 91.7016, which include construction requirements for grading, excavation, and use of fill, would reduce the potential for wind or waterborne erosion. In addition, the LABC requires an erosion control plan that is reviewed by the Department of Building and Safety prior to construction should grading exceed 200 cubic yards and occur during the rainy season (between November 1 and April 15). In addition, LAWA would prepare an erosion control plan to reduce soil erosion. As part of such a plan, erosion and sediment control facilities will be provided throughout the duration of construction, existing inlets will be protected with filter fabric inserts, and disturbed areas will be seeded. ***Therefore, impacts related to soil erosion would be less than significant.***

[35] Lateral Spreading: Deformation of very gently sloping ground (or virtually flat ground adjacent to an open body of water) that occurs when cyclic shear stresses caused by an earthquake induce liquefaction, reducing the shear strength of the soil and causing failure and "spreading" of the slope.

[36] Ground lurching: Ground lurching (and related lateral extension) is the horizontal movement of soil, sediments, or fill located on relatively steep embankments or scarps as a result of earthquake-induced ground-shaking. Damage includes lateral movement of the slope in the direction of the slope face, ground cracks, slope bulging, and other deformations.

[37] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.

[38] Public Resources Code 2690–2699.6.

[39] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.

[40] City of Los Angeles Planning Department. "Exhibit C, Landslide Inventory and Hillside Areas in the City of Los Angeles." *Safety Element of the City of Los Angeles General Plan.* June 1994.

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?

VI.c. ***Less than Significant Impact.*** Settlement of foundation soils beneath engineered structures or fills typically results from the consolidation and/or compaction of the foundation soils in response to the increased load induced by the structure or fill. The presence of undocumented and typically weak artificial fill at LAX creates the potential for settlement. The Lakewood Formation also includes some silt and clay layers prone to settlement. However, foundation design features and construction methods can reduce the potential for excessive settlement at LAX. [41] As the proposed Project will be utilized by heavy aircraft, the FAA has specific requirements to ensure that the pavement supports the anticipated weights during operations which will be incorporated into the design of the proposed Project. Furthermore, construction of the proposed GSE Maintenance Facility would comply with all requirements of the LABC, which has strict standards related to unstable soils. Project design and construction would be required to adhere to engineering and design recommendations of a geological and/or soils report required by LAMC Section 91.7006.2. ***Therefore, impacts related to soil settlement would be less than significant.***

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?

VI.d. ***Less than Significant Impact.*** Expansive soils are typically composed of certain types of silts and clays that have the capacity to shrink or swell in response to changes in soil moisture content. Shrinking or swelling of foundation soils can lead to damage to foundations and engineered structures including tilting and cracking. Fill materials located in some portions of LAX could be prone to expansion, and some portions of the Lakewood Formation found beneath the eastern portion of LAX may also be prone to expansion due to their high content of clay and silt.[42] As proposed Project construction would occur in accordance with the aforementioned FAA Advisory Circulars, which include construction requirements for grading, excavation, and foundation work, the potential for hazards to occur as a result of expansive soils would be minimized. Furthermore, construction of the GSE Maintenance Facility would comply with all requirements of the LABC which has strict standards related to expansive soils. All construction would occur in accordance with the LAMC Sections 91.7001 through 91.7016 and with the City of Los Angeles Department of Building and Safety requirements, which include construction requirements for grading, excavation, and foundation work, and the requirement to prepare a geological and/or soils report and adhere to all the engineering and design recommendations made in the report. ***Therefore, 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?

VI.e. ***No Impact.*** The Project site is located in an urbanized area where wastewater infrastructure is currently in place. The proposed Project would not use septic tanks or alternative wastewater disposal systems. Consequently, the ability of on-site soils to support septic tanks or alternative wastewater systems would not be relevant to the proposed Project. ***Therefore, no impacts related to septic tanks or alternative wastewater disposal systems would occur.***

As impacts related to Geology and Soils would be less than significant, this topic will not be evaluated further in the EIR and no mitigation is required.

[41] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.
[42] *Ibid*.

VII. GREENHOUSE GAS EMISSIONS

Would the project:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b. Conflict with an application plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

VII.a. and VII.b. ***Potentially Significant Impact.*** To date the City of Los Angeles does not have finalized thresholds to evaluate whether or not the proposed Project is a significant contributor of greenhouse gases (GHG). The SCAQMD has, however, drafted interim screening level thresholds of significance for commercial and residential projects as 3,000 metric tons (MT) of carbon dioxide equivalents (CO_2eq) a year, and 10,000 MTCO_2eq per year for industrial projects.

The California Air Resource Board (CARB) has established the 1990 statewide GHG emissions level as 427 teragrams (Tg; one Tg is equivalent to one million MTCO_2eq), which, as required under Assembly Bill 32, is the statewide GHG emissions level to be achieved by 2020. The construction GHG emissions of the proposed Project, even though very minor, could conflict with the Assembly Bill 32 GHG emissions reduction goals, and thus would be considered a potentially significant impact.

Operationally, the proposed Project would not generate additional GHG emissions because it would not result in increased airport capacity. However, the proposed Project may generate GHG emissions during construction that could have a significant impact on the environment and the EIR will evaluate whether the Project would generate greenhouse gas emissions or conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. ***Therefore, impacts related to GHG will be evaluated further in the EIR.***

VIII. 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 the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

VIII.a and VIII.b. ***Less than Significant Impact***. The proposed Project would not require changes in any routine transport, use, or disposal of hazardous materials associated with operations at the Airport. Construction of the proposed Project may involve the use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. The quantities of these materials would not be significantly different than another construction project of similar size. Furthermore, LAX has hazardous material spill protocols that can be implemented during construction and operations. During operations, the likelihood of exposure to hazardous materials from spills and/or releases would be similar to existing conditions. Compliance with the existing federal, state, and local regulations would reduce the potential for accidental release of hazardous materials. ***Therefore, impacts related to the routine transport, use, or disposal of hazardous materials would be less than significant, and this topic will not be evaluated further in the EIR and no mitigation is 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?

VIII.c. ***No Impact.*** The nearest school is Imperial School, located approximately 0.33 miles southeast of the proposed GSE Maintenance Facility site. The proposed GSE Maintenance Facility would use chemicals and products associated with maintenance operations, including diesel fuel and other machinery fluids. The storage of these materials at LAX is regulated by the federal statutes and by LAWA protocols. However, the proposed GSE Maintenance Facility site is not located within 0.25 of a school. ***Therefore, no impacts related to exposing schools to hazardous materials would occur, and this topic will not be evaluated further in the EIR and no mitigation is required.***

d. Is the project 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?

VIII.d. ***Potentially Significant Impact.*** Runway 7L/25R is not included on any agencies' list of hazardous materials sites.[43] However, there are other portions of the Airport that are listed on hazardous site lists, including sites within the Century Cargo Complex and the cargo area along Imperial Highway. In addition, there is the potential for encountering contaminated soils at the site of the proposed GSE Maintenance Facility during construction. ***Therefore, potentially significant impacts related to hazardous materials sites would occur. As impacts related to hazardous sites would be potentially significant, this topic will be evaluated further in the EIR.***

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?

VIII.e. ***Less than Significant Impact.*** The proposed Project is designed to reduce safety hazards on the Runway for people working at or using the Airport, and in the vicinity of the Project site. Construction of the proposed Project may involve the use of potentially hazardous materials, including vehicle fuels, oils, and transmission fluids. However, compliance with the existing federal, state, and local regulations would reduce the potential for accidental release of hazardous materials. The proposed GSE Maintenance Facility would relocate existing employees from other parts of the Airport to the Project site. ***Therefore, impacts related to the exposing people in an airport land use plan to hazardous materials would be less than significant, and this topic will not be evaluated further in the EIR and no mitigation is required.***

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?

VIII.f. ***No Impact.*** The easternmost point of the Project site is located approximately two miles northwest of Hawthorne Airport, the closest private airstrip. Although the Project site is located near this private airstrip, as it is a larger airport, it is not in the flight path of airplanes using Hawthorne Airport. ***Therefore, no impacts related to hazards from private airfields would occur, and this topic will not be evaluated further in the EIR and no mitigation is required.***

[43] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.

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

VIII.g. ***Less than Significant Impact.*** Implementation of the proposed Project would alter ground access within the Project site during construction; however, local access would be adequately maintained through detours and diversions and emergency access would be coordinated and ensured through the implementation of the following LAX Master Plan EIR commitments:

- **LAX Master Plan Mitigation Measure MM-C-1. Establishment of Ground Transportation/ Construction Coordination Office**: To coordinate deliveries, monitor traffic conditions, advise motorists and those making deliveries about detours and congested areas, and monitor and enforce delivery times and routes.
- **LAX Master Plan Mitigation Measure MM-C-2. Construction Personnel Airport Orientation**: All construction personnel will be required to attend a pre-construction Airport project-specific orientation that includes where to park, where staging areas are located, construction policies, etc.
- **LAX Master Plan Mitigation Measure MM-ST-9. Construction Deliveries:** Requires that construction deliveries needing lane closures receive prior approval from the Construction Coordination Office. The measure imposes that notification of deliveries be made with sufficient time to allow for any modifications of approved traffic detour plans.
- **LAX Master Plan Mitigation Measure MM-ST-12. Designated Truck Delivery Hours:** Defines the truck delivery hours for the project, which would avoid truck deliveries during peak traffic periods of 7:00 a.m. to 9:00 a.m. and 4:30 p.m. to 6:30 p.m.
- **LAX Master Plan Mitigation Measure MM-ST-14. Construction Employee Shift Hours:** Defines the construction employee shift hours for the project, which should typically not coincide with peak traffic hours. To the extent possible and necessary, work periods would be extended to include weekends and multiple work shifts.
- **LAX Master Plan Mitigation Measure MM-ST-16. Designated Haul Routes:** Every effort will be made to ensure that haul routes are located away from sensitive noise receptors.
- **LAX Master Plan Mitigation Measure MM-ST-17. Maintenance of Haul Routes:** Haul routes will be maintained in compliance with the City of Los Angeles or other appropriate jurisdictional requirements for maintenance.
- **LAX Master Plan Mitigation Measure MM-ST-18. Construction Traffic Management Plan:** A complete construction traffic plan will be developed for the project to designate detour and/or haul routes, variable message and other sign locations, communication methods with Airport passengers, construction deliveries, construction employee shift hours and parking locations, and other relevant information.
- **LAX Master Plan Mitigation Measure MM-ST-19. Closure Restrictions of Existing Roadways:** Other than for short periods during nighttime construction, existing roadways will remain open until they are no longer needed for regular or construction traffic, unless temporary detour route is available.
- **LAX Master Plan Mitigation Measure MM-ST-20. Stockpile Locations:** Stockpile locations will be where they can be accessed by construction vehicles with minimal or no disruption to adjacent streets.
- **LAX Master Plan Mitigation Measure MM-ST-21. Construction Employee Parking Locations:** Construction employee parking locations will be placed where they can be accessed by employees with minimal or no disruption to adjacent streets.

- **LAX Master Plan Mitigation Measure MM-ST-22. Designated Truck Routes:** For dirt and aggregate and all other materials and equipment, truck deliveries will be on designated routes only (freeways and non-residential streets).

With implementation of these commitments to the design of the proposed Project, impacts related to emergency access and response plans would be less than significant, and this topic ***will not be evaluated further in the EIR and no mitigation is required***.

h. Expose people or structures to the risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

VIII.h. ***No impact.*** The proposed Project is located in a developed, paved, urbanized area. There are no wildlands located within the Project site. In addition, the Project site is not within the City of Los Angeles Wildfire Hazard Area.[44] Consequently, the proposed Project would not expose people or structures to significant loss, injury, or death due to wildland fires. ***Therefore, no impacts related to wildland fires would occur, and this topic will not be evaluated further in the EIR and no mitigation is required.***

IX. HYDROLOGY AND WATER QUALITY

Would the project:

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

IX.a. ***Less than Significant Impact.*** The demolition, grading, and other construction phases of the proposed Project would require temporary disturbance of surface soils and removal of asphalt and ornamental vegetative cover which could potentially result in on-site erosion and sedimentation. Erosion and sedimentation attributable to construction activities could potentially impact water quality. Any stockpiles and excavated areas on the Project site would be susceptible to high rates of erosion from wind and rain and, if not managed properly, could result in increased sedimentation into nearby storm drains.

Development of the Project site is in excess of one acre and would require a Statewide General Construction National Pollutant Discharge Elimination System (NPDES) Permit (Order No 2009-0009-DWQ). The NPDES permit requires compliance with construction-specific pollutant numerical levels and regional water-quality objectives. In addition, the NPDES ensures that a state's mandatory standards for clean water and the federal minimums are met during construction. The NPDES permit sets forth conditions that would help prevent sedimentation and soil erosion through implementation of a construction Storm Water Pollution Prevention Plan (SWPPP) and also calls for periodic inspections by City or Regional Water Quality Control Board staff. A SWPPP is a written document that describes the construction activities to comply with the requirements in the NPDES permit. The SWPPP is intended to facilitate a process whereby the Project site and activities associated with construction are evaluated for potential pollutant sources at the site and selects and implements BMPs designed to prevent or control the discharge of pollutants in stormwater runoff. During construction, the proposed Project would use a series of BMPs to reduce erosion and sedimentation. These measures may include the use of gravel bags, silt fences, and check dams.

As part of the Los Angeles River watershed, LAWA would also conform to the City of Los Angeles' requirements for preparation of a project-specific Standard Urban Stormwater Mitigation Plan (SUSMP)[45] that would address project-related pollutants and would incorporate permanent (post-construction) BMPs[46], which are incorporated during the design phase. The BMPs included in the proposed Project

[44] City of Los Angeles, *Safety Element of the City of Los Angeles General Plan*, 1996.
[45] City of Los Angeles Municipal Code §§ 64.00 et seq. available: http://www.amlegal.com/ library/ca/losangeles.shtml
[46] Additional details on applicable BMPs (including the BMP Handbook) are available at: http://www.lastormwater.org/siteorg/download/partb.htm

design would maintain or reduce peak stormwater runoff discharge rates and volume and would minimize or prevent storm-water pollution. Post-construction water quality requirements are already managed at LAX with conformance to the SUSMP requirements. The proposed Project includes a treatment system which consists of Continuous Deflective Separation (CDS) units in combination with an underground infiltration system which diverts the first flush of stormwater to a pre-treatment device and, where applicable, downstream through an underground infiltration system. An underground infiltration system will remove both the suspended solids and heavy metals prior to releasing the filtered water to percolate into the natural ground.

The storm drain improvements for the proposed RSA improvements will be limited to providing SUSMP required stormwater treatment only for drainage systems receiving runoff from new taxiway and runway pavement surfaces, and replacing only the sections of storm drain pipe that are under new taxiway and runway pavement areas. Therefore, impacts related water quality standards or waste discharge requirements would be less than significant. ***Therefore, this topic will not be evaluated further in the EIR and no mitigation is required.***

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 (i.e., 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)?

IX.b. ***No Impact.*** The proposed Project would include a new stormwater infiltration facility that would increase groundwater recharge. No depletion of groundwater supplies is anticipated. ***Therefore, no impacts related to groundwater quality would occur, and this topic will not be evaluated further in the EIR and no mitigation is 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 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 that would result in flooding on- or off-site?

IX.c and IX.d. ***Less Than Significant.*** In general, Sepulveda Boulevard divides the drainage pattern of the Airport, with the area west of Sepulveda Boulevard draining to Santa Monica Bay and the area east of Sepulveda Boulevard draining to the Dominguez Channel.[47] Existing surface drainage at LAX is conveyed into storm drains and flood control structures that ultimately discharge to Santa Monica Bay, the Dominguez Channel, the Argo Drain, the Pershing Drain, the Imperial Drain, and the Culver Drain. The proposed Project is located in the South Airfield area that drains to the Argo Drain outfall and to the Dominguez Channel which discharges to Santa Monica Bay via the Los Angeles County outfall.

The proposed Project has elements on both sides of Sepulveda Boulevard. The construction of the proposed Project would rehabilitate pavement and extend paved and unpaved segments of runways and taxiways but would not change the topography or place structures that would change the established drainage patterns discussed above. The demolition of Air Freight Building No. 8 and the construction of the proposed GSE Maintenance Facility would not substantially change the topography of the area. ***Therefore, impacts related to changes to drainage patterns would be less than significant, and this topic will not be evaluated further in the EIR and no mitigation is required.***

[47] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.

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

IX.e. ***Potentially Significant Impact.*** Drainage runoff calculations were developed during proposed Project design to characterize the flows resulting from the Runway extension and taxiway construction for the RSA as well as for the rehabilitation and extension on the eastern side of the Runway to ensure that any increase in runoff volume generated by the proposed Project can be adequately conveyed to the appropriate Los Angeles County Flood Control District drainage system. The proposed Project falls under Category 5 - 100,000 or more square feet of impervious surface in industrial/commercial development, triggering the SUSMP requirement for media filtration. The proposed Project would have an estimated runoff increase (for peak run-off flows for a 25-year frequency storm rainfall event) of approximately 3 cubic feet per second (cfs) for the western Runway improvements and of approximately 4 cfs for the eastern Runway improvements.[48] As described in Section IX.a above, BMPs would be incorporated into the proposed Project's design to reduce water-quality impacts by considering post-construction potential pollutants that may be generated by the proposed Project and the pollutants that are causing impairments to downstream receiving waters. Impacts related to storm drain system capacity and increased runoff would be potentially significant. ***Therefore, this topic will be evaluated further in EIR.***

f. Otherwise substantially degrade water quality?

IX.f. ***Less than Significant Impact.*** During construction of the proposed Project, demolition and grading of the Project site would require temporary disturbance of surface soils and removal of asphalt and ornamental vegetative cover which could potentially result in erosion and sedimentation on-site. Any stockpiles and excavated areas on the Project site could potentially be susceptible to high rates of erosion from wind and rain and, if not managed properly, could result in increased sedimentation into immediate area storm drains.

Construction storm-water pollutant discharges from the Project site would not occur through compliance with the Statewide General Construction NPDES Permit (Order No 2009-0009-DWQ). The NPDES requires compliance with construction specific pollutant numerical levels and regional water-quality objectives. (See Section IX.a above.) With compliance with NPDES requirements, construction impacts related to water quality would be less than significant. During operations of the proposed Project, the SWPPP associated with industrial activities at LAX would apply. This specific program addresses the Project site's compliance with the Statewide General Industrial Permit (Site-specific WDID # 4 19I004995). ***Therefore, operational impacts related to water quality would be less than significant. Consequently, this topic will not be evaluated further in the EIR and no mitigation is required.***

[48] URS, *Runway 7L/25R Safety Area (RSA) Project Engineer's Design Report 30% Design Final Submittal*. April 8, 2011; and HNTB, *Runway25R & Taxiway B East End Rehabilitation and Taxiway C Extension Preliminary Engineer's Design Report 30% Design*, August 16, 2011

g. Place housing within a 100-year floodplain, 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 floodplain structure that would impede or redirect flood flows?

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?

IX.g, IX.h, and IX.i. ***No Impact.*** The proposed Project is located in Zone C of the FEMA Flood Insurance Map, an area of minimal flooding.[49] The proposed Project does not involve development of housing units or structures of any kind. ***Therefore, no impacts related to exposing housing or structures to significant flooding. Consequently, this topic will not be evaluated further in the EIR and no mitigation is required.***

j. Inundation by seiche, tsunami, or mudflow?

IX.j. ***No Impact.*** LAX is not located within the tsunami inundation zone and the proposed Project would not be considered at risk for impacts from seiches or tsunamis.[50] Mudflows would also not be considered a risk due to the existing geology and topography in the Project site. ***Therefore, no impacts related to risk from tsunamis, seiches, or mudflows would occur. Consequently, this topic will not be evaluated further in the EIR and no mitigation is required.***

X. LAND USE AND PLANNING

Would the project:

a. Physically divide an established community?

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

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

X.a., X.b., and X.c. ***No Impact.*** The proposed Project would be developed entirely within the existing Airport property. Land uses surrounding the South Airfield Complex include airport uses.[51] No land use acquisition or new facilities are proposed in the surrounding communities that would physically divide any established community. The construction of the GSE Maintenance Facility along Imperial Highway would not affect community cohesion as this building would be located north of Imperial Highway within the Airport boundary away from residential uses. Imperial Highway also serves as a physical barrier between the City of Los Angeles and the City of El Segundo.

Land use designations and development regulations applicable to LAX, including the Project site, are set forth in the LAX Plan and the LAX Specific Plan. The Project site is in an area designated in the LAX Plan as "Airport Airside." Within the LAX Specific Plan, the Project site is in an area designated within the Airport Airside subarea and zoned "LAX – A Zone, Airport Airside Sub-Area." The proposed Project would be compatible with existing on-site uses, as it would extend existing runways and create taxiways where these uses already exist. No change in zoning and/or LAX Master Plan or Specific Plan land use designation is anticipated due to the proposed Project. Furthermore, the proposed Project would not

[49] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.

[50] State of California Emergency Management Agency, California Geological Survey, and University of Southern California. *Tsunami Inundation Map for Emergency Planning Venice Quadrangle*. March 1, 2009.

[51] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.

increase overall capacity at LAX, which would not conflict with established goals of the LAX Master Plan or Specific Plan. The Los Angeles/El Segundo Dunes, managed by LAWA, supports the largest of the four remaining occupied habitats for the El Segundo Blue Butterfly, which the City has designated as a Habitat Restoration Area pursuant to City Ordinance 167940 for the long-term conservation of the El Segundo Blue Butterfly. There are no direct impacts to the El Segundo Blue Butterfly Habitat Restoration Area anticipated during construction because that area is located at least 3,345 feet from the Project site. Indirect impacts from construction activities, including staging and stockpiling of materials that may have the potential to result in deposition of fugitive dust within the occupied habitat of the El Segundo Blue Butterfly, would be avoided via standard dust control measures that are part of the LAX Master Plan Commitments which would be employed as part of the proposed Project:

- **LAX Master Plan Mitigation Measure MM-AQ-2. Mitigation Plan for Air Quality - Construction- Related Mitigation Measures.** This measure describes numerous specific actions to reduce fugitive dust emissions and exhaust emissions from on-road and off-road mobile and stationary sources used in construction. These actions are listed in the table below.

Measure	**Type of Measure**
Post a publically visible sign with the telephone number and person to contact regarding dust complaints; this person shall respond and take corrective action within 24 hours.	Fugitive Dust
Prior to final occupancy, the applicable demonstrates that all ground surfaces are covered or treated sufficiently to minimize fugitive dust emissions.	Fugitive Dust
All roadways, driveways, sidewalks, etc., being installed as part of the project should be completed as soon as possible; in addition, building pads should be laid as soon as possible after grading.	Fugitive Dust
Pave all construction access roads at least 100 feet on to the site from the main road.	Fugitive Dust
To the extent feasible, have construction employees' work/commute during off-peak hours	On-Road Mobile
Make available on-site lunch trucks during construction to minimize off-site worker vehicle trips.	On-Road Mobile
Prohibit staging and parking of construction vehicles (including workers' vehicles) on streets adjacent to sensitive receptors such as schools, daycare centers, and hospitals.	Non-road Mobile
Prohibit construction vehicle idling in excess of ten minutes.	Non-road Mobile
Utilize on-site rock crushing facility, where feasible, during construction to reuse rock/concrete and minimize off-site truck haul trips.	Non-road Mobile
Specify combination of electricity from power poles and portable diesel- or gasoline-fuel generators using "clan burning diesel" fuel and exhaust emission controls	Stationary Point Source Controls
Suspend use of all construction equipment during a second-stage smog alert in the immediate vicinity of LAX.	Mobile and Stationary
Utilize construction equipment having the minimum practical engine size (i.e., lowest appropriate horsepower rating for intended job).	Mobile and Stationary

Measure	Type of Measure
Require that all construction equipment working on-site is properly maintained (including engine tuning) at all times in accordance with manufacturers' specifications and schedules.	Mobile and Stationary
Prohibit tampering with construction equipment to increase horsepower or to defeat emission control devices.	Mobile and Stationary
The contractor or builder shall designate a person or persons to ensure the implementation of all components of the construction-related measure through direct inspections, record reviews, and investigations of complaints.	Administrative

- **LAX Mitigation Measure MM-ET-3. El Segundo Blue Butterfly Conservation – Dust Control.** To reduce the transport of fugitive dust particles related to construction activities, soil stabilization, watering or other dust control measures, as feasible and appropriate, shall be implemented with a goal to reduce fugitive dust emissions by 90 to 95 percent during construction activities within 2,000 feet of the El Segundo Blue Butterfly Habitat Restoration Area. In addition, to the extent feasible, no grading or stockpiling for construction activities should take place within 100 feet of occupied habitat of the El Segundo blue butterfly.

With implementation of these mitigation commitments, impacts related to habitat conservation plans would be less than significant.

As no impacts related to Land Use and Planning would occur, this topic will not be evaluated further in the EIR and no mitigation is required.

XI. 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?

XI.a. and XI.b. ***No Impact.*** The State Mining and Geology Board classifies mineral resource zones throughout the state. As indicated in the LAX Master Plan Final EIS/EIR, the Project site is located within a MRZ-3 zone, which represents areas with mineral deposits whose significance cannot be evaluated from available data.[52] The Project site is developed with airport-related uses that are mostly paved with some disturbed open space and limited landscaping. There are no actively mined mineral resources on the Project site. Therefore, the proposed Project would not affect access to or the availability of valued mineral resources. The Project site is not within an area delineated on the City of Los Angeles Oil Field & Oil Drilling Areas map in the City of Los Angeles General Plan Safety Element.[53] ***No impacts related to mineral resources would occur.***

As no impacts related to Mineral Resources would occur, this topic will not be evaluated further in the EIR and no mitigation is required.

[52] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.

[53] City of Los Angeles, Planning Department. *Safety Element of the City of Los Angeles General Plan, Exhibit E, Oil Field & Oil Drilling Areas in the City of Los Angeles.* May 1994.

XII. NOISE

Would the project result in:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

XII.a. ***Potentially Significant Impact.*** The Project site is located within a highly developed, urbanized area consisting of airport, commercial, transportation, and residential land uses. Ambient noise levels in the immediate vicinity of the Project site are characterized by frequent commercial aircraft arrival and departure operations. The nearest off-site existing noise sensitive residential land uses are located in the City of El Segundo, approximately 300 feet south of the proposed GSE Maintenance Facility along Imperial Highway. The nearest noise-sensitive receivers in the City of Los Angeles are homes and a hotel located in the northeast intersection of La Cienega Boulevard and West 104th Street (over ½-mile east of the eastern end of the Runway). These areas are currently exposed to noise levels in excess of federal and state standards of 65 dBA Day/Night Level (DNL) and Community Noise Equivalent Level (CNEL), respectively.

While the proposed Project will not cause any long-term changes in departures and arrivals runway utilization, easterly departures on Runway 7L, which are less than two percent of aircraft departures at LAX, will take off from the new 7L runway end after proposed Project completion, which will be 832 feet west of the existing runway end. While it is unlikely for such relatively minor operational changes to cause any significant permanent changes in aircraft noise exposure at the City of El Segundo residences, ***post-project aircraft noise levels from the Runway and from the Imperial Highway site for the proposed GSE Maintenance Facility will nevertheless be evaluated in the EIR to determine whether the proposed Project would cause any new locations in the vicinity of the Airport to be exposed to levels above 65 dBA CNEL.***

Construction Noise

Construction of the proposed Project would result in noise generated by on-site equipment and activities, such as pavement demolition, excavation, grading, and paving. Impacts associated with exposure of persons to or generation of noise levels in excess of applicable construction standards will be evaluated in the EIR and construction noise mitigation measures will be identified, if necessary.

Furthermore, the proposed construction sequencing for the Runway 25R reconstruction would require an approximate three-month closure of the Runway. As the Runway is the primary departure runway on the South Airfield, the proposed closure will require shifting aircraft traffic from this runway to other runways at LAX for the duration of construction. The shift in aircraft flight patterns during the three-month period has the potential to result in significant airport noise exposure changes, causing noise levels to exceed airport noise standards in some noise-sensitive areas. Aircraft noise exposure effects will be evaluated further in the Runway 7L/25R Project EIR.

The construction of the GSE Maintenance Facility and associated developments in the vicinity would occur within the designated construction hours as permissible under the City of Los Angeles zoning and noise ordinances. Nevertheless, construction would require hauling of materials to and from this site and would involve equipment generating noise that may exceed construction noise criteria. ***Therefore, impacts associated with exposure of persons to, or generation of, noise levels in excess of applicable construction standards will be evaluated in the EIR.***

b. Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?

XII.b. ***Less Than Significant Impact.*** The nearest off-site existing noise-sensitive residential land uses are approximately 300 feet south of the Project site in the City of El Segundo. Construction activities associated with the proposed Project primarily include site clearing, excavation, grading, paving building

erection, and site finishing. These activities may potentially include heavy impact actions that could generate localized ground vibration. Generally speaking, even the most vibration-intensive construction activities (i.e. pile driving) would need to occur within 50 feet of a sensitive use to be perceptible.[54] At the closest distance to existing homes in the City of El Segundo (i.e. 300 feet), it is not likely that the proposed Project construction will result in exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels. ***Therefore, impacts related to ground-borne vibration would be less than significant, and this topic will not be evaluated further in the EIR and no mitigation is required.***

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

XII.c. ***Potentially Significant Impact.*** Operationally, the proposed Project does not increase aviation capacity and would not change aircraft arrival and departure locations or taxi times for the majority of flights. A small number of flights would begin their departure from the new 7L runway end, located 832 feet west of the existing runway end, during east-flow departures (less than 2% of departures). While the change in departure location for such a low percentage of overall flights would probably not cause a change in long-term cumulative noise levels from aircraft operations, ***this topic will be evaluated further in the EIR to determine the level of significance of potential changes in aircraft noise exposure.***

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

XII.d. ***Potentially Significant Impact.*** Temporary construction activity could potentially impact off-site locations such as those adjacent to transportation corridors leading to the Project site. Aircraft operations may be shifted to other runways due to shortened runway conditions (approximately 15 weeks for the RSA improvements on the western end of the Runway) and runway closure (approximate three-months for the work on the eastern end of the Runway). Due to construction activities and potential temporary changes in flight operations, the proposed Project may cause substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels that exist without the proposed Project, which would result in potential significant impacts. ***Furthermore, the noise from constructing the GSE Maintenance Facility could potentially impact the nearest residences to the south of the Imperial Highway and will need to be further assessed. Temporary impacts to ambient noise levels will be evaluated further in the EIR.***

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?

XII.e. ***Potentially Significant Impact***. The proposed Project is an airport safety improvement project located on the South Airfield at LAX (**Figure 1**) in the City of Los Angeles. Although the proposed Project is not at an off-airport location, the extension of the Runway could potentially place new receivers within the LAX noise impact areas. ***This topic will be evaluated further in the EIR.***

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?

XII.f. ***No Impact.*** The easternmost point of the Project site is located approximately two miles northwest of Hawthorne Airport, the closest private airstrip. Although the Project site is located near this private airstrip, as it is a larger airport, it is not in the flight path of airplanes using Hawthorne Airport. Therefore, no impacts related to noise from private airfields would occur. ***This topic will not be evaluated further in the EIR and no mitigation is required.***

[54] Caltrans Transportation and Construction Induced Vibration Guidance Manual (June 2004).

XIII. 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?

XIII.a., XIII.b., and XIII.c. ***No Impact.*** The proposed Project does not include residential or business development and would not induce population growth that would require additional housing. The infrastructure improvements that are proposed would not be utilized by the general public and are not considered to be employment-generating. The employees expected to work on the Project site are existing employees that would move to the GSE Maintenance Facility from Air Freight Building No. 8 rather than represent new employees. Furthermore, the proposed Project will not displace existing housing or residential populations. ***Therefore, no impacts related to population or housing growth and displacement would occur. As no impacts related to Population and Housing would occur, this topic will not be evaluated further in the EIR and no mitigation is required.***

XIV. PUBLIC SERVICES

Would the project:

a. Result in substantial adverse physical impacts associated with the provision of 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?

Fire Protection. ***Less Than Significant Impact.*** The City of Los Angeles Fire Department (LAFD) provides fire protection services throughout LAX, including the Project site. Three LAFD fire stations are located on the LAX property (Fire Station Nos. 80, 51, and 95), with the new Fire Station No. 80 located less than one mile to the east of the Project site within the airfield. Finally, the proposed Project would comply with all applicable LAWA, City, state, and federal fire codes and ordinances, including but not limited to the LAX Master Plan commitment identified below, which have been formulated to ensure that proper fire protection features, emergency access, fire flow, etc., are incorporated into the development.

- **LAX Master Plan Commitment FP-1. LAFD Design Recommendations:** During the design phase prior to initiating construction the project, LAWA will work with LAFD to prepare plans that contain the appropriate design features applicable to that component, such as those recommended by LAFD, and listed below:
    - Emergency Access. During Plot Plan development and the construction phase, LAWA will coordinate with LAFD to ensure that access points for off-airport LAFD personnel and apparatus are maintained and strategically located to support timely access. In addition, at least two different ingress/egress roads for each area, which will accommodate major fire apparatus and will provide for major evacuation during emergency situations, will be provided.

- Fire Flow Requirements. Proposed Master Plan development will include improvements, as needed, to ensure that adequate fire flow is provided to all new facilities. The fire flow requirements for individual Master Plan improvements will be determined in conjunction with LAFD and will meet, or exceed, fire flow requirements in effect at the time.
- Fire Hydrants. Adequate off-site public and on-site private fire hydrants may be required, based on determination by the LAFD upon review of proposed plot plans.
- Street Dimensions. New development will conform to the standard street dimensions shown on the applicable City of Los Angeles Department of Public Works Standard Plan.
- Road Turns. Standard cut-corners will be used on all proposed road turns.
- Private Roadway Access. Private roadways that will be used for general access and fire lanes shall have at least 20 feet of vertical access. Private roadways will be built to City of Los Angeles standards to the satisfaction of the City Engineer and the LAFD.
- Dead-End Streets. Where fire lanes or access roads are provided, dead-end streets will terminate in a cul-de-sac or other approved turning area. No fire lane shall be greater than 700 feet in length unless secondary access is provided.
- Fire Lanes. All new fire lanes will be at least 20 feet wide. Where a fire lane must accommodate a LAFD aerial ladder apparatus or where a fire hydrant is installed, the fire lane will be at least 28 feet wide.
- Building Setbacks. New buildings will be constructed no greater than 150 feet from the edge of the roadways of improved streets, access roads, or designated fire lanes.
- Building Heights. New buildings exceeding 28 feet in height may be required to provide additional LAFD access.
- Construction/Demolition Access. During demolition and construction activities, emergency access will remain unobstructed.
- Aircraft Fire Protection Systems. Effective fire protection systems will be provided to protect the areas beneath the wings and fuselage portions of large aircraft. This may be accomplished by incorporating foam-water deluge sprinkler systems with foam-producing and oscillating nozzle (per NFPA 409, aircraft hangars for design criteria).

Implementation of the proposed Project is not expected to increase the capacity of the Airport operations, traffic congestion (except temporarily during construction), or the number of passengers. Consequently, the proposed Project would not require additional support from Airport or local fire departments or require new or expanded fire facilities. ***With implementation of the LAX Master Plan Mitigation and Commitments, impacts related to fire services will be less than significant.***

Police Protection. ***Less Than Significant Impact.*** The Los Angeles World Airports Police Division (LAWAPD), the City of Los Angeles Police Department LAX Detail (LAPD LAX Detail), and the Los Angeles Police Department (LAPD) provide police protection services to LAX, including the Project site. The LAWAPD is located just east of the CTA and the LAPD LAX Detail station is also located on the east side of the airport. Demand for on-airport police protection services is typically determined by increases in aircraft activity and employees. Implementation of the proposed Project is not expected to increase the capacity of the Airport operations, traffic congestion (except temporarily during construction), or the number of passengers. Consequently, the proposed Project would not require additional support from Airport or local police departments or require new or expanded police facilities. ***Therefore, less than significant impacts related to police protection services would occur***.

Schools, Parks, and Other Public Facilities. No Impact. As discussed in XIII, the proposed Project does not include a residential element nor will it increase employment at the Airport during operations. The proposed GSE Maintenance Facility will relocate existing employees currently working elsewhere at the Airport. Consequently, there is no population growth that would increase demands for schools, parks, or other public facilities, such as libraries. ***Therefore, no impacts related to schools, parks, and other public facilities would occur.***

As no impacts related to Public Services would occur, this topic will not be evaluated further in the EIR and no mitigation is required.

XV. RECREATION

Would the project:

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 that might have an adverse physical effect on the environment?

XV.a. and XV.b. ***No Impact***. The proposed Project does not include a housing component that would increase the resident population around the LAX area nor will it increase the number of employees. The proposed GSE Maintenance Facility will relocate existing employees currently working elsewhere at the Airport. Consequently, no increased demand for recreational facilities beyond the existing demand and no physical deterioration of recreational areas would occur. As discussed in XIV, the proposed Project would not increase the use of existing parks or recreational facilities and does not include the construction or expansion of recreational facilities. ***No impacts related to Recreation would occur.***

As no impacts related to Recreation would occur, this topic will not be evaluated further in the EIR and no mitigation is required.

XVI. TRANSPORTATION/TRAFFIC

Would the project:

a. Conflict with an application plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways, and freeways, pedestrian and bicycle paths, and mass transit?

b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

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

XVIa., XVIb., and XVIc. ***Potentially Significant Impact***. Construction of the proposed Project would generate traffic associated with workers traveling to and from the construction employee parking a and staging areas, and the associated shuttle trips between any utilized auxiliary parking areas and the construction site, truck haul/delivery trips, and miscellaneous construction-related travel. These vehicle trips could result in increased traffic volumes on the local roadway system during the construction period and affect both personal vehicles and public transit travel times and safety. And, although the proposed Project is designed to improve aviation safety, during construction there is a potential to create new or substantially different/increased aviation safety impacts due to the proposed 3-month closure of Runway

7L/25R. ***Therefore, impacts related to circulation plans and programs, and impacts related to changes in air traffic patterns would be potentially significant, and these topics will be evaluated further in the EIR.***

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

e. Result in inadequate emergency access?

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

XVI.d through XVI.f. ***No Impact.*** The proposed Project would not require operational modifications to the existing on-airport circulation system, the existing transportation adjacent to LAX, or the regional access system. The proposed Project is an airport safety improvement project, and implementation of the proposed Project would potentially decrease hazards to design or incompatible uses. Additionally, the proposed Project would not increase traffic on the surrounding street network during operations or modify the long-term circulation and emergency access systems to the Airport. Consequently, the proposed Project would not conflict with approved or adopted policies regarding other modes of transit. ***Therefore, no impacts related to increasing hazards to a design feature would occur, nor impacts related to inadequate emergency access, or conflict with adopted plans would occur and these topics will not be evaluated further in the EIR and no mitigation is required.***

XVII. 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 could 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 federal, state, and local statues and regulations related to solid waste?

XVIIa. through XVIIg. ***Less Than Significant Impact.*** The proposed Project does not include the addition of new uses or components that would result in an increase in population or employment that would increase wastewater generation or increase demand for water. As discussed, the proposed GSE Maintenance Facility will relocate existing employees from Air Freight Building No.8 (which will be demolished) and will not generate additional employment. Therefore, wastewater generation and water demand at the GSE Maintenance Facility would be similar to existing conditions. During construction, the increase in wastewater generation will be minimal, as would be the demand for water. Consequently, the proposed Project would not result in the need for a new water supply or water or wastewater treatment

facilities. Also, the proposed Project would include construction of new stormwater drainage system which would result in a benefit to groundwater recharge. Construction of these drainage facilities is not anticipated to have significant impacts, as they will follow the building requirements of LAX and the City of Los Angeles and would occur entirely on Airport property. Water supplies are available to accommodate water demand at LAX.[55] The proposed Project would be implemented for safety purposes and would not increase Airport capacity or employee population. As discussed, the proposed GSE Maintenance Facility will relocate existing employees from Air Freight Building No. 8 (which will be demolished) and will not generate additional employment. Therefore, water demand at the GSE Maintenance Facility would be similar to existing conditions. Construction activities would require water usage and reclaimed water would be used for dust suppression whenever feasible, which would reduce the quantity of potable water required.

The proposed GSE Maintenance Facility will relocate existing employees from Air Freight Building No. 8 (which will be demolished) and will not generate additional employment. Therefore, wastewater generation at the GSE Maintenance Facility would be similar to existing conditions. During construction, the increase in wastewater generation will be minimal. Consequently, construction and operation of the proposed Project would not result in the need for new water supply or water or wastewater treatment facilities. Therefore, impacts related to wastewater treatment capacity would be less than significant.

There are eight major landfills and several smaller landfills currently accepting municipal solid waste in Los Angeles County. Disposal capacity is anticipated to be available well beyond 2015.[56] Construction and demolition activities for the proposed Project would generate a substantial amount of solid waste; however, the proposed Project would adhere to LAWA's recycling program and mitigation measures, which are intended to comply with Assembly Bill 939. Removed pavement from the Project site would be used as filler below any new paving, and any materials would be reused to the extent possible. The proposed GSE Maintenance Facility will relocate existing employees from Air Freight Building No. 8 (which will be demolished) and will not generate additional employment. Therefore, solid waste generation at the GSE Maintenance Facility would be similar to existing conditions.

The use of reclaimed water, additional water conservation, and solid waste measures are incorporated into the following LAX Master Plan Commitments:

- **LAX Master Plan Commitment W-1. Maximized Use of Reclaimed Water**: To the extent feasible, LAWA will maximize the use of reclaimed water, as an offset for potable water use, in Master Plan-related facilities and landscaping.
- **LAX Master Plan Commitment W-2. Enhanced Existing Water Conservation Program**: This is a program to minimize the potential for increased water use due to implementation of the Master Plan.
- **LAX Master Plan Commitment SW-1. Implement an Enhanced Recycling Program:** LAWA will enhance their existing recycling program, based on successful programs at other airports and similar facilities. Features of the enhanced recycling program will include: expansion of the existing terminal recycling program to all terminals, including new terminals; development of a recycling program at LAX Northside/Westchester Southside; lease provisions requiring that tenants meet specified diversion goals; and preference for recycled materials during procurement where, practical and appropriate. *Note: Subsequent to the approval of the LAX Master Plan, LAWA adopted the "LAWA Sustainable Airport Planning, Design and Construction Guidelines" for implementation on all airport projects. These Guidelines provide goals and performance standards for recycling of materials during both construction and operation of airport facilities in accordance with the*

[55] City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047,* April 2004.
[56] *Ibid.*

provisions of Master Plan Commitment SW-1. LAWA has also implemented an enhanced recycling program at LAX as outlined in the "LAX Recycling Plan" which provides updated guidelines for recycling operations at LAX.

- **LAX Master Plan Commitment SW-2. Requirements for the Use of Recycled Materials during Construction:** LAWA will require, where feasible, that contractors use a specified minimum percentage of recycled materials during construction of LAX Master Plan improvements. The percentage of recycled materials required will be specified in the construction bid documents. Recycled materials may include, but are not limited to, asphalt, drywall, steel, aluminum, ceramic tile, cellulose insulation, and composite engineered wood products. The use of recycled materials in LAX Master Plan construction will help to reduce the project's reliance upon virgin materials and support the recycled materials market, decreasing the quantity of solid waste requiring disposal.
- **LAX Master Plan Commitment SW-3. Requirements for the Recycling of Construction and Demolition Waste:** LAWA will require that contractors recycle a specified minimum percentage of waste materials generated during demolition and construction. The percentage of waste materials required to be recycled will be specified in the construction bid documents. Waste materials to be recycled may include, but are not limited to, asphalt, concrete, drywall, steel, aluminum, ceramic tile, and architectural details.

Due to increased water conservation measures as stated in the LAX Master Plan as well as the projected availability of local water supplies as stated in the Master Plan[57], impacts related to water supply would be less than significant.

As impacts related to Utilities and Service Systems would be less than significant, this topic will not be evaluated further in the EIR and no additional mitigation is required

XVIII. 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?

XVIII.a. ***Less than Significant Impact.*** As discussed in IV, the proposed Project would not affect the quality of the environment for biological resources. There are no listed endangered, threatened or special status species, riparian/wetland areas, trees, or wildlife movement corridors known to occur at the Project site, and fairy shrimp cysts, which were documented on the Project site and at other locations within the airport property in the past, have been removed and relocated from the Project site. Furthermore, the proposed Project would not result in significant indirect impacts on the El Segundo Blue Butterfly given a suite of applicable LAX Master Plan mitigation measures and other factors. Therefore, the proposed Project would not have the potential to result in significant biological resources impacts, and no mitigation measures are required.

As discussed in Section V, historical surveys previously conducted of the airport property have not identified any historic resources on the Project site. Air Freight Building No. 8 and Runway 7L/25R have been determined to not be eligible for historic status. For archaeological and paleontological resources, with implementation of the LAX Master Plan EIR commitments, impacts to cultural resources would be less than significant.

[57]City of Los Angeles, Los Angeles World Airports (LAWA), *Final Environmental Impact Statement/Environmental Impact Report, Los Angeles International Airport Proposed Master Plan Improvements, SCH#1997061047*, April 2004.

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, effects of other current projects, and the effects of probable future projects.)

XVIII.b. ***Potentially Significant Impact.*** Implementation of the proposed Project could potentially result in cumulative impacts when considered with other present and planned projects at the Airport and in the surrounding area, particularly with respect to aesthetics, air quality, greenhouse gases, hazards and hazardous materials, hydrology, noise, and traffic. In order to provide a conservative analysis, this Initial Study assumes that the proposed Project could have impacts which are individually limited but cumulatively considerable in each of these issue areas. Therefore, the cumulative impacts in terms of each of these impact areas will be evaluated in an EIR. For the other environmental issues, the proposed Project would be located too far away from sensitive uses, and/or result in such minor impacts, that it would not have the potential to generate cumulatively considerable impacts in combination with the limited number of other past, current or probable future projects in the vicinity of the Project site.

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

XVIII.c. ***Potentially Significant Impact.*** Implementation of the proposed Project may result in adverse environmental effects in terms of the environmental issues listed under Response No. XVIII.b above which could potentially result in substantial adverse effects on human beings. The potential for the proposed Project to result in such impacts will be evaluated further in an EIR. For the other environmental issues, the proposed Project would be located too far away from sensitive uses, and/or result in such minor impacts, that it would not have the potential to generate environmental effects which could cause substantial adverse effects on human beings, either directly or indirectly**.**

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4.0 REFERENCES

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5.0 PREPARERS AND PERSONS CONTACTED

LEAD AGENCY

City of Los Angeles
Los Angeles World Airports
One World Way, Room 218B
Los Angeles, CA 90045

Herb Glasgow, Chief of Airport Planning (Project Manager)

Evelyn Quintanilla, City Planner

INITIAL STUDY PREPARATION

URS Corporation
915 Wilshire Boulevard, Suite 700
Los Angeles, CA 90017

Kavita Mehta, Project Manager

Jaime R. Guzmán, Senior Planner and Deputy Project Manager

Farshad Farhang, Senior Noise Specialist

Tin Cheung, Senior Air Quality Specialist

Roopa Dandamudi, Planner

Henry Choi, Planner

Jang Seo, Graphic Designer

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APPENDIX A3

NOP/IS LOCAL AND STATEWIDE NOTICING

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LA COUNTY CLERK FILING

Print Form

Appendix C

Notice of Completion & Environmental Document Transmittal

Mail to: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (916) 445-0613
For Hand Delivery/Street Address: 1400 Tenth Street, Sacramento, CA 95814

SCH #

Project Title: LAX RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) PROJECT AND ASSOCIATED IMPROVEMENTS

Lead Agency: Los Angeles World Airports
Contact Person: Herb Glasgow
Mailing Address: 1 World Way, Room 218B
Phone: (424) 646-5180
City: Los Angeles Zip: 90045
County: Los Angeles

Project Location: County: Los Angeles City/Nearest Community: City of Los Angeles
Cross Streets: Sepulveda Boulevard/Century Boulevard-World Way/Imperial Highway/Aviation Blvd Zip Code: 90045
Longitude/Latitude (degrees, minutes and seconds): 33 ° 56 ′ 18.58″ N / 118 ° 25 ′ 46.68″ W Total Acres: 5 acres
Assessor's Parcel No.: 4129-026-903 and 4129-026-902 Section: _____ Twp.: _____ Range: _____ Base: _____
Within 2 Miles: State Hwy #: I-105, I-405 Waterways: Pacific Ocean
Airports: LAX, Hawthorne Railways: BNSF, Metro Light Rail Schools: Various

Document Type:

CEQA: ☒ NOP ☐ Draft EIR NEPA: ☐ NOI Other: ☐ Joint Document
☐ Early Cons ☐ Supplement/Subsequent EIR ☐ EA ☐ Final Document
☐ Neg Dec (Prior SCH No.) _____ ☐ Draft EIS ☐ Other: _____
☐ Mit Neg Dec Other: _____ ☐ FONSI

Local Action Type:

☐ General Plan Update ☐ Specific Plan ☐ Rezone ☐ Annexation
☐ General Plan Amendment ☐ Master Plan ☐ Prezone ☐ Redevelopment
☐ General Plan Element ☐ Planned Unit Development ☐ Use Permit ☐ Coastal Permit
☐ Community Plan ☒ Site Plan ☐ Land Division (Subdivision, etc.) ☐ Other: _____

Development Type:

☐ Residential: Units _____ Acres _____
☐ Office: Sq.ft. _____ Acres _____ Employees _____
☐ Commercial: Sq.ft. _____ Acres _____ Employees _____
☐ Industrial: Sq.ft. _____ Acres _____ Employees _____
☐ Educational: _____
☐ Recreational: _____
☐ Water Facilities: Type _____ MGD _____
☒ Transportation: Type Airfield Improvements
☐ Mining: Mineral _____
☐ Power: Type _____ MW _____
☐ Waste Treatment: Type _____ MGD _____
☐ Hazardous Waste: Type _____
☐ Other: _____

Project Issues Discussed in Document:

☒ Aesthetic/Visual ☐ Fiscal ☐ Recreation/Parks ☐ Vegetation
☐ Agricultural Land ☐ Flood Plain/Flooding ☐ Schools/Universities ☐ Water Quality
☒ Air Quality ☐ Forest Land/Fire Hazard ☐ Septic Systems ☐ Water Supply/Groundwater
☐ Archeological/Historical ☐ Geologic/Seismic ☐ Sewer Capacity ☐ Wetland/Riparian
☐ Biological Resources ☐ Minerals ☐ Soil Erosion/Compaction/Grading ☐ Growth Inducement
☐ Coastal Zone ☒ Noise ☐ Solid Waste ☐ Land Use
☒ Drainage/Absorption ☐ Population/Housing Balance ☒ Toxic/Hazardous ☒ Cumulative Effects
☐ Economic/Jobs ☐ Public Services/Facilities ☒ Traffic/Circulation ☐ Other: _____

Present Land Use/Zoning/General Plan Designation:

LAX- A ZONE: Airport Airside Sub-area

FILED

Project Description: *(please use a separate page if necessary)*
See attached page.

THIS NOTICE WAS POSTED
ON OCT 0 9 2012
UNTIL NOV 0 7 2012
REGISTRAR-RECORDER/COUNTY CLERK

OCT 0 5 2012
DEAN C. LOGAN
REGISTRAR-RECORDER/COUNTY CLERK
K. BRADLEY DEPUTY

12 0046734

Note: The State Clearinghouse will assign identification numbers for all new projects. If a SCH number already exists for a project (e.g. Notice of Preparation or previous draft document) please fill in.

Revised 2010

LA COUNTY CLERK FILING

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	____	Office of Historic Preservation
____	Boating & Waterways, Department of	____	Office of Public School Construction
____	California Emergency Management Agency	____	Parks & Recreation, Department of
____	California Highway Patrol	____	Pesticide Regulation, Department of
X	Caltrans District # 7	____	Public Utilities Commission
X	Caltrans Division of Aeronautics	X	Regional WQCB # 4
____	Caltrans Planning	____	Resources Agency
____	Central Valley Flood Protection Board	____	Resources Recycling and Recovery, Department of
____	Coachella Valley Mtns. Conservancy	____	S.F. Bay Conservation & Development Comm.
____	Coastal Commission	____	San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
____	Colorado River Board	____	San Joaquin River Conservancy
____	Conservation, Department of	____	Santa Monica Mtns. Conservancy
____	Corrections, Department of	____	State Lands Commission
____	Delta Protection Commission	____	SWRCB: Clean Water Grants
____	Education, Department of	____	SWRCB: Water Quality
____	Energy Commission	____	SWRCB: Water Rights
X	Fish & Game Region # 5	____	Tahoe Regional Planning Agency
____	Food & Agriculture, Department of	X	Toxic Substances Control, Department of
____	Forestry and Fire Protection, Department of	____	Water Resources, Department of
____	General Services, Department of		
____	Health Services, Department of	____	Other:
____	Housing & Community Development	____	Other:
____	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date October 5, 2012 Ending Date November 5, 2012

Lead Agency (Complete if applicable):

Consulting Firm: URS Corporation
Address: 915 Wilshire Boulevard, Ste 700
City/State/Zip: Los Angeles, CA 90032
Contact: Kavita Mehta
Phone: (213) 996-2200

Applicant: Herb Glasgow, Los Angeles World Airports
Address: 1 World Way, Room 218B
City/State/Zip: Los Angeles, CA 90045
Phone: (424) 646-5180

Signature of Lead Agency Representative: Herbert W. Glasgow Date: 10/05/12

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

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LA COUNTY CLERK FILING

PROJECT DESCRIPTION:

The intent of the proposed Project is to comply with the *Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, such as LAX, to meet FAA airport design standards by December 31, 2015. LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway 7L/25R does not meet current airport design standards and improvements to the RSA were needed. Additionally, Runway 7L/25R, as the primary departure runway on the south airfield, and its connecting taxiways which provides the main access to both runways, handle a large amount of traffic. Due to heavy usage the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility.

Specifically, the proposed Project would include: (1) Runway 7L/25R Improvements including extending the Runway 7L/25R pavement; grading and compacting the RSA; constructing blast fences west of the Runway 7L extension; several taxiways modifications as necessary; relocating the existing Localizer Antenna and blast fences to the west; replacing the existing Approach Lighting System (ALS) towers with in-pavement lights; and modifying the existing Runway and Taxiway lighting and markings in the newly constructed pavements; (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B including connecting taxiways and installation of in-pavement approach lights; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8 including realigning an existing service road north of Taxiway C; realignment and eastward extension of Taxiway C; and the paving of the Air Freight Building No. 8 site; (4) Construction of a GSE Maintenance Facility including removal and relocation of four temporary structures (trailers) present at the proposed site; removal of existing concrete; grading and excavation; and the installation of utilities. The proposed Project would not result in increased or decreased aviation activity at LAX compared to existing conditions.

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LA COUNTY CLERK FILING

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OCT 05 2012
DEAN C. LOGAN
REGISTRAR-RECORDER/COUNTY CLERK
K. BRADLEY
DEPUTY

October 5, 2012

NOTICE OF PREPARATION AND NOTICE OF A PUBLIC SCOPING MEETING FOR AN ENVIRONMENTAL IMPACT REPORT

PROJECT NAME: Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)

PROJECT LOCATION/ADDRESS: On the South Airfield of the LAX property in the City of Los Angeles, County of Los Angeles

COMMUNITY PLANNING AREA: LAX Plan

COUNCIL DISTRICT: 11 – Rosendahl

DUE DATE FOR PUBLIC COMMENTS: Monday, November 5, 2012 by 5:00 p.m.

Los Angeles World Airports (LAWA), a proprietary department of the City of Los Angeles, will be the lead agency and will prepare an Environmental Impact Report (EIR) for the project identified above (proposed Project). LAWA requests your comments as to the scope and content of the EIR. The purpose of the scoping meeting, as further described below, is also focused on receiving input from the public as to what areas the EIR should study.

The Project description, requested permits and approvals, and the potentially significant environmental effects of the proposed Project are set forth below. Also included below are the date, time and location of the scoping meeting that will be held in order to solicit input regarding the content of the Draft EIR. The scoping meeting will be in an open house format. A copy of the Initial Study prepared for the proposed Project is available for review at the LAX website at: http://www.ourlax.org and at the locations listed below:

Westchester-Loyola Village Branch Library
7114 W. Manchester Ave.
Los Angeles, CA 90045

El Segundo Library
111 W. Mariposa Avenue
El Segundo, CA 90245

PROJECT DESCRIPTION: The intent of the proposed Project is to comply with the *Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, such as LAX, to meet FAA airport design standards by December 31, 2015. LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway 7L/25R does not meet current airport design standards and improvements to the RSA were needed.

Additionally, Runway 7L/25R , as the primary departure runway on the south airfield, and its connecting taxiways, which provide the main access to both South Airfield runways, handle a large amount of traffic. Due to heavy usage, the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility. It should be noted that the proposed Project would not result in increased or decreased aviation activity at LAX compared to existing conditions.

Specifically, the proposed Project would include: (1) *Runway 7L/25R RSA Improvements* including extending the Runway 7L/25R pavement; grading and compacting the RSA; constructing blast fences west of the Runway 7L extension; several taxiways modifications as necessary; relocating the existing Localizer Antenna and blast fences to the west; replacing the existing Approach Lighting System (ALS) towers with in-pavement lights; and modifying the existing Runway and Taxiway lighting and markings in the newly constructed pavements; (2) *Pavement Reconstruction of the Eastern Portions of Runway 7L/25R and Taxiway B* including connecting taxiways and installation of in-pavement approach lights; (3) *Taxiway C Extension and Demolition of Air Freight Building No. 8* including realigning an existing service road north of Taxiway C; realignment and eastward extension of Taxiway C; and the paving of the Air Freight Building No. 8 site; and (4) *Construction of a GSE Maintenance Facility* which

12 0046735

THIS NOTICE WAS POSTED
ON OCT 09 2012
UNTIL NOV 07 2012
Removed 11-8-12 PE
REGISTRAR-RECORDER/COUNTY CLERK

STATE CLEARINGHOUSE FILING

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Notice of Preparation

October 5, 2012

To: Reviewing Agencies

Re: LAX Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements
SCH# 2012101019

Attached for your review and comment is the Notice of Preparation (NOP) for the LAX Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Herb Glasgow
Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Attachments
cc: Lead Agency

STATE CLEARINGHOUSE FILING

Document Details Report
State Clearinghouse Data Base

SCH# 2012101019
Project Title LAX Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements
Lead Agency Los Angeles World Airports

Type NOP Notice of Preparation

Description LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway were needed. Additionally, Runway 7L/25R, as the primary departure runway on the south airfield, and its connecting taxiways which provides the main access to both runways, handle a large amount of traffic. Due to heavy usage the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility.

Lead Agency Contact

Name Herb Glasgow
Agency Los Angeles World Airports
Phone 424 646 5180 **Fax**
email
Address 1 World Way, Room 218B
City Los Angeles **State** CA **Zip** 90045

Project Location

County Los Angeles
City Los Angeles, City of
Region
Cross Streets Sepulveda Boulevard/Century Boulevard-World Way/Imperial Highway/Aviation Blvd
Lat / Long 33° 56' 18.58" N / 118° 25' 46.68" W
Parcel No. 4129-026-903, 4129-026-902
Township **Range** **Section** **Base**

Proximity to:

Highways I-105, 405
Airports LAX, Hawthorne
Railways BNSF, Metro Light Rail
Waterways Pacific Ocean
Schools Various
Land Use LAX- A Zone: Airport Airside Sub-area

Project Issues Aesthetic/Visual; Air Quality; Drainage/Absorption; Noise; Toxic/Hazardous; Traffic/Circulation; Cumulative Effects

Reviewing Agencies Resources Agency; California Coastal Commission; Office of Historic Preservation; Department of Parks and Recreation; Resources, Recycling and Recovery; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 7; Air Resources Board, Airport/Energy Projects; Department of Toxic Substances Control; Regional Water Quality Control Board, Region 4

Date Received 10/05/2012 **Start of Review** 10/05/2012 **End of Review** 11/05/2012

NOP Distribution List

County: Los Angeles

SCH# 2012101019

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  Nicole Wong
- [x] California Coastal Commission
  Elizabeth A. Fuchs
- [ ] Colorado River Board
  Gerald R. Zimmerman
- [ ] Dept. of Conservation
  Elizabeth Carpenter
- [ ] California Energy Commission
  Eric Knight
- [ ] Cal Fire
  Dan Foster
- [ ] Central Valley Flood Protection Board
  James Herota
- [x] Office of Historic Preservation
  Ron Parsons
- [x] Dept of Parks & Recreation
  Environmental Stewardship Section
- [x] California Department of Resources, Recycling & Recovery
  Sue O'Leary
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [x] Dept. of Water Resources Resources Agency
  Nadell Gayou

Fish and Game

- [ ] Depart. of Fish & Game
  Scott Flint
  Environmental Services Division
- [ ] Fish & Game Region 1
  Donald Koch
- [ ] Fish & Game Region 1E
  Laurie Harnsberger
- [ ] Fish & Game Region 2
  Jeff Drongesen
- [ ] Fish & Game Region 3
  Charles Armor
- [ ] Fish & Game Region 4
  Julie Vance
- [x] Fish & Game Region 5
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] Fish & Game Region 6
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] Fish & Game Region 6 I/M
  Brad Henderson
  Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game M
  George Isaac
  Marine Region

Other Departments

- [ ] Food & Agriculture
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] Depart. of General Services
  Public School Construction
- [ ] Dept. of General Services
  Anna Garbeff
  Environmental Services Section
- [ ] Dept. of Public Health
  Jeffery Worth
  Dept. of Health/Drinking Water
- [ ] Delta Stewardship Council
  Kevan Samsam

Independent Commissions Boards

- [ ] Delta Protection Commission
  Michael Machado
- [ ] Cal EMA (Emergency Management Agency)
  Dennis Castrillo
- [x] Native American Heritage Comm.
  Debbie Treadway
- [ ] Public Utilities Commission
  Leo Wong
- [ ] Santa Monica Bay Restoration
  Guangyu Wang
- [ ] State Lands Commission
  Jennifer Deleong
- [ ] Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Business, Trans & Housing

- [x] Caltrans - Division of Aeronautics
  Philip Crimmins
- [ ] Caltrans - Planning
  Terri Pencovic
- [x] California Highway Patrol
  Suzann Ikeuchi
  Office of Special Projects
- [ ] Housing & Community Development
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] Caltrans, District 1
  Rex Jackman
- [ ] Caltrans, District 2
  Marcelino Gonzalez
- [ ] Caltrans, District 3
  Gary Arnold
- [ ] Caltrans, District 4
  Erik Alm
- [ ] Caltrans, District 5
  David Murray
- [ ] Caltrans, District 6
  Michael Navarro
- [x] Caltrans, District 7
  Dianna Watson
- [ ] Caltrans, District 8
  Dan Kopulsky
- [ ] Caltrans, District 9
  Gayle Rosander
- [ ] Caltrans, District 10
  Tom Dumas
- [ ] Caltrans, District 11
  Jacob Armstrong
- [ ] Caltrans, District 12
  Marlon Regisford

Cal EPA

Air Resources Board

- [x] Airport/Energy Projects
  Jim Lerner
- [ ] Transportation Projects
  Douglas Ito
- [ ] Industrial Projects
  Mike Tollstrup
- [ ] State Water Resources Control Board
  Regional Programs Unit
  Division of Financial Assistance
- [ ] State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] State Water Resouces Control Board
  Phil Crader
  Division of Water Rights
- [x] Dept. of Toxic Substances Control
  CEQA Tracking Center
- [ ] Department of Pesticide Regulation
  CEQA Coordinator

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB 3
  Central Coast Region (3)
- [x] RWQCB 4
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] RWQCB 5S
  Central Valley Region (5)
- [ ] RWQCB 5F
  Central Valley Region (5)
  Fresno Branch Office
- [ ] RWQCB 5R
  Central Valley Region (5)
  Redding Branch Office
- [ ] RWQCB 6
  Lahontan Region (6)
- [ ] RWQCB 6V
  Lahontan Region (6)
  Victorville Branch Office
- [ ] RWQCB 7
  Colorado River Basin Region (7)
- [ ] RWQCB 8
  Santa Ana Region (8)
- [ ] RWQCB 9
  San Diego Region (9)

- [ ] Other _____

- [ ] _____
  Conservancy

Last Updated 8/14/2012

STATE CLEARINGHOUSE FILING

STATE CLEARINGHOUSE FILING

Reviewing Agencies Checklist

Lead Agencies may recommend State Clearinghouse distribution by marking agencies below with and "X".
If you have already sent your document to the agency please denote that with an "S".

X	Air Resources Board	____	Office of Historic Preservation
____	Boating & Waterways, Department of	____	Office of Public School Construction
____	California Emergency Management Agency	____	Parks & Recreation, Department of
____	California Highway Patrol	____	Pesticide Regulation, Department of
X	Caltrans District # 7	____	Public Utilities Commission
X	Caltrans Division of Aeronautics	X	Regional WQCB # 4
____	Caltrans Planning	____	Resources Agency
____	Central Valley Flood Protection Board	____	Resources Recycling and Recovery, Department of
____	Coachella Valley Mtns. Conservancy	____	S.F. Bay Conservation & Development Comm.
____	Coastal Commission	____	San Gabriel & Lower L.A. Rivers & Mtns. Conservancy
____	Colorado River Board	____	San Joaquin River Conservancy
____	Conservation, Department of	____	Santa Monica Mtns. Conservancy
____	Corrections, Department of	____	State Lands Commission
____	Delta Protection Commission	____	SWRCB: Clean Water Grants
____	Education, Department of	____	SWRCB: Water Quality
____	Energy Commission	____	SWRCB: Water Rights
X	Fish & Game Region # 5	____	Tahoe Regional Planning Agency
____	Food & Agriculture, Department of	X	Toxic Substances Control, Department of
____	Forestry and Fire Protection, Department of	____	Water Resources, Department of
____	General Services, Department of		
____	Health Services, Department of	____	Other:
____	Housing & Community Development	____	Other:
____	Native American Heritage Commission		

Local Public Review Period (to be filled in by lead agency)

Starting Date October 5, 2012 Ending Date November 5, 2012

Lead Agency (Complete if applicable):

Consulting Firm: URS Corporation
Address: 915 Wilshire Boulevard, Ste 700
City/State/Zip: Los Angeles, CA 90032
Contact: Kavita Mehta
Phone: (213) 996-2200

Applicant: Herb Glasgow, Los Angeles World Airports
Address: 1 World Way, Room 218B
City/State/Zip: Los Angeles, CA 90045
Phone: (424) 646-5180

Signature of Lead Agency Representative: Herbert W. Glasgow Date: 10/05/12

Authority cited: Section 21083, Public Resources Code. Reference: Section 21161, Public Resources Code.

STATE CLEARINGHOUSE FILING

PROJECT DESCRIPTION:

The intent of the proposed Project is to comply with the *Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, such as LAX, to meet FAA airport design standards by December 31, 2015. LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway 7L/25R does not meet current airport design standards and improvements to the RSA were needed. Additionally, Runway 7L/25R, as the primary departure runway on the south airfield, and its connecting taxiways which provides the main access to both runways, handle a large amount of traffic. Due to heavy usage the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility.

Specifically, the proposed Project would include: (1) Runway 7L/25R Improvements including extending the Runway 7L/25R pavement; grading and compacting the RSA; constructing blast fences west of the Runway 7L extension; several taxiways modifications as necessary; relocating the existing Localizer Antenna and blast fences to the west; replacing the existing Approach Lighting System (ALS) towers with in-pavement lights; and modifying the existing Runway and Taxiway lighting and markings in the newly constructed pavements; (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B including connecting taxiways and installation of in-pavement approach lights; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8 including realigning an existing service road north of Taxiway C; realignment and eastward extension of Taxiway C; and the paving of the Air Freight Building No. 8 site; (4) Construction of a GSE Maintenance Facility including removal and relocation of four temporary structures (trailers) present at the proposed site; removal of existing concrete; grading and excavation; and the installation of utilities. The proposed Project would not result in increased or decreased aviation activity at LAX compared to existing conditions.

STATE CLEARINGHOUSE FILING

Notice of Preparation

To: State Clearinghouse
1400 Tenth Street
Sacramento, CA (Address) 95814

From: Herb Glasgow, Chief of Airport Planning I
Los Angeles World Airports (LAWA)
1 World Way, Rm 218B, LA, CA 90045 (Address)

Subject: Notice of Preparation of a Draft Environmental Impact Report

Los Angeles World Airport (LAWA) will be the Lead Agency and will prepare an environmental impact report for the project identified below. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by our agency when considering your permit or other approval for the project.

The project description, location, and the potential environmental effects are contained in the attached materials. A copy of the Initial Study (☒ is ☐ is not) attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Herb Glasgow, Chief of Airport Planning I at the address shown above. We will need the name for a contact person in your agency.

Project Title: LAX RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) PROJECT AND ASSOCIATED IMPROVEMENTS

Project Applicant, if any: LAWA

Date 10/05/12

Signature Herbert W. Glasgow

Title Chief of Airport Planning I

Telephone (424) 646-5180

RECEIVED
OCT 05 2012
STATE CLEARING HOUSE

Reference: California Code of Regulations, Title 14, (CEQA Guidelines) Sections 15082(a), 15103, 15375.

LOCAL NEWSPAPER NOTIFICATION

Proof of Publication

Los Angeles Times

STATE OF CALIFORNIA
County of Los Angeles

I am a citizen of the United States, and a resident of the county aforesaid; I am over the age of eighteen years; and I am not a party to or interested in the notice published. I am the chief legal advertising clerk of the publisher of the LOS ANGELES TIME a newspaper of general circulation, printed and published daily in the City of Los Angeles, County of Los Angeles. The LOS ANGELES TIMES has been adjudged a newspaper of general circulation by the Superior Court of the County of Los Angeles, State of California, under the date of May 21, 1952, Case No. 598,599. The notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

October 5,

all in the year2012

I certify (or declare) under penalty of perjury that the foregoing is true and correct

Dated at Los Angeles, California, this

5th *day of* October 2012

Signature

2388553

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* A 0 0 0 0 0 2 8 4 1 0 2 6 *

LEAD AGENCY: Los Angeles World Airports (LAWA)
SUBJECT: Notice of Preparation of an Environmental Impact Report
PROJECT TITLE: Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)
PROJECT LOCATION: Los Angeles International Airport in the City of Los Angeles, County of Los Angeles

PROJECT DESCRIPTION: The intent of the proposed Project is to comply with the Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006 (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, Certification and Operations: Land Airports Serving

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Rec'd 10/18/12

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LOS ANGELES WORLD AIRPORTS/LONG RANGE PL
1 WORLD WAY RM 218
LOS ANGELES, CA 90045 USA

LOCAL NEWSPAPER NOTIFICATION

PROOF OF PUBLICATION
(2015.5 C.C.P.)

STATE OF CALIFORNIA
County of Los Angeles

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter. I am the principal clerk of the printer of The Argonaut, a newspaper of general circulation, printed and published weekly in the County of Los Angeles, State of California, under the date of March 7, 1973, modified October 5, 1976, Case Number C47170; that the notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

10/4

All in the year 2012

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Dated at Los Angeles

California, the 4th October, 2012

Signature:

Joy Lesser

The Argonaut

P. O. Box 11209, Marina del Rey, CA 90295-7209
Located at 5355 McConnell Ave., L. A., CA 90066
(310) 822-1629

Proof of Publication of

ArgonautNews

LEAD AGENCY: Los Angeles World Airports (LAWA)
SUBJECT: Notice of Preparation of an Environmental Impact
PROJECT TITLE: Los Angeles International Airport (LAX) Improvements (proposed Project)
PROJECT LOCATION: Los Angeles International Airport in the

PROJECT DESCRIPTION: The intent of the proposed Proje Development, the Judiciary, District of Columbia, and Indep November 30, 2005. P.L. 109-115 requires completion of RSA Code of Federal Regulations (CFR), Part 139, Certification an meet FAA airport design standards by December 31, 2015. LA RSA for Runway 7L/25R does not meet current airport design

Additionally, Runway 7L/25R , as the primary departure run the main access to both South Airfield runways, handle a lar of both the runway and taxiways has deteriorated over the taxiway will force their temporary closure and necessitate the with FAA standards for taxiway centerline to fixed or movabl Service Equipment (GSE) maintenance uses currently housed noted that the proposed Project would not result in increase

Specifically, the proposed Project would include: (1) Runwa pavement; grading and compacting the RSA; constructing bla as necessary; relocating the existing Localizer Antenna and b (ALS) towers with in-pavement lights; and modifying the exist pavements; (2) Pavement Reconstructionof the Eastern Porti installation of in-pavement approach lights; (3) Taxiway C Ex an existing service road north of Taxiway C; realignment a Building No. 8 site; and (4) Construction of a GSE Maintenar structures (trailers) present at the proposed site; removal of

Potentially significant environmental effects that may result Gas Emissions, Hazards and Hazardous Materials, Hydrology

PUBLIC SCOPING MEETING: As part of the scoping process

Meeting Date: Wednesday, October 17, 2012, 6:00 PM to
Meeting Location: Proud Bird Restaurant
6661 West Imperial Highway
Los Angeles CA 90045

The NOP is available online at www.OurLAX.org and will be Clerk Desk. A copy of the Initial Study prepared for the pr information, or to request a copy, please call LAWA at (424) 6 and must be received by LAWA no later than 5:00 p.m. on M Chief of Airport Planning, at hglasgow@lawa.org or to the f

City of Los Ange
1 Wo
Los
Pho

Si deseaestainformaci ó n en Espa ñ ol, visite la página v

As a covered entity under Title II of the Americans with Dis disability and, upon request, will provide reasonable accom

10/4/12
CNS-2388554#
THE ARGONAUT

FICTITIOUS BUSINESS NAME STATEMENT
File No. 2012172083
The following person is doing business as: Home Perfection, 4150 Via Dolce #123, Marina del Rey, CA 90292, County of Los Angeles. Articles of Incorporation or Organization Number: AI #ON: Registered owner: Nancy Cohen, 4150 Via Dolce #123, Marina del Rey, CA 90292.This business is conducted by an individual. The registrant commenced to transact business under the fictitious business name or names listed above on August 27, 2012. I declare that all information in this statement is true and correct. (A registrant who declares as true information which he or she knows to be false is guilty of a crime.) Registrant Signature/ Name: Nancy Cohen, Owner. This statement was filed with the County Clerk of Los Angeles on August 27, 2012. Argonaut published: September 13, 20, 27, October 4, 2012. NOTICE-In accordance with Subdivision (a) of Section 17920, a Fictitious Name Statement generally expires at the end of five years from the date on which it was filed in the office of the County Clerk, except, as provided in Subdivision (b) of Section 17920, where it expires 40 days after any change in the facts set forth in the statement pursuant to section 17913 other than a change in the residence address of a registered owner. A New Fictitious Business Name Statement must be filed before the expiration. The filing of this statement does not of itself authorize the use in this state

A000002851106

LOCAL NEWSPAPER PUBLICATION

THE DAILY BREEZE

21250 TORRANCE BLVD STE 170, TORRANCE, CA 90503
Telephone (310) 543-6635 / Fax (310) 543-9601

This space for filing stamp only

PROOF OF PUBLICATION

(2015.5 C.C.P.)

State of California)
County of LOS ANGELES) ss

Notice Type: GPN - GOVT PUBLIC NOTICE

Ad Description:

Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed

I am a citizen of the United States and a resident of the State of California; I am over the age of eighteen years, and not a party to or interested in the above entitled matter. I am the principal clerk of the printer and publisher of the THE DAILY BREEZE, a newspaper published in the English language in the city of TORRANCE, county of LOS ANGELES, and adjudged a newspaper of general circulation as defined by the laws of the State of California by the Superior Court of the County of LOS ANGELES, State of California, under date 06/10/1974, Case No. SWC7146. That the notice, of which the annexed is a printed copy, has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

10/05/2012

Executed on: 10/05/2012
At Los Angeles, California

I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Signature

CNS#: 2388550

LEAD AGENCY: Los Angeles World Airports (LAWA)
SUBJECT: Notice of Preparation of an Environmental Impact Report
PROJECT TITLE: Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)
PROJECT LOCATION: Los Angeles International Airport in the City of Los Angeles, County of Los Angeles

PROJECT DESCRIPTION: The intent of the proposed Project is to comply with the Transportation, Treasury, Housing and Urban Development, the Judiciary, District of Columbia, and Independent Agencies Appropriations Act, 2006 (Public Law [P.L.] 109-115), November 30, 2005. P.L. 109-115 requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, Certification and Operations: Land Airports Serving Certain Air Carriers, such as LAX, to meet FAA airport design standards by December 31, 2015. LAWA prepared an RSA Practicability Study and concluded that the existing RSA for Runway 7L/25R does not meet current airport design standards and improvements to the RSA were needed.

Additionally, Runway 7L/25R , as the primary departure runway on the south airfield, and its connecting taxiways, which provide the main access to both South Airfield runways, handle a large amount of traffic. Due to heavy usage, the pavement on the east end of both the runway and taxiways has deteriorated over the years and needs reconstruction. The reconstruction of the runway and taxiway will force their temporary closure and necessitate the extension of Taxiway C to maintain access to Runway 7R/25L. To comply with FAA standards for taxiway centerline to fixed or movable objects, Air Freight Building No. 8 will be demolished and the Ground Service Equipment (GSE) maintenance uses currently housed in the building, relocated to a new GSE Maintenance Facility. It should be noted that the proposed Project would not result in increased or decreased aviation activity at LAX compared to existing conditions.

Specifically, the proposed Project would include: (1) Runway 7L/25R RSA Improvements including extending the Runway 7L/25R pavement; grading and compacting

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LOCAL NEWSPAPER PUBLICATION

the RSA; constructing blast fences west of the Runway 7L extension; several taxiways modifications as necessary; relocating the existing Localizer Antenna and blast fences to the west; replacing the existing Approach Lighting System (ALS) towers with in-pavement lights; and modifying the existing Runway and Taxiway lighting and markings in the newly constructed pavements; (2) Pavement Reconstructionof the Eastern Portions of Runway 7L/25R and Taxiway B including connecting taxiways and installation of in-pavement approach lights; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8 including realigning an existing service road north of Taxiway C; realignment and eastward extension of Taxiway C; and the paving of the Air Freight Building No. 8 site; and (4) Construction of a GSE Maintenance Facility which includes removal and relocation of several temporary structures (trailers) present at the proposed site; removal of existing concrete; grading and excavation; and the installation of utilities.

Potentially significant environmental effects that may result from the proposed Project include: Aesthetics, Air Quality, Greenhouse Gas Emissions, Hazards and Hazardous Materials, Hydrology/Water Quality, Noise, and Transportation/Traffic.

PUBLIC SCOPING MEETING: As part of the scoping process, a public scoping meeting will be held on:

Meeting Date: Wednesday, October 17, 2012, 6:00 PM to 8:00 PM
Meeting Location: Proud Bird Restaurant
6661 West Imperial Highway
Los Angeles CA 90045

The NOP is available online at www.OurLAX.org and will be posted at the Los Angeles City Clerk's office and the Los Angeles County Clerk Desk. A copy of the Initial Study prepared for the proposed Project is also available for review at www.OurLAX.org. For more information, or to request a copy, please call LAWA at (424) 646-7690. Responses to the NOP should be sent at the earliest possible date and must be received by LAWA no later than 5:00 p.m. on Monday, November 5, 2012. Responses should be sent to Mr. Herb Glasgow, Chief of Airport Planning, at hglasgow@lawa.org or to the following address:

City of Los Angeles, Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045
Phone: (424) 646-5180

Si deseaestainformaci ó n en Espa ñ ol, visite la página web www.OurLAX.org o llamea (424) 646-7690

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.
10/5/12
CNS-2388550#
THE DAILY BREEZE

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APPENDIX A4

NOP/IS LOCAL AND STATEWIDE NOTICING REVIEW PERIOD EXTENSION

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LAX
Los Angeles World Airports

NOTICE OF EXTENDED PUBLIC REVIEW PERIOD

NOTICE OF PREPARATION FOR AN ENVIRONMENTAL IMPACT REPORT (EIR) LOS ANGELES INTERNATIONAL AIRPORT (LAX) RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) AND ASSOCIATED IMPROVEMENTS PROJECT

SCH No. 2012101019

Extended Public Review Period: On October 5, 2012 a Notice of Preparation (NOP) and Notice of Public Scoping Meeting, and an Initial Study were issued for a Draft Environmental Impact Report for the Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project ("proposed Project"). The NOP set a public review period that was to end on November 5, 2012. LAWA has extended the public review period for the NOP by 15 days. Comments on the NOP and Initial Study will now be accepted until 5:00 p.m. on November 20, 2012.

Proposed Project: The proposed Project would include: (1) Improvements to pavement, fencing, taxiways, and lighting on Runway 7L/25R; (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8; and (4) Construction of a Ground Service Equipment (GSE) Maintenance Facility.

The proposed improvements will ensure that Runway 7L/25R at LAX meets FAA safety requirements. The current RSA at Runway 7L/25R does not meet current airport design standards and contains deteriorated pavement. In order to maintain access to Runway 7R/25L during pavement reconstruction Air Freight Building No. 8 will be demolished to accommodate a realignment and eastern extension of Taxiway C and realignment of a service road. A new GSE Maintenance Facility will be built for current uses in Air Freight Building No. 8. These improvements are designed to ensure that the Runway 7L/25R RSA meets FAA airport design standards, but will not increase airport capacity or result in additional the employment.

Availability of Document: The NOP (which includes more information regarding the proposed Project) and Initial Study will continue to be available online at www.OurLAX.org and at the following library branches: Westchester-Loyola Village Branch and El Segundo Library.

If you wish to submit comments on the NOP and Initial Study, please reference the project name and submit them to Mr. Herb Glasgow, Chief of Airport Planning by **November 20, 2012** at City of Los Angeles, Los Angeles World Airports, 1 World Way, Room 218B, Los Angeles, CA 90045, or by phone at **(424) 646-5180.**

CITY OF LOS ANGELES
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NOTE: ADVERTISING REQUEST MUST BE APPROVED BY CITY CLERK

DEPARTMENT: Airports

ADDRESS: 1 World Way, Los Angeles, CA 90045 Room#: 218

MAIL STOP: 101

Requestor: Herb Glasgow Date Submitted: 11/2/12

Phone: 424-646-5180 Fax: 424-646-9210 Second Contact: Evelyn Quintanilla

Description of Advertisement: (Notice of Preparation –Public Review Extension)

Ad Format: (X) In Column ( ) Display w/ border & logo ( ) Shoot to fit (must be clear copy)

Ad Location: (X) Legal ( ) Classified

Note: Unless mandated otherwise, only the FIRST printing of an official notice is paid for from the Official Notices account by the City Clerk, Administrative Services Division, and processed by City Clerk, Council & Public Services Division.
Official Notices must be sent as a **Word document**. The ad will publish "in-column" format and will be placed in the legal section of the official notices section where it is most cost-effective.

Name of Newspaper	Publication Date
L.A. Times	November 8, 2012

(Must be single printing unless mandated otherwise)

E-MAIL REQUESTS TO: Office of the City Clerk, Council & Public Services Division
Attn: Julia.Amanti@lacity.org,
Maria.Vizcarra@lacity.org
200 N. Spring St. Room 395
Mail Stop 160
(213) 978-1133
Please call if you do not receive a response.

For official publications, the requestor will receive an advertiser proof (on multiple run publications) on the date of first publication and/or declaration of publication (on one-time notices) on the date of last publication.

For standard publication requests, please submit request to City Clerk no later than 3:00 pm, two days prior to publication date. For next day publication requests, the submission deadline is 8:30 a.m. of the day prior to the publication date.

For discretionary notices, please contact newspaper for placement. Cost for placing discretionary notices is paid by the requesting department.

City Clerk Approval: _____ 11/2/12
Revised 5/12

From:	MARTINEZ-SIDHOM, BRENDA
To:	MARTINEZ-SIDHOM, BRENDA
Bcc:	Denny@welivefree.com; blichman@buchalter.com; dpc@cbcearthlaw.com; carol.schwab@culvercity.org; lisa.melgoza@culvercity.org; cjacobson@elsegundo.org; gcarpenter@elsegundo.org; mtagle@elsegundo.org; csaunders@cityofinglewood.org; jim.bickhart@lacity.org; mike.bonin@lacity.org; chad.molnar@lacity.org; Jkraptli@counsel.lacounty.gov; Lhafetz@counsel.lacounty.gov; Elemke@counsel.lacounty.gov; shute@smwlaw.com; wolff@smwlaw.com; ross@smwlaw.com; MILLER, SANDRA J.; TRACY, SUZANNE; LINDSEY, GINA MARIE; GUIDRY, CYNTHIA; GLASGOW, HERB; TRIFILETTI, LISA; ALVAREZ, DIEGO; TOMCHECK, PATRICK; DUKE, JAMES (Non-LAWA); NAGY, GREG; GROSSI, LEAH M.; MARTIN, STEVE; MARTINEZ-SIDHOM, BRENDA
Subject:	Extension of public comment period SCH No. 2012101019 (Runway 7L/25R Runway Safety Area & Associated Improvements Project)
Date:	Friday, November 02, 2012 12:00:00 PM
Attachments:	RSA NOP EXTENSION _ NOV 20-2012.pdf

Extension of public comment period SCH No. 2012101019

Please note, on October 5, 2012 a Notice of Preparation (NOP) and Notice of Public Scoping Meeting, and an Initial Study were issued for a Draft Environmental Impact Report for the Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project ("proposed Project"). The NOP set a public review period that was to end on November 5, 2012. LAWA has extended the public review period for the NOP by 15 days. Comments on the NOP and Initial Study will now be accepted until 5:00 p.m. on **November 20, 2012.** The SCH No. is 2012101019.

The notice is attached.

Brenda Sidhom
Airports & Facilities Planning
Stakeholder Liaison Office
(424) 646-5185

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ARSAC
7929 Breen Ave.
Los Angeles, CA 90045

Barbara Lichman
Bauchalter Namer
18400 Von Karman Ave, Suite 800
Irvine, CA 92612

Bureau of Engineering
Attention: Environmental Group
1149 S. Broadway, 6th Floor, #600
Los Angeles, CA 90015

Cal Trans – District 7
IGR/CEQA Program Manager
100 S. Main Street (1-1-C)
Los Angeles, CA 90012

Cal Trans – Division of Aeronautics
1120 N. Street, #3300
Sacramento, CA 94274

Doug Carstens
Chatten-Brown & Carstens
2200 Pacific Coast Hwy;
Hermosa Beach, CA 90254

City of Culver City
Attention: Carol Schwab
9770 Culver Blvd., 3rd Floor
Culver City, CA 90232

City of Culver City
Attention: David McCarthy
9770 Culver Blvd., 3rd Floor
Culver City, CA 90232

City of Culver City
Attention: City Manager
9770 Culver Blvd.
Culver City, CA 90232

City of El Segundo
Hon. Mayor Carl Jacobson
350 Main Street
El Segundo, CA 90245

City of El Segundo
Greg Carpenter, City Manager
350 Main Street
El Segundo, CA 90245

City of Inglewood
Attention: Cal Saunders
One Manchester Blvd.
Inglewood, CA 90312

City of Inglewood
Attention: Hon. Mayor
One Manchester Blvd.
Inglewood, CA 90312

City of Los Angeles Department of Building & Safety
Attention: General Manger
201 N. Figueroa St
Los Angeles, CA 90012

City of Los Angeles Mayor's Office
Attention: Jim Bickhart
200 N. Spring St., #303
Los Angeles, CA 90012

City of Los Angeles, CD11
Attention: Mike Bonin
200 N. Spring Street, #415
Los Angeles, CA 90012

City of Los Angeles, Fire Dept.
Attention: Constructions Services
200 N. Main Street
Los Angeles, CA 90012

City of Los Angeles – CD11
Attention: Chad Molnar
7166 W. Manchester Ave.
Los Angeles, CA 90045

County of Los Angeles
Attention: John F. Kraptli
648 Hall of Administration
500 W. Temple Street
Los Angeles, CA 90012

County of Los Angeles
Attention: William Fujioka
648 Hall of Administration
500 W. Temple Street
Los Angeles, CA 90012

County of Los Angeles
Attention: Director of Regional Plng.
320 W. Temple Street
Los Angeles, CA 90012

County of Los Angeles
Attention: Lawrence Haefetz
648 Hall of Administration
500 W. Temple Street
Los Angeles, CA 90012

County of Los Angeles
Attention: Elaine Lemke
648 Hall of Administration
500 W. Temple Street
Los Angeles, CA 90012

County of LA – Dept. of Regional Planning – Impact Analysis Section
320 W. Temple St., #1348
Los Angeles, CA 90012

County of Los Angeles
County Supervisor – 4th District
822 Hall of Administration
500 W. Temple Street, # 822
Los Angeles, CA 90012

County of Los Angeles
County Supervisor – 4th District
Attention: Steve Napolitano
825 Maple Ave.
Torrance, CA 90503

Dept. of Public Works – BOS
Solid Waste Division
1149 S. Broadway, 10th Floor
Los Angeles, CA 90015

Department of Water and Power
Attn: Supervisor of Environmental Assessment
111 N. Hope Street, #104
Los Angeles, CA 90012

FAA
Attention: Ruben Cabalbag
15000 Aviation Blvd., #3024
Lawndale, CA 90261

Gateway to LA Airport Business District
Attention: Laurie Hughes
6151 W. Century Blvd, #121
Los Angeles, CA 90045

LA County, Department of Public Works – Land Dev. Division
P.O. Box 1460
Alhambra, CA 91802

LA Dept. of Transportation
Attention: Jay Kim
100 S. Main Street, 9th Floor
Los Angeles, CA 90012

LADOT
West LA Development Review
7166 W. Manchester Ave, 10th Floor
Los Angeles, CA 90045

Los Angeles Fire Department
Attention: Chief Cummings
200 N. Main Street, #1800
Los Angeles, CA 90012

Los Angeles Planning Dept.
Attention: Planning Director
200 N. Spring St, 5th Floor
Los Angeles, CA 90012

MTA
Metro CEQA Review Coordination
One Gateway Plaza
Los Angeles, CA 90012

Neighborhood Council of Westchester/Playa
8726 S. Sepulveda Blvd., #PMB191A
Los Angeles, CA 90045

SCAG
Inter-Governmental Review
818 W. 7th Street, 12th Floor
Los Angeles, CA 90017

SCAQMD
Attention: Steve Smith
21865 Copley Dr.
Diamond Bar, CA 91765

Shute, Mihaly & Weinberger, LLP
Attention: E. Clement Shute
396 Hayes Street
San Francisco, CA 94102

Shute, Mihaly & Weinberger, LLP
Attention: Osa Wolff
396 Hayes Street
San Francisco, CA 94102

Shute, Mihaly & Weinberger, LLP
Attention: Gabriel Ross
396 Hayes Street
San Francisco, CA 94102

Westchester Town Center Business Improvement District
Attention: Karen Dial
8929 S. Sepulveda Blvd., #130
Westchester, CA 90045

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

EDMUND G. BROWN JR.
GOVERNOR

KEN ALEX
DIRECTOR

Memorandum

Date: November 2, 2012

To: All Reviewing Agencies

From: Scott Morgan, Director

Re: SCH #2012101019
LAX Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements

---

Pursuant to the attached letter, the Lead Agency has *extended* the review period for the above referenced project to **November 20, 2012** to accommodate the review process. All other project information remains the same.

cc: Herb Glasgow
Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

NOP Distribution List

County: Los Angeles SCH# 2012101

Resources Agency

- [x] Resources Agency
  Nadell Gayou
- [ ] Dept. of Boating & Waterways
  Nicole Wong
- [x] California Coastal Commission
  Elizabeth A. Fuchs
- [ ] Colorado River Board
  Gerald R. Zimmerman
- [ ] Dept. of Conservation
  Elizabeth Carpenter
- [ ] California Energy Commission
  Eric Knight
- [ ] Cal Fire
  Dan Foster
- [ ] Central Valley Flood Protection Board
  James Herota
- [x] Office of Historic Preservation
  Ron Parsons
- [x] Dept of Parks & Recreation
  Environmental Stewardship Section
- [x] California Department of Resources, Recycling & Recovery
  Sue O'Leary
- [ ] S.F. Bay Conservation & Dev't. Comm.
  Steve McAdam
- [x] Dept. of Water Resources Resources Agency
  Nadell Gayou

Fish and Game

- [ ] Depart. of Fish & Game
  Scott Flint
  Environmental Services Division
- [ ] Fish & Game Region 1
  Donald Koch
- [ ] Fish & Game Region 1E
  Laurie Harnsberger
- [ ] Fish & Game Region 2
  Jeff Drongesen
- [ ] Fish & Game Region 3
  Charles Armor
- [ ] Fish & Game Region 4
  Julie Vance
- [x] Fish & Game Region 5
  Leslie Newton-Reed
  Habitat Conservation Program
- [ ] Fish & Game Region 6
  Gabrina Gatchel
  Habitat Conservation Program
- [ ] Fish & Game Region 6 I/M
  Brad Henderson
  Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game M
  George Isaac
  Marine Region

Other Departments

- [ ] Food & Agriculture
  Sandra Schubert
  Dept. of Food and Agriculture
- [ ] Depart. of General Services
  Public School Construction
- [ ] Dept. of General Services
  Anna Garbeff
  Environmental Services Section
- [ ] Dept. of Public Health
  Jeffery Worth
  Dept. of Health/Drinking Water
- [ ] Delta Stewardship Council
  Kevan Samsam

Independent Commissions,Boards

- [ ] Delta Protection Commission
  Michael Machado
- [ ] Cal EMA (Emergency Management Agency)
  Dennis Castrillo
- [x] Native American Heritage Comm.
  Debbie Treadway
- [ ] Public Utilities Commission
  Leo Wong
- [ ] Santa Monica Bay Restoration
  Guangyu Wang
- [ ] State Lands Commission
  Jennifer Deleong
- [ ] Tahoe Regional Planning Agency (TRPA)
  Cherry Jacques

Business, Trans & Housing

- [x] Caltrans - Division of Aeronautics
  Philip Crimmins
- [ ] Caltrans - Planning
  Terri Pencovic
- [x] California Highway Patrol
  Suzann Ikeuchi
  Office of Special Projects
- [ ] Housing & Community Development
  CEQA Coordinator
  Housing Policy Division

Dept. of Transportation

- [ ] Caltrans, District 1
  Rex Jackman
- [ ] Caltrans, District 2
  Marcelino Gonzalez
- [ ] Caltrans, District 3
  Gary Arnold
- [ ] Caltrans, District 4
  Erik Alm
- [ ] Caltrans, District 5
  David Murray
- [ ] Caltrans, District 6
  Michael Navarro
- [x] Caltrans, District 7
  Dianna Watson
- [ ] Caltrans, District 8
  Dan Kopulsky
- [ ] Caltrans, District 9
  Gayle Rosander
- [ ] Caltrans, District 10
  Tom Dumas
- [ ] Caltrans, District 11
  Jacob Armstrong
- [ ] Caltrans, District 12
  Marlon Regisford

Cal EPA

Air Resources Board

- [x] Airport/Energy Projects
  Jim Lerner
- [ ] Transportation Projects
  Douglas Ito
- [ ] Industrial Projects
  Mike Tollstrup
- [ ] State Water Resources Control Board
  Regional Programs Unit
  Division of Financial Assistance
- [ ] State Water Resources Control Board
  Student Intern, 401 Water Quality Certification Unit
  Division of Water Quality
- [ ] State Water Resouces Control Board
  Phil Crader
  Division of Water Rights
- [x] Dept. of Toxic Substances Control
  CEQA Tracking Center
- [ ] Department of Pesticide Regulation
  CEQA Coordinator

Regional Water Quality Board (RWQCB)

- [ ] RWQCB 1
  Cathleen Hudson
  North Coast Region (1)
- [ ] RWQCB 2
  Environmental Document Coordinator
  San Francisco Bay Region (2)
- [ ] RWQCB 3
  Central Coast Region (3)
- [x] RWQCB 4
  Teresa Rodgers
  Los Angeles Region (4)
- [ ] RWQCB 5S
  Central Valley Region (5)
- [ ] RWQCB 5F
  Central Valley Region (5)
  Fresno Branch Office
- [ ] RWQCB 5R
  Central Valley Region (5)
  Redding Branch Office
- [ ] RWQCB 6
  Lahontan Region (6)
- [ ] RWQCB 6V
  Lahontan Region (6)
  Victorville Branch Office
- [ ] RWQCB 7
  Colorado River Basin Region (7)
- [ ] RWQCB 8
  Santa Ana Region (8)
- [ ] RWQCB 9
  San Diego Region (9)

- [ ] Other _____
- [ ] _____ Conservancy

Last Updated 8/14/2012

LAX
Los Angeles World Airports

ORIGINAL FILED

NOV 02 2012

LOS ANGELES COUNTY CLERK

NOTICE OF EXTENDED PUBLIC REVIEW PERIOD

NOTICE OF PREPARATION FOR AN ENVIRONMENTAL IMPACT REPORT (EIR)
LOS ANGELES INTERNATIONAL AIRPORT (LAX) RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) AND ASSOCIATED IMPROVEMENTS PROJECT

SCH No. 2012101019

Extended Public Review Period: On October 5, 2012 a Notice of Preparation (NOP) and Notice of Public Scoping Meeting, and an Initial Study were issued for a Draft Environmental Impact Report for the Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project ("proposed Project"). The NOP set a public review period that was to end on November 5, 2012. LAWA has extended the public review period for the NOP by 15 days. Comments on the NOP and Initial Study will now be accepted until 5:00 p.m. on November 20, 2012.

Proposed Project: The proposed Project would include: (1) Improvements to pavement, fencing, taxiways, and lighting on Runway 7L/25R; (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8; and (4) Construction of a Ground Service Equipment (GSE) Maintenance Facility.

The proposed improvements will ensure that Runway 7L/25R at LAX meets FAA safety requirements. The current RSA at Runway 7L/25R does not meet current airport design standards and contains deteriorated pavement. In order to maintain access to Runway 7R/25L during pavement reconstruction Air Freight Building No. 8 will be demolished to accommodate a realignment and eastern extension of Taxiway C and realignment of a service road. A new GSE Maintenance Facility will be built for current uses in Air Freight Building No. 8. These improvements are designed to ensure that the Runway 7L/25R RSA meets FAA airport design standards, but will not increase airport capacity or result in additional the employment.

Availability of Document: The NOP (which includes more information regarding the proposed Project) and Initial Study will continue to be available online at www.OurLAX.org and at the following library branches: Westchester-Loyola Village Branch and El Segundo Library.

If you wish to submit comments on the NOP and Initial Study, please reference the project name and submit them to Mr. Herb Glasgow, Chief of Airport Planning by **November 20, 2012** at City of Los Angeles, Los Angeles World Airports, 1 World Way, Room 218B, Los Angeles, CA 90045, or by phone at **(424) 646-5180.**

APPENDIX A5

SCOPING MEETING MATERIALS

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SIGN-IN SHEET

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Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)

Public Scoping Meeting

Wednesday, October 17, 2012

SIGN – IN
Public/*Registro de Público*

Name/*Nombre*	Organization/*Organización*	Address/*Domicilio*	Phone/*Teléfono*	Fax	E-mail/*Correo electrónico*
Magno Sellano		646 W. Imperial Ave #35	310 592 1018		
Tatianna Sidnam	NONE	449 MAIN DR LA CA 90065	NONE	NONE	sidnam449@gmail.com

Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)

Public Scoping Meeting

Wednesday, October 17, 2012

SIGN – IN
Public/*Registro de Público*

Name/*Nombre*	Organization/*Organización*	Address/*Domicilio*	Phone/*Teléfono*	Fax	E-mail/*Correo electrónico*
Nelson Carrera	Nippon Cargo Airlines	6501 W Imperial Hwy LA CA 90045	310.342.2424	310.342.2440	nelson.carrera@nca.aero
MATT PATTERSON	LAWA - ADG	ADMIN WEST 8th FLOOR	424 646 5065	—	mpatterson@lawa.org
[illegible]	—	[illegible]	—	—	[illegible]

Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)

Public Scoping Meeting

Wednesday, October 17, 2012

LAWA & Consultant Sign-In

SIGN – IN

Public/*Registro de Público*

Name/*Nombre*	Organization/*Organización*	Address/*Domicilio*	Phone/*Teléfono*	Fax	E-mail/*Correo electrónico*
Roopa Dandamudi	URS	915 Wilshire Blvd suite 700 Los Angeles, CA 90017	213-996-2200	—	—
Brenda Sidhom	LAWA	One World Way, #219	6-5185	—	—
Veronica Sivanosian	URS	915 wilshire Blvd, 700 LA, CA 90017	213-996-2200	—	—
Jaime I Guzmán	URS	915 Wilshire Blvd Suite 700 LA, CA 90017	213-996 2200	—	—
Vickie Remington	LAWA	1 World Way LA, CA 90045	x6-5135	—	—
James Pike	LAWA	1 World Way LA, CA 90045	3109082084	—	—
Greg Nagy	LAWA	1 World Way LA, CA 90045	x6-5284	—	—

Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements (proposed Project)

Staff sign-in

~~Public Scoping~~ Meeting

Wednesday, October 17, 2012

SIGN – IN
Media/*Registro de Prensa*

Name/*Nombre*	**Organization**/*Organización*	**Address**/*Domicilio*	**Phone**/*Teléfono*	**Fax**	**E-mail**/*Correo electrónico*
KAVITA MEHTA	URS.	915 Wilshire Blvd, Suite 700 Los Angeles, CA 90017.	213.996.2254		kavita.mehta@urs.com
Farshad Farhang	URS	"	213.996.2225		farshad.farhang@urs.com
Evelyn Quintanilla	LAWA				

PRESENTATION BOARDS

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WELCOME!

SCOPING MEETING

Wednesday, October 17, 2012

6:00 p.m. to 8:00 p.m.

Proud Bird Restaurant
11022 Aviation Boulevard
Los Angeles, CA 90045

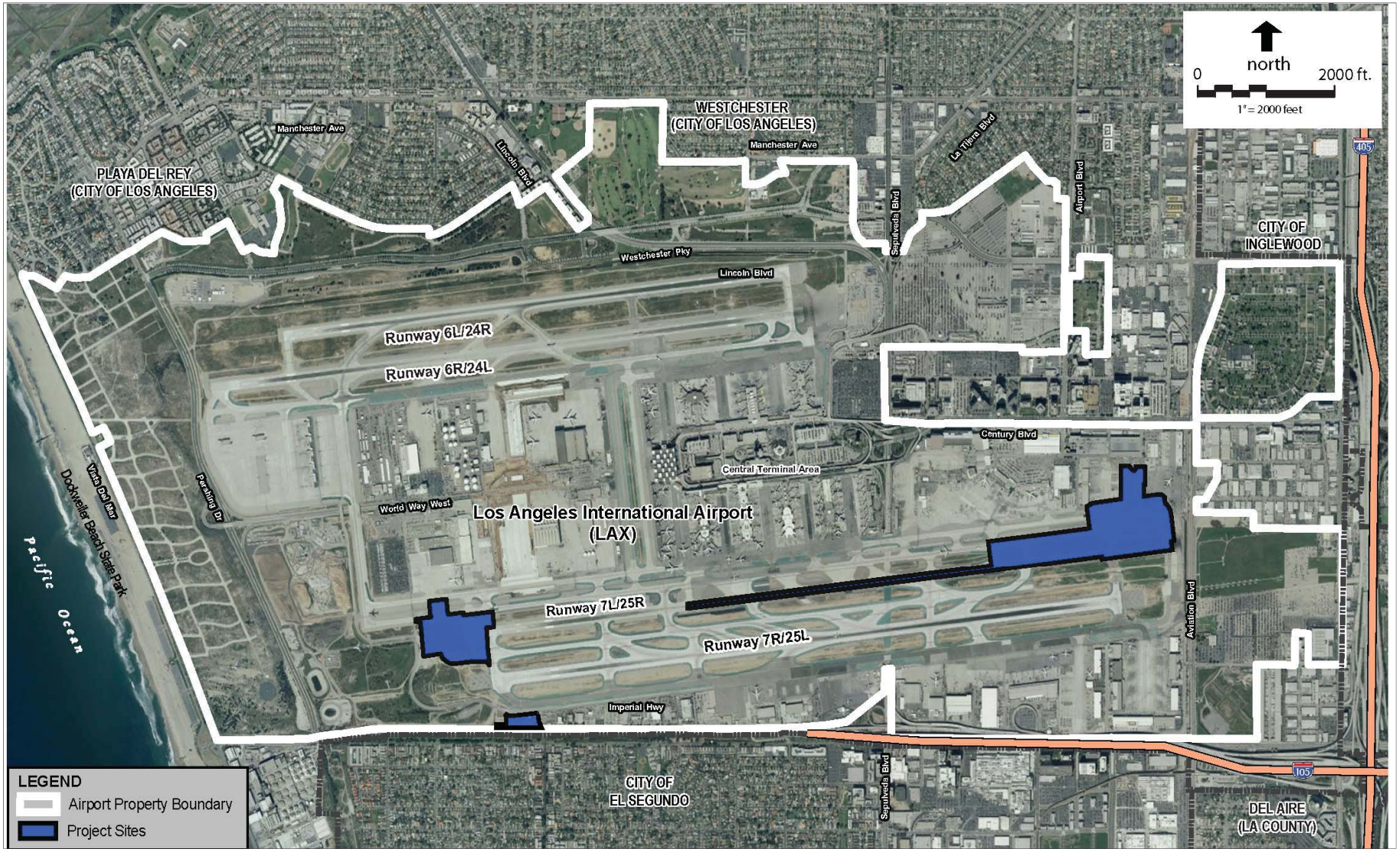
Los Angeles International Airport
Runway 7L/25R RSA & Associated Improvements Project

LAX
Los Angeles
World Airports

SCOPING MEETING OBJECTIVES

- Provide information on the environmental process
- Provide information about the LAX Runway 7L/25R Runway Safety Area and Associated Improvements Project
- Present findings of Initial Study which identified environmental topics that will be further analyzed in the Environmental Impact Report (EIR)
- Collect community input on additional issues they would like to see analyzed in the EIR

PROJECT LOCATION



Los Angeles International Airport
Runway 7L/25R RSA & Associated Improvements Project

LAX
Los Angeles
World Airports

WHAT IS THE PURPOSE OF THE PROPOSED PROJECT?

The proposed Project is an integral part of the infrastructure and modernization program at LAWA and its commitment to maintain a safe and secure airport.

The proposed Project will:

- **Comply with federal mandates that all runways at Title 14, Code of Federal Regulations (CFR), Part 139 certified airports (such as LAX) meet Federal Aviation Administration (FAA) Runway Safety Area (RSA) design requirements by December 31, 2015.**
- **Preserve and rehabilitate Taxiway B and Runway 7L/25R, the inboard runway, on the south airfield.**
- **Extend Taxiway C to the east to maintain aircraft access to Runway 7L/25R while Taxiway B is being rehabilitated.**

A number of additional improvements are required to enable compliance with FAA RSA design standards.

PROJECT ELEMENT
RUNWAY SAFETY AREA (RSA)

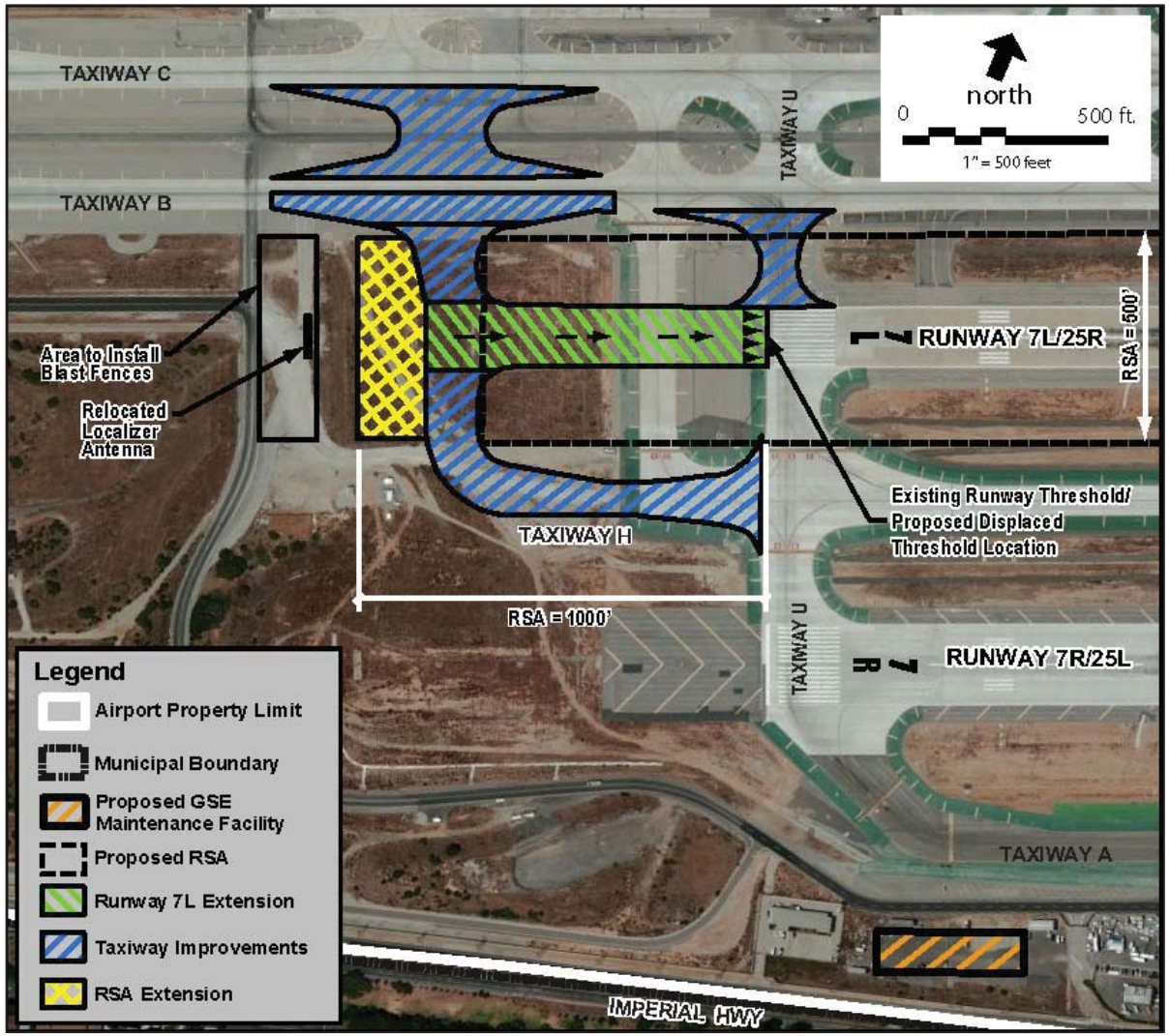
- RSAs are defined surfaces surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of undershoot, overshoot, or excursion from the runway (FAA Advisory Circular 150/5300-13)

- Runway 7L/25R currently does not comply with the FAA RSA design standard of 1,000 feet from each end.

- Due to physical constraints at LAX, the east end of Runway 7L/25R (Runway 25R) cannot be extended eastward to comply with FAA RSA design standards. In these cases, the FAA allows for the use of Declared Distances on the runway to meet the RSA design requirements. This practice is commonly used at other major airports with similar physical constraints.

- On the west end of Runway 7L/25R (Runway 7L), however, there is sufficient physical space to accommodate an 832 feet extension.

PROJECT ELEMENTS
WEST END IMPROVEMENTS



Project Elements

- Extending the Runway 7L/25R pavement to the west and implement displaced thresholds to provide FAA-required RSA
- Grading and compacting the RSA
- Constructing blast fences west of the Runway 7L extension
- Several taxiways modifications as necessary
- Relocating the existing Localizer Antenna and blast fences to the west
- Replacing the existing Approach Lighting System (ALS) towers with in-pavement lights
- Modifying the existing Runway and Taxiway lighting and markings in the newly constructed pavements

Los Angeles International Airport
Runway 7L/25R RSA & Associated Improvements Project

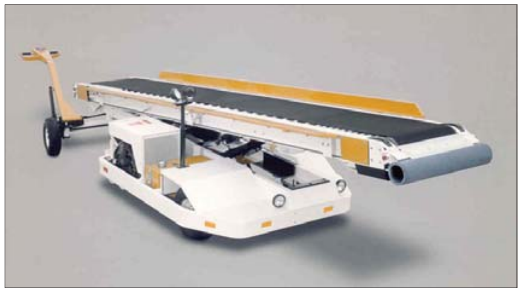
LAX
Los Angeles World Airports

PROJECT ELEMENT
GSE MAINTENANCE FACILITY

- To comply with FAA fixed-object clearance requirements during the realignment of Taxiway C, Air Freight No. 8 is being demolished and its uses moved to a new GSE Maintenance Facility
- The proposed GSE Maintenance Facility is an enclosed building that will store and perform indoor routine maintenance on GSE equipment
- Primary access to the new GSE Maintenance Facility will be through the airfield with employee access available off Imperial Highway
- The new GSE Maintenance Facility will be a 60,000-square-foot, 2-story facility
- GSE supports the operations of aircraft on the ground and examples are shown below

Passenger Stairs
Graphic Source: Airport International, 2012

Main Deck Loader
Graphic Source: AVIGROUP, 2012



Baggage Loader
Graphic Source: WASP Inc., 2012

Los Angeles International Airport
Runway 7L/25R RSA & Associated Improvements Project

LAX
Los Angeles World Airports

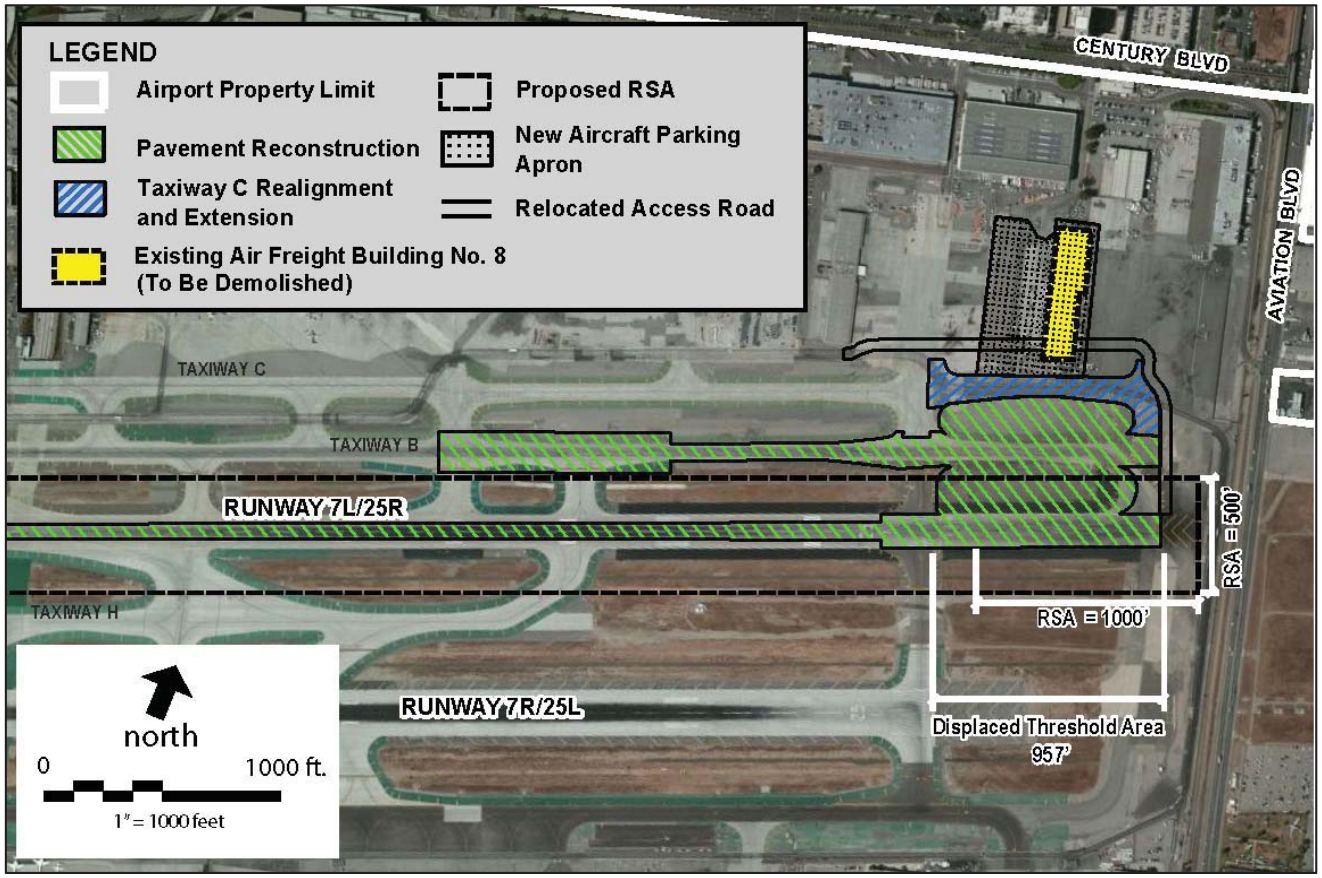
PROJECT ELEMENTS
EAST END IMPROVEMENTS

Pavement Reconstruction of the Eastern Portions of Runway 7L/25R and Taxiway B

- Demolition, removal, and reconstruction of pavement and base materials
- Application of runway and taxiway markings on the new pavement segments, and the installation of in-pavement approach lights

Taxiway C Extension and Demolition of Air Freight Building No. 8

- Demolition of Air Freight Building No. 8
- Realigning an existing service road north of Taxiway C
- Realignment and eastward extension of Taxiway C
- Paving of the Air Freight Building No. 8 site



Los Angeles International Airport
Runway 7L/25R RSA & Associated Improvements Project

LAX
Los Angeles World Airports

THE PROCESS

All airfield projects require federal and local approval and environmental clearance as dictated by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). In order to meet the federal RSA requirements and comply by December 31, 2015, both the CEQA and NEPA processes are underway simultaneously.

NEPA PROCESS

- **A Draft Environmental Assessment (DEA) was prepared and released for public review on September 28, 2012.**
  - **Comments are due November 13, 2012**
  - **Public Workshop and Hearing will be held on November 1, 2012**
- **The FAA is the Lead Agency for the NEPA process**

CEQA PROCESS

- **The Notice of Preparation (NOP) and Initial Study (IS) were released on October 5, 2012.**
  - **Comments are due November 5, 2012**
- **LAWA is the Lead Agency for the CEQA process**

ALL COMMENTS ARE WELCOMED THROUGHOUT THE PROCESS

WHAT IS CEQA?

- Purpose is to inform public agency decision makers and the public of the environmental effects of a project
- Applies to discretionary projects
- Identifies potential impacts on the environment
- Identifies ways to avoid or reduce potential impacts through mitigation measures and/or alternatives
- Is not the project approval process

CEQA PROCESS

Notice of Preparation of an EIR/ Initial Study

October 5, 2012

WE ARE HERE

30-Day Public Review Period of NOP/IS

October 5 – November 5, 2012

Scoping Meeting

October 17, 2012

45-Day Public Review Period of Draft EIR

2nd Quarter 2013

Public Hearing

Final EIR

2nd Quarter 2013

Final EIR Certification

Summer 2013

Public Hearing

Los Angeles International Airport
Runway 7L/25R RSA &
Associated Improvements Project

LAX
Los Angeles World Airports

INITIAL STUDY

No Impacts (No Further Study)	Less Than Significant Impacts (No Further Study)	Potentially Significant Impacts (For EIR Analysis)
Agricultural & Forestry Resources	Aesthetics	Aesthetics (Light & Glare ONLY)
Land Use & Planning	Biological Resources	Air Quality
Mineral Resources	Cultural Resources	Greenhouse Gas Emissions
Population & Housing	Geology & Soils	Hazards & Hazardous Materials (Hazardous Material Sites ONLY)
Recreation	Hazards & Hazardous Materials	Hydrology & Water Quality (Drainage ONLY)
	Hydrology & Water Quality	Noise
	Public Services	Transportation & Traffic
	Utilities & Service Systems	

COMMENTS

- **Comments can be handwritten on comment cards and submitted at this Scoping Meeting**

- **Comments can be mailed or faxed to the following contact:**

HERB GLASGOW

CHIEF OF AIRPORT PLANNING I

LOS ANGELES WORLD AIRPORTS

1 WORLD WAY, ROOM 218B

LOS ANGELES, CA 90045

FAX NO: (424) 646-9210

COMMENTS MUST BE RECEIVED BY (NOT POSTMARKED BY) 5:00 P.M. MONDAY, NOVEMBER 5, 2012

FACT SHEET

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Runway 7L/25R Runway Safety Area & Associated Improvements Project

Factsheet

LAX Los Angeles World Airports

IMPROVED RUNWAY SAFETY AT LAX

Los Angeles International Airport (LAX) is the 6th busiest airport in the world, and 3rd busiest in the United States serving over 63 Million Annual Passengers (MAP) in 2011. The proposed Project is an integral part of the infrastructure and modernization program at LAWA and its commitment to maintain a safe and secure airport. As part of this proposed Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project, runways and maintenance facilities at LAX will be improved to enhance safety and maintain efficient operations.

What is the proposed Project?

The proposed Project includes: (1) Improvements to pavement, fencing, taxiways, and lighting on Runway 7L/25R (the inboard runway); (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8; and (4) Construction of a Ground Support Equipment (GSE) Maintenance Facility.

What is the purpose of the proposed Project?

The purpose of the proposed Project is to comply with federal mandates that **ALL** runways at Title 14, Code of Federal Regulations (CFR), Part 139 certified airports (such as LAX) meet Federal Aviation Administration (FAA) Runway Safety Area (RSA) design requirements by December 31, 2015. To minimize impacts to operations, to maximize efficiencies in construction and to reduce passenger inconvenience, LAWA proposes the RSA improvements to include the pavement rehabilitation of Taxiway B and Runway 7L/25R and the extension of Taxiway C eastward to maintain aircraft access to Runway 7R/25L while Taxiway B is being rehabilitated. Similarly, to maximize efficiencies in construction and minimize impacts to operation, the RSA improvements on Runway 7L/25R also include improvements to pavement, fencing, taxiways, and lighting. The proposed Project ***will not*** increase airport capacity or operations at LAX.

What is a Runway Safety Area (RSA)?

RSAs are defined surfaces surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of undershoot, overshoot, or excursion from the runway (FAA Advisory Circular 150/5300-13). Runway 7L/25R currently does not comply with the FAA RSA design standard of 1,000 feet from each end. Due to physical constraints at LAX, the east end of Runway 7L/25R (Runway 25R) cannot be extended eastward to comply with FAA RSA design standards. In these cases, the FAA allows for the use of Declared Distances on the runway to meet the RSA design requirements. This practice is commonly used at other major airports with similar physical constraints. On the west end of Runway 7L/25R (Runway 7L), however, there is sufficient physical space to accommodate an 832 feet extension.

Process and Schedule

All airfield projects require federal and local approval and environmental clearance as dictated by the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). In order to meet the federal RSA requirements and comply by December 31, 2015, both the CEQA and NEPA processes are underway simultaneously.

For the NEPA process, a Draft Environmental Assessment (DEA) was prepared and released for public review on September 28, 2012. A Public Workshop and Hearing will be held on November 1, 2012 and comments are due to LAWA on November 13, 2012. In the NEPA process, the FAA is the Lead Agency.

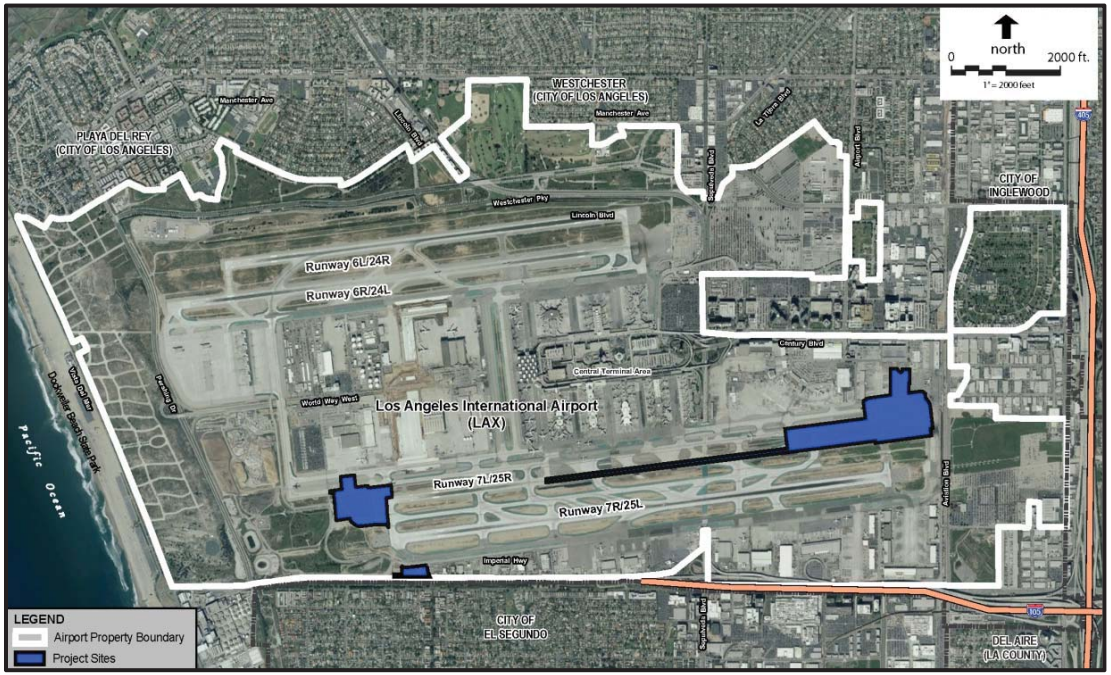
A Notice of Preparation (NOP) and Initial Study (IS) was prepared and issued on October 5, 2012 to begin the CEQA process. The public will have an opportunity to provide comments in writing on any areas of concern during the Scoping Meeting and up to the end of the public comment period. Comments are due to LAWA on November 5, 2012. In the CEQA process, LAWA is the Lead Agency.

After federal, state, and City approvals are secured, construction would begin and it is estimated that the proposed Project would be completed over a two-year period. All comments are welcomed throughout both the CEQA and NEPA process.

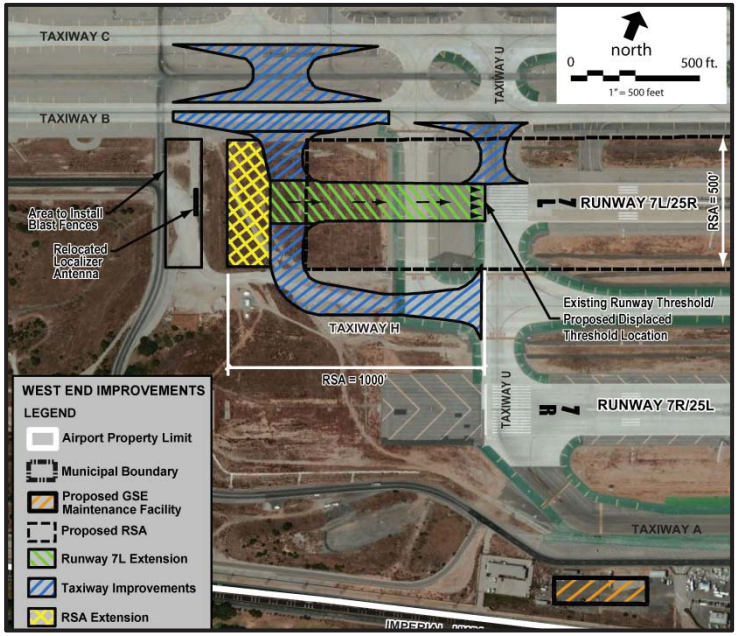
A copy of the Initial Study prepared for the proposed Project is available at the LAX website at ***http://www.ourlax.org.***

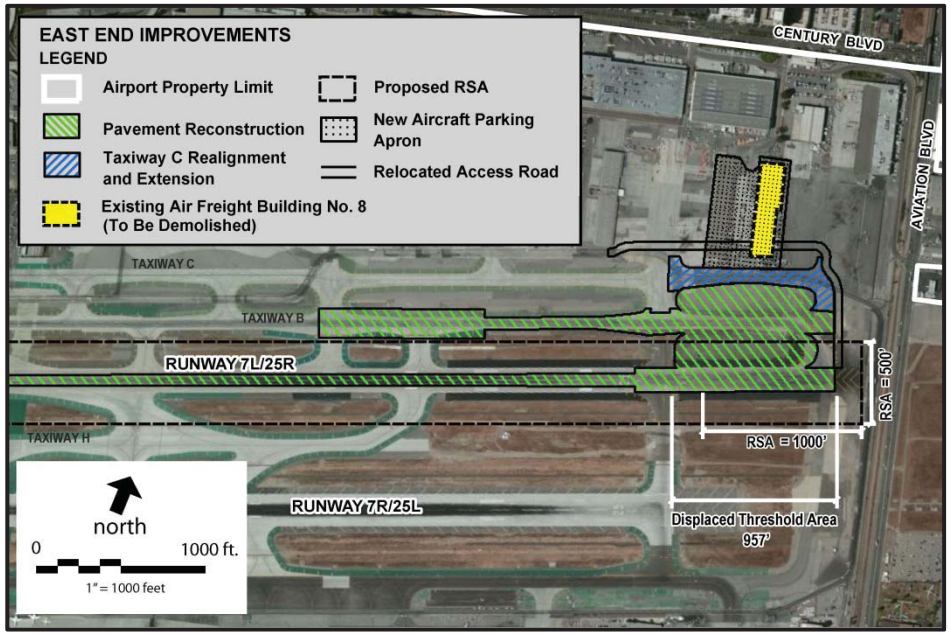
For further information contact: Herb Glasgow at ***hglasgow@lawa.org 424.646.5180***

Aerial View of Airport



Conceptual Site Plans





APPENDIX A6

COMMENTS RECEIVED ON NOP/IS

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SCOPING MEETING COMMENT

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SCOPING MEETING COMMENT #1

LAX
Los Angeles
World Airports

WRITTEN COMMENT FORM

SCOPING MEETING FOR THE RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) PROJECT
AND ASSOCIATED IMPROVEMENTS (proposed Project)
DRAFT ENVIRONMENTAL IMPACT REPORT (EIR)

The purpose of the scoping process and the meeting is to hear from the public and responsible agencies what significant environmental issues and alternatives they think should be analyzed in the Draft EIR for the Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements. Written comments can be submitted at the Public Scoping meeting or mailed no later than 5:00 p.m. on **November 5, 2012**. In the space below (and on additional pages, if necessary), please provide any written comments you may have concerning the scope of the Draft EIR for the proposed Project. Your comments will then be considered during preparation of the Draft EIR.

Date: 10/17/12

Name: Nelson Carrera

Organization: Nippon Cargo Airlines

Address: 6501 W Imperial Hwy Los Angeles CA 90045

Comment:

- IF 7L/25R IS CLOSED, FOR HOW LONG IT WILL BE CLOSED?
- WHAT OTHER ALTERNATIVE WILL B747-8F OPERATORS HAVE?
- WHAT WILL BE THE PROJECT TIME FRAME?

Please drop completed form into the box marked "COMMENTS" at the October 17, 2012 public meeting or mail to:

Herb Glasgow, Chief of Airport Planning
City of Los Angeles, Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

All comments must be received no later than 5:00 p.m., November 5, 2012.

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COMMENT LETTERS

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STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN, JR., Governor

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 MAIN STREET, MS # 16
LOS ANGELES, CA 90012-3606
PHONE: (213) 897-9140
FAX: (213) 897-1337

Flex your power!
Be energy efficient!

October 10, 2012

Mr. Herb Glasgow
City of Los Angeles
Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

Re: IGR/CEQA No. 121005AL, NOP
LAX Runway 7L/25R Runway Safety Area (RSA) Project
Vic. LA-01/PM R23.50
SCH # 2012101019

Dear Mr. Glasgow:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the above referenced project. The proposed project includes: (1) Runway 7L25R Improvements, (2) Pavement Reconstruction, (3) Taxiway C Extension and Demolition of Air Freight Building No. 8, (4) Construction of a GSE Maintenance Facility. The Project would not result in increased or decreased aviation activity at LAX compared to existing conditions.

Construction of the proposed Project would generate traffic associated with workers traveling to and from the construction employee parking and staging areas, and the associated shuttle trips between any utilized auxiliary parking areas and the construction site, truck haul/delivery trips, and miscellaneous construction-related travel. These vehicle trips could result in increased traffic volumes on the local roadway system during the construction period and affect both personal vehicles and public transit travel time and safety.

To assist in the evaluation of the impacts of this project on State Transportation Facilities, please forward a copy of a construction traffic study for Caltrans review, if one has been prepared. Otherwise, a new construction traffic study should be prepared to analyze the following information:

1. Traffic impacts on State Routes 01 and 105, and all significantly impacted streets, crossroads and controlling intersections, as well as analysis of existing condition and construction periods.
2. A truck/traffic construction management plan is needed for this project. Please submit it for Caltrans' review.
3. Traffic volume counts to include anticipated AM and PM peak-hour volumes.
4. Level of service (LOS) before and during the construction.
5. A brief construction traffic discussion showing ingress/egress, turning movements, and a directional flow for construction vehicle trips.
6. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts, including sharing of mitigation costs.

We look forward to reviewing the traffic study. We expect to receive a copy from the State Clearinghouse when the DEIR is completed. However, to expedite the review process you may send a copy in advance to the undersigned.

If you have any questions, please feel free to contact Alan Lin the project coordinator at (213) 897-8391 and refer to IGR/CEQA No. 121005AL.

Sincerely,

DIANNA WATSON
IGR/CEQA Branch Chief

cc: Scott Morgan, State Clearinghouse

COMMENT LETTER #2

STATE OF CALIFORNIA — Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

October 10, 2012

Mr. Herbert Glasgow, Chief of Airport Planning I
Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

Re: SCH#2012101019; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the **"LAX Runway 71/25R Runway Safety Area (RSA) Project;"** located at Los Angeles International Airport (LAX); Los Angeles County, California

Dear Mr. Glasgow:

The Native American Heritage Commission (NAHC) is the State of California 'Trustee Agency' for the protection and preservation of Native American cultural resources pursuant to California Public Resources Code §21070 and affirmed by the Third Appellate Court in the case of EPIC v. Johnson (1985: 170 Cal App. 3rd 604).

This letter includes state and federal statutes relating to Native American historic properties or resources of religious and cultural significance to American Indian tribes and interested Native American individuals as 'consulting parties' under both state and federal law. State law also addresses the freedom of Native American Religious Expression in Public Resources Code §5097.9. This project is also subject to California Government Code Section 65352.3.

The California Environmental Quality Act (CEQA – CA Public Resources Code 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. The NAHC recommends that lead agencies conduct a Sacred Lands File search of the proposed 'area of potential effect' (APE) as part of their due diligence. .

The NAHC "Sacred Sites,' as defined by the Native American Heritage Commission and the California Legislature in California Public Resources Code §§5097.94(a) and 5097.96. Items in the NAHC Sacred Lands Inventory are confidential and exempt from the Public Records Act pursuant to California Government Code §6254 (r).

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries of cultural resources or burial sites once a project is underway.

Culturally affiliated tribes and individuals may have knowledge of the religious and cultural significance of the historic properties in the project area (e.g. APE). We strongly urge that you make contact with the list of Native American Contacts on the attached list of Native American contacts, to see if your proposed project might impact Native American cultural resources and to obtain their recommendations concerning the proposed project. Pursuant to CA Public Resources Code § 5097.95, the NAHC requests cooperation from other public agencies in order that the Native American consulting parties be provided pertinent project information. Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). Pursuant to CA Public Resources Code §5097.95, the NAHC requests that pertinent project information be provided consulting tribal parties, including archaeological studies. The NAHC recommends *avoidance* as defined by CEQA Guidelines §15370(a) to pursuing a project that would damage or destroy Native American cultural resources and California Public Resources Code Section 21083.2 (Archaeological Resources) that requires documentation, data recovery of cultural resources, construction to avoid sites and the possible use of covenant easements to protect sites.

Furthermore, the NAHC if the proposed project is under the jurisdiction of the statutes and regulations of the National Environmental Policy Act (e.g. NEPA; 42 U.S.C. 4321-43351). Consultation with tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA and Section 106 and 4(f) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Confidentiality of "historic properties of religious and cultural significance" should also be considered as protected by California Government Code §6254(r) and may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision on whether or not to disclose items of religious and/or cultural significance identified in or near the APEs and possibility threatened by proposed project activity.

Furthermore, Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for inadvertent discovery of human remains mandate the processes to be followed in the event of a discovery of human remains in a project location other than a 'dedicated cemetery'.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. Regarding tribal consultation, a relationship built around regular meetings and informal involvement with local tribes will lead to more qualitative consultation tribal input on specific projects.

Finally, when Native American cultural sites and/or Native American burial sites are prevalent within the project site, the NAHC recommends 'avoidance' of the site as referenced by CEQA Guidelines Section 15370(a).

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: Native American Contact List

COMMENT LETTER #2

Native American Contacts
Los Angeles County
October 10, 2012

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th St, Rm. 403
Los Angeles , CA 90020
randrade@css.lacounty.gov
(213) 351-5324
(213) 386-3995 FAX

Gabrielino Tongva Nation
Sam Dunlap, Cultural Resources Director
P.O. Box 86908 Gabrielino Tongva
Los Angeles , CA 90086
samdunlap@earthlink.net

(909) 262-9351 - cell

Ti'At Society/Inter-Tribal Council of Pimu
Cindi M. Alvitre, Chairwoman-Manisar
3094 Mace Avenue, Apt. B Gabrielino
Costa Mesa, , CA 92626
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrielino Tongva Indians of California Tribal Council
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gtongva@verizon.net
562-761-6417 - voice
562-761-6417- fax

Tongva Ancestral Territorial Tribal Nation
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Gabrielino-Tongva Tribe
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Gabrieleno/Tongva San Gabriel Band of Mission
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Gabrielino-Tongva Tribe
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Los Angeles , CA 90067
lcandelaria1@gabrielinoTribe.org
626-676-1184- cell
(310) 587-0170 - FAX

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012101019; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the LAX Runway 7L/25R Runway Safety Area (RSA) Project; located at Los Angeles International Airport; Los Angeles County, California.

COMMENT LETTER #2

Native American Contacts
Los Angeles County
October 10, 2012

Gabrieleno Band of Mission Indians
Andrew Salas, Chairperson
P.O. Box 393 Gabrielino
Covina , CA 91723
(626) 926-4131
gabrielenoindians@yahoo.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed SCH#2012101019; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the LAX Runway 7L/25R Runway Safety Area (RSA) Project; located at Los Angeles International Airport; Los Angeles County, California.

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

November 5, 2012

Mr. Herb Glasgow, Chief of Airport Planning I
City of Los Angeles, Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

Dear Mr. Glasgow:

Thank you for the opportunity to comment on the Notice of Preparation (NOP) for the LAX Runway 7L/25R RSA Project and Associated Improvements. This letter conveys recommendations from the Los Angeles County Metropolitan Transportation Authority (LACMTA) concerning issues that are germane to our agency's statutory responsibilities in relation to the proposed project.

A Traffic Impact Analysis (TIA), with roadway and transit components, is required under the State of California Congestion Management Program (CMP) statute. The CMP TIA Guidelines are published in the "2010 Congestion Management Program for Los Angeles County", Appendix D (attached). The geographic area examined in the TIA must include the following, at a minimum:

1. All CMP arterial monitoring intersections, including monitored freeway on/off-ramp intersections, where the proposed project will add 50 or more trips during either the a.m. or p.m. weekday peak hour (of adjacent street traffic);
2. If CMP arterial segments are being analyzed rather than intersections, the study area must include all segments where the proposed project will add 50 or more peak hour trips (total of both directions). Within the study area, the TIA must analyze at least one segment between monitored CMP intersections;
3. Mainline freeway-monitoring locations where the project will add 150 or more trips, in either direction, during either the a.m. or p.m. weekday peak hour; and
4. Caltrans must also be consulted through the NOP process to identify other specific locations to be analyzed on the state highway system.

The CMP TIA requirement also contains two separate impact studies covering roadways and transit, as outlined in Sections D.8.1 – D.9.4. If the TIA identifies no facilities for study based on the criteria above, no further traffic analysis is required. However, projects must still consider transit impacts. For all CMP TIA requirements please see the attached guidelines.

MTA looks forward to reviewing the Draft Environmental Impact Report (EIR). If you have any questions regarding this response, please call me at 213-922-2836 or by email at hartwells@metro.net. Please send the Draft EIR to the following address:

Sincerely,

Scott Hartwell
CEQA Review Coordinator, Long Range Planning

Attachment

APPENDIX

D

GUIDELINES FOR CMP TRANSPORTATION IMPACT ANALYSIS

Important Notice to User: This section provides detailed travel statistics for the Los Angeles area which will be updated on an ongoing basis. Updates will be distributed to all local jurisdictions when available. In order to ensure that impact analyses reflect the best available information, lead agencies may also contact MTA at the time of study initiation. Please contact MTA staff to request the most recent release of "Baseline Travel Data for CMP TIAs."

D.1 OBJECTIVE OF GUIDELINES

The following guidelines are intended to assist local agencies in evaluating impacts of land use decisions on the Congestion Management Program (CMP) system, through preparation of a regional transportation impact analysis (TIA). The following are the basic objectives of these guidelines:

- Promote consistency in the studies conducted by different jurisdictions, while maintaining flexibility for the variety of project types which could be affected by these guidelines.
- Establish procedures which can be implemented within existing project review processes and without ongoing review by MTA.
- Provide guidelines which can be implemented immediately, with the full intention of subsequent review and possible revision.

These guidelines are based on specific requirements of the Congestion Management Program, and travel data sources available specifically for Los Angeles County. References are listed in Section D.10 which provide additional information on possible methodologies and available resources for conducting TIAs.

D.2 GENERAL PROVISIONS

Exhibit D-7 provides the model resolution that local jurisdictions adopted containing CMP TIA procedures in 1993. TIA requirements should be fulfilled within the existing environmental review process, extending local traffic impact studies to include impacts to the regional system. In order to monitor activities affected by these requirements, Notices of Preparation (NOPs) must be submitted to MTA as a responsible agency. Formal MTA approval of individual TIAs is not required.

The following sections describe CMP TIA requirements in detail. In general, the competing objectives of consistency & flexibility have been addressed by specifying standard, or minimum, requirements and requiring documentation when a TIA varies from these standards.

D.3 PROJECTS SUBJECT TO ANALYSIS

In general a CMP TIA is required for all projects required to prepare an Environmental Impact Report (EIR) based on local determination. A TIA is not required if the lead agency for the EIR finds that traffic is not a significant issue, and does not require local or regional traffic impact analysis in the EIR. Please refer to Chapter 5 for more detailed information.

CMP TIA guidelines, particularly intersection analyses, are largely geared toward analysis of projects where land use types and design details are known. Where likely land uses are not defined (such as where project descriptions are limited to zoning designation and parcel size with no information on access location), the level of detail in the TIA may be adjusted accordingly. This may apply, for example, to some redevelopment areas and citywide general plans, or community level specific plans. In such cases, where project definition is insufficient for meaningful intersection level of service analysis, CMP arterial segment analysis may substitute for intersection analysis.

D.4 STUDY AREA

The geographic area examined in the TIA must include the following, at a minimum:

- All CMP arterial monitoring intersections, including monitored freeway on- or off-ramp intersections, where the proposed project will add 50 or more trips during either the AM or PM weekday peak hours (of adjacent street traffic).
- If CMP arterial segments are being analyzed rather than intersections (see Section D.3), the study area must include all segments where the proposed project will add 50 or more peak hour trips (total of both directions). Within the study area, the TIA must analyze at least one segment between monitored CMP intersections.
- Mainline freeway monitoring locations where the project will add 150 or more trips, in either direction, during either the AM or PM weekday peak hours.
- Caltrans must also be consulted through the Notice of Preparation (NOP) process to identify other specific locations to be analyzed on the state highway system.

If the TIA identifies no facilities for study based on these criteria, no further traffic analysis is required. However, projects must still consider transit impacts (Section D.8.4).

D.5 BACKGROUND TRAFFIC CONDITIONS

The following sections describe the procedures for documenting and estimating background, or non-project related traffic conditions. Note that for the purpose of a TIA, these background estimates must include traffic from all sources without regard to the exemptions specified in CMP statute (e.g., traffic generated by the provision of low and very low income housing, or trips originating outside Los Angeles County. Refer to Chapter 5, Section 5.2.3 for a complete list of exempted projects).

D.5.1 Existing Traffic Conditions. Existing traffic volumes and levels of service (LOS) on the CMP highway system within the study area must be documented. Traffic counts must

be less than one year old at the time the study is initiated, and collected in accordance with CMP highway monitoring requirements (see Appendix A). Section D.8.1 describes TIA LOS calculation requirements in greater detail. Freeway traffic volume and LOS data provided by Caltrans is also provided in Appendix A.

D.5.2 Selection of Horizon Year and Background Traffic Growth. Horizon year(s) selection is left to the lead agency, based on individual characteristics of the project being analyzed. In general, the horizon year should reflect a realistic estimate of the project completion date. For large developments phased over several years, review of intermediate milestones prior to buildout should also be considered.

At a minimum, horizon year background traffic growth estimates must use the generalized growth factors shown in Exhibit D-1. These growth factors are based on regional modeling efforts, and estimate the general effect of cumulative development and other socioeconomic changes on traffic throughout the region. Beyond this minimum, selection among the various methodologies available to estimate horizon year background traffic in greater detail is left to the lead agency. Suggested approaches include consultation with the jurisdiction in which the intersection under study is located, in order to obtain more detailed traffic estimates based on ongoing development in the vicinity.

D.6 PROPOSED PROJECT TRAFFIC GENERATION

Traffic generation estimates must conform to the procedures of the current edition of Trip Generation, by the Institute of Transportation Engineers (ITE). If an alternative methodology is used, the basis for this methodology must be fully documented.

Increases in site traffic generation may be reduced for existing land uses to be removed, if the existing use was operating during the year the traffic counts were collected. Current traffic generation should be substantiated by actual driveway counts; however, if infeasible, traffic may be estimated based on a methodology consistent with that used for the proposed use.

Regional transportation impact analysis also requires consideration of trip lengths. Total site traffic generation must therefore be divided into work and non-work-related trip purposes in order to reflect observed trip length differences. Exhibit D-2 provides factors which indicate trip purpose breakdowns for various land use types.

For lead agencies who also participate in CMP highway monitoring, it is recommended that any traffic counts on CMP facilities needed to prepare the TIA should be done in the manner outlined in Chapter 2 and Appendix A. If the TIA traffic counts are taken within one year of the deadline for submittal of CMP highway monitoring data, the local jurisdiction would save the cost of having to conduct the traffic counts twice.

D.7 TRIP DISTRIBUTION

For trip distribution by direct/manual assignment, generalized trip distribution factors are provided in Exhibit D-3, based on regional modeling efforts. These factors indicate Regional Statistical Area (RSA)-level tripmaking for work and non-work trip purposes.

(These RSAs are illustrated in Exhibit D-4.) For locations where it is difficult to determine the project site RSA, census tract/RSA correspondence tables are available from MTA.

Exhibit D-5 describes a general approach to applying the preceding factors. Project trip distribution must be consistent with these trip distribution and purpose factors; the basis for variation must be documented.

Local agency travel demand models disaggregated from the SCAG regional model are presumed to conform to this requirement, as long as the trip distribution functions are consistent with the regional distribution patterns. For retail commercial developments, alternative trip distribution factors may be appropriate based on the market area for the specific planned use. Such market area analysis must clearly identify the basis for the trip distribution pattern expected.

D.8 IMPACT ANALYSIS

CMP Transportation Impact Analyses contain two separate impact studies covering roadways and transit. Section Nos. D.8.1-D.8.3 cover required roadway analysis while Section No. D.8.4 covers the required transit impact analysis. Section Nos. D.9.1-D.9.4 define the requirement for discussion and evaluation of alternative mitigation measures.

D.8.1 Intersection Level of Service Analysis. The LA County CMP recognizes that individual jurisdictions have wide ranging experience with LOS analysis, reflecting the variety of community characteristics, traffic controls and street standards throughout the county. As a result, the CMP acknowledges the possibility that no single set of assumptions should be mandated for all TIAs within the county.

However, in order to promote consistency in the TIAs prepared by different jurisdictions, CMP TIAs must conduct intersection LOS calculations using either of the following methods:

- The Intersection Capacity Utilization (ICU) method as specified for CMP highway monitoring (see Appendix A); or
- The Critical Movement Analysis (CMA) / Circular 212 method.

Variation from the standard assumptions under either of these methods for circumstances at particular intersections must be fully documented.

TIAs using the 1985 or 1994 Highway Capacity Manual (HCM) operational analysis must provide converted volume-to-capacity based LOS values, as specified for CMP highway monitoring in Appendix A.

D.8.2 Arterial Segment Analysis. For TIAs involving arterial segment analysis, volume-to-capacity ratios must be calculated for each segment and LOS values assigned using the V/C-LOS equivalency specified for arterial intersections. A capacity of 800 vehicles per hour per through traffic lane must be used, unless localized conditions necessitate alternative values to approximate current intersection congestion levels.

D.8.3 Freeway Segment (Mainline) Analysis. For the purpose of CMP TIAs, a simplified analysis of freeway impacts is required. This analysis consists of a demand-to-capacity calculation for the affected segments, and is indicated in Exhibit D-6.

D.8.4 Transit Impact Review. CMP transit analysis requirements are met by completing and incorporating into an EIR the following transit impact analysis:

- ❑ Evidence that affected transit operators received the Notice of Preparation.
- ❑ A summary of existing transit services in the project area. Include local fixed-route services within a ¼ mile radius of the project; express bus routes within a 2 mile radius of the project, and; rail service within a 2 mile radius of the project.
- ❑ Information on trip generation and mode assignment for both AM and PM peak hour periods as well as for daily periods. Trips assigned to transit will also need to be calculated for the same peak hour and daily periods. Peak hours are defined as 7:30-8:30 AM and 4:30-5:30 PM. Both "peak hour" and "daily" refer to average weekdays, unless special seasonal variations are expected. If expected, seasonal variations should be described.
- ❑ Documentation of the assumption and analyses that were used to determine the number and percent of trips assigned to transit. Trips assigned to transit may be calculated along the following guidelines:
  - ➢ Multiply the total trips generated by 1.4 to convert vehicle trips to person trips;
  - ➢ For each time period, multiply the result by one of the following factors:

    3.5% of Total Person Trips Generated for most cases, except:

    10% primarily Residential within 1/4 mile of a CMP transit center
    15% primarily Commercial within 1/4 mile of a CMP transit center
    7% primarily Residential within 1/4 mile of a CMP multi-modal transportation center
    9% primarily Commercial within 1/4 mile of a CMP multi-modal transportation center
    5% primarily Residential within 1/4 mile of a CMP transit corridor
    7% primarily Commercial within 1/4 mile of a CMP transit corridor
    0% if no fixed route transit services operate within one mile of the project

  To determine whether a project is primarily residential or commercial in nature, please refer to the CMP land use categories listed and defined in Appendix E, *Guidelines for New Development Activity Tracking and Self Certification*. For projects that are only partially within the above one-quarter mile radius, the base rate (3.5% of total trips generated) should be applied to all of the project buildings that touch the radius perimeter.

- ❑ Information on facilities and/or programs that will be incorporated in the development plan that will encourage public transit use. Include not only the jurisdiction's TDM Ordinance measures, but other project specific measures.

- Analysis of expected project impacts on current and future transit services and proposed project mitigation measures, and;
- Selection of final mitigation measures remains at the discretion of the local jurisdiction/lead agency. Once a mitigation program is selected, the jurisdiction self-monitors implementation through the existing mitigation monitoring requirements of CEQA.

D.9 IDENTIFICATION AND EVALUATION OF MITIGATION

D.9.1 Criteria for Determining a Significant Impact. For purposes of the CMP, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$), causing LOS F ($V/C > 1.00$); if the facility is already at LOS F, a significant impact occurs when the proposed project increases traffic demand on a CMP facility by 2% of capacity ($V/C \geq 0.02$). The lead agency may apply a more stringent criteria if desired.

D.9.2 Identification of Mitigation. Once the project has been determined to cause a significant impact, the lead agency must investigate measures which will mitigate the impact of the project. Mitigation measures proposed must clearly indicate the following:

- Cost estimates, indicating the fair share costs to mitigate the impact of the proposed project. If the improvement from a proposed mitigation measure will exceed the impact of the project, the TIA must indicate the proportion of total mitigation costs which is attributable to the project. This fulfills the statutory requirement to exclude the costs of mitigating inter-regional trips.
- Implementation responsibilities. Where the agency responsible for implementing mitigation is not the lead agency, the TIA must document consultation with the implementing agency regarding project impacts, mitigation feasibility and responsibility.

Final selection of mitigation measures remains at the discretion of the lead agency. The TIA must, however, provide a summary of impacts and mitigation measures. Once a mitigation program is selected, the jurisdiction self-monitors implementation through the mitigation monitoring requirements contained in CEQA.

D.9.3 Project Contribution to Planned Regional Improvements. If the TIA concludes that project impacts will be mitigated by anticipated regional transportation improvements, such as rail transit or high occupancy vehicle facilities, the TIA must document:

- Any project contribution to the improvement, and
- The means by which trips generated at the site will access the regional facility.

D.9.4 Transportation Demand Management (TDM). If the TIA concludes or assumes that project impacts will be reduced through the implementation of TDM measures, the TIA must document specific actions to be implemented by the project which substantiate these conclusions.

D.10 REFERENCES

1. *Traffic Access and Impact Studies for Site Development: A Recommended Practice*, Institute of Transportation Engineers, 1991.
2. *Trip Generation*, 5th Edition, Institute of Transportation Engineers, 1991.
3. *Travel Forecast Summary: 1987 Base Model - Los Angeles Regional Transportation Study (LARTS)*, California State Department of Transportation (Caltrans), February 1990.
4. *Traffic Study Guidelines*, City of Los Angeles Department of Transportation (LADOT), July 1991.
5. *Traffic/Access Guidelines*, County of Los Angeles Department of Public Works.
6. *Building Better Communities*, Sourcebook, Coordinating Land Use and Transit Planning, American Public Transit Association.
7. *Design Guidelines for Bus Facilities*, Orange County Transit District, 2nd Edition, November 1987.
8. *Coordination of Transit and Project Development*, Orange County Transit District, 1988.
9. *Encouraging Public Transportation Through Effective Land Use Actions*, Municipality of Metropolitan Seattle, May 1987.

COMMENT LETTER #4

SHUTE, MIHALY & WEINBERGER LLP

396 HAYES STREET, SAN FRANCISCO, CA 94102
T: 415 552-7272 F: 415 552-5816
www.smwlaw.com

JACLYN H. PRANGE
Attorney
prange@smwlaw.com

November 19, 2012

Via E-Mail and Federal Express

Mr. Herb Glasgow
Chief of Airport Planning I
Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

Re: Notice of Preparation for Runway Safety Area Project

Dear Mr. Glasgow:

On behalf of the City of El Segundo, thank you for the opportunity to review the Notice of Preparation of an Environmental Impact Report ("EIR") for the LAX Runway 7L/25R Safety Area Project ("Project" or "RSA Project"). We would also like to extend our thanks to LAWA for meeting with El Segundo regarding this Project. We look forward to further follow-up discussions and close coordination as the Project goes forward.

With the Project, LAWA is proposing to 1) make safety improvements to Runway 7L/25R, 2) re-pave portions of Runway 7L/25R, 3) extend Taxiway C and demolish Air Freight Building No. 8, and 4) construct a new Ground Service Equipment ("GSE") maintenance facility. Because the Project could have significant impacts on the residents of El Segundo, the City expects to be actively involved in the process.

As El Segundo's representatives explained in their initial meeting with LAWA regarding the RSA Project, based on currently available information, El Segundo would prefer the Shift Runway alternative proposed in the NEPA Environmental Assessment for the Project. This letter explains the reasons for that preference and calls on LAWA to evaluate it fully in the EIR.

Project Setting. A complete and accurate description of the Project setting is the foundation upon which an EIR is built. *See San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus,* 27 Cal. App. 4th 713, 729 (1994). The EIR "must include a description of the physical environmental conditions in the vicinity of the project . . . from both a local and regional perspective." 14 Cal. Code Regs. ("CEQA Guidelines") § 15125(a). Without this description, a proper analysis of a project's impacts is impossible. *Galante Vineyards v. Monterey Peninsula Water Mgmt. Dist.*, 60 Cal. App. 4th 1109, 1122 (1997).

The Environmental Setting section of the Initial Study ("IS") states that the Project is bordered to the south by airport facilities. IS at 2-1. However, the Project includes construction of a new GSE maintenance facility immediately across Imperial Highway from El Segundo. IS at Figure 5. The setting section of the Draft EIR should clearly state that the Project is located adjacent to residential uses in the City of El Segundo.

Master Plan Consistency. The adopted LAX Master Plan does not call for any improvements to Runway 7L/25R or an extension of Taxiway C. *See* Master Plan at 2-10. Nor does it call for a new GSE maintenance facility. *See* Master Plan at 2-96. Although LAWA is currently undergoing a Specific Plan Amendment Study ("SPAS"), to look at various proposed departures from the adopted LAX Master Plan, that SPAS process does not include the proposed RSA Project. Please provide additional detail regarding what process LAWA would go through to amend the Master Plan to make it consistent with this Project.

Runway 7L/25R Safety Areas. The Project proposes to extend Runway 7L 832 feet to the west. IS at 2-13. El Segundo agrees that LAWA should analyze the impact of noise levels from aircraft starting eastern departures 832 feet farther west on Runway 7L. *See* IS at 3-25. LAWA should also analyze the noise impacts from other shifts in departure points under any alternatives analyzed in the EIR.

Based on the Draft Environmental Assessment, it is unclear whether the Project will increase the length of Runway 7L/25R available to pilots for departures, even though LAWA has indicated that it will not. LAWA should assure El Segundo and the public that the Project will not lengthen Runway 7L/25R. If the Project will, in fact, lengthen the runway, LAWA must evaluate whether that change will increase noise by allowing larger and/more more heavily loaded aircraft to use the runway.

El Segundo also requests that the Draft EIR fully evaluate the Shift Runway alternative proposed in the Environmental Assessment for the Project. Under this alternative, aircraft making westward departures would begin their roll 832 feet west of the eastern end of the runway. This would solve a number of problems. First, it would eliminate the need to extend Taxiway C east because aircraft would not need to access the far eastern end of the runway. Thus, LAWA could avoid demolishing Air Freight Building No. 8 and building a new GSE maintenance facility on El Segundo's border. The Shift Runway alternative may also reduce the amount of time that Runway 7L/25R would need to be closed during construction because the most eastern portion of the runway would not need to be re-paved.

Furthermore, the Shift Runway alternative would help solve other longstanding problems at LAX. First, the Shift Runway alternative, because it moves the departure point west by 832 feet, would result in planes flying farther out over the ocean before making turns to head south and east, thus reducing early turns over El Segundo. Second, many cargo freighter aircraft based along the El Segundo border south of the runways currently use Runway 25L for departures, even though the preferential runway policy states that they should use Runway 25R. They prefer to do so because using Runway 25R takes a little longer. FAA often allows such violations of the preferential runway use policy because using 25R for departures involves the aircraft taxiing across two active runways (Runways 25L and 25R). Under the Shift Runway alternative, cargo aircraft would need to cross only one active runway, Runway 25L, before reaching the departure point on Runway 25R. This would reduce the number of aircraft using Runway 25L for departures in violation of LAWA policy and reduce the noise impact on El Segundo residents.

Therefore, the EIR should evaluate the Shift Runway alternative discussed in the Environmental Assessment. This alternative would prevent new impacts on El Segundo from the proposed new GSE maintenance facility and would help solve other longstanding noise problems from early turns and cargo aircraft using Runway 25L for departures.

Changes in Noise Burdens During Re-paving and Construction. The Initial Study states that Runway 7L/25R will be closed for three months during re-paving. IS at 3-25. It also states that Runway 7L/25R will be closed for approximately 15 weeks for the construction at the west end of the runway. IS at 3-26. However, the Initial Study makes no effort to describe which runways the flights displaced during these closures will use. *Id.*

The Draft EIR must explain in detail where the flights will go during the construction period and analyze the noise impacts of that shift. Any additional use of Runway 7R/25L for departures, especially for long-haul cargo aircraft departures, will significantly increase the noise burden on El Segundo and other residents. Given that El Segundo already bears a disproportionate amount of LAX's noise impacts and that LAWA's preferential runway policy states that LAWA should limit departures from outboard runways, LAWA should ensure that flights will not be shifted farther south. LAWA gathered relevant real-world experience about these sorts of shifts during construction of the South Airfield Improvement Project and should apply it here.

Construction Traffic Impacts. The Draft EIR should clearly outline any phasing of the Project, the duration of construction activities, and the schedule of construction and truck deliveries.

LAWA should identify all construction staging areas in the Draft EIR and ensure that these locations and the access to these locations do not create traffic and circulation impacts into and out of the City of El Segundo, or along major arterial corridors, particularly along Imperial Highway and Sepulveda Boulevard. El Segundo's General Plan Circulation Element establishes truck haul routes through the City. The City of El Segundo requests that truck trips during construction avoid the City of El Segundo. However, if any travel through the City occurs, it must be in compliance with the City's adopted truck routes.

New GSE Maintenance Facility. LAWA proposes demolishing Air Freight Building No. 8 to make way for an extension of Taxiway C. IS at 2-2. The proposed new site for the GSE maintenance facilities that are currently housed in Air Freight Building No. 8 is across Imperial Highway from El Segundo. IS at Figure 5. Given the sensitive residential uses near the proposed new GSE maintenance facility, LAWA must evaluate noise, light, hazards, traffic and other impacts associated with this new use.

Furthermore, LAWA apparently changed the use of Air Freight Building No. 8 from cargo to GSE maintenance without public review, so El Segundo is concerned that LAWA could eventually use the new GSE maintenance facility for cargo or other purposes without public review. If LAWA intends to configure this new building in such a way that it could be used for other purposes in the future, LAWA and the FAA must evaluate any such impacts now. Otherwise, LAWA and the FAA should set forth enforceable assurances that LAWA will not use the new building for purposes other than GSE maintenance.

Given the relatively short amount of time that Taxiway B will be under construction, it is difficult to see why the demolition of Air Freight Building No. 8 is necessary simply to maintain access to the runway. If LAWA has another goal for the relocation of GSE maintenance facilities or extending Taxiway C, it must state that in the Draft EIR. CEQA requires an EIR to include a statement of objectives describing the "underlying purpose of the project." CEQA Guidelines § 15124(b).

On the other hand, if extending Taxiway C and building a new GSE maintenance building are not goals of the Project, LAWA should consider alternatives that eliminate these elements from consideration. An EIR must describe a range of alternatives to the proposed project, and to its location, that would feasibly attain the project's basic objectives while avoiding or substantially lessening the project's significant impacts. Pub. Res. Code § 21100(b)(4); CEQA Guidelines § 15126.6(a). As the California Supreme Court explained in *Laurel Heights*, "[w]ithout meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process." *Laurel Heights Improvement Ass'n v. Regents of the University of California*, 47 Cal. 3d 376, 404 (1988).

There are many alternatives that would allow LAWA and the FAA to meet the Project's runway safety area and re-paving goals without requiring the extension of Taxiway C. For example, LAWA and the FAA should consider re-paving Taxiway B at the same time that the runway is closed. Similarly, LAWA and the FAA should consider adopting the Shift Runway alternative, which would also eliminate the need to extend Taxiway C by shifting the departure point west.

Thank you for the opportunity to comment on the Project. We request that this firm and the City of El Segundo Planning and Building Safety Department receive a copy of the Draft EIR.

Very truly yours,

SHUTE, MIHALY & WEINBERGER LLP

Jaclyn H. Prange

439299.4

COMMENT LETTER #5

15 November 2012

Mr. Herb Glasgow
Chief of Airport Planning I
Los Angeles World Airports
1 World Way, Room 218B
Los Angeles, CA 90045

Subject: Runway 7L/25R RSA & Associated Improvement Project:

Dear Mr. Glasgow

I am writing as an El Segundo resident and member of the LAX Area Advisory Committee (LAXAAC) to express a preference for Alternative 2 for the project. This alternative extends the west end of 7L/25R 832 feet to the west and shifts the usable runway at the east end of 7L/25R 832 to the west. The reasons for this preference are as follows:

1) One of the biggest LAX noise effects on the City of El Segundo are the numerous heavy freighter take offs from 25L, particularly in the 1AM to 6AM time period.
2) The LAX preferred take off runways are the inboard runways (25R and 24L)
3) The FAA has been consistently reluctant to move the heavy freighters across two active runways (25L and 25R) to taxiway B so that they can take off from the eastern threshold of 25R (longest take off run).
4) This practice has increased the number of 25L take offs thus enlarging the noise footprint in El Segundo, and in some cases delays of freighter take offs for offloading of cargo and/or more favorable take off conditions.
5) Alternative 2 eliminates the need to cross two active runways to get to the maximum length take off threshold; the El Segundo noise footprint and impact would be reduced.
6) The construction costs of the two alternatives appear to be close and should not be the determining factor.

As the LAXAAC Noise Subcommittee lead and El Segundo resident, I respectfully request your consideration and cooperation in selecting Alternative 2 for the Runway 7L/25R RSA & Associated Improvement Project. This alternative will decrease the noise impact on El Segundo and improve freighter operating efficiency.

Sincerely,

Richard Croxall
742 W. Mariposa Ave.
El Segundo, Ca. 90245
310 322 7931

COMMENT LETTER #6

From:	Yanez, Jarrett
To:	GLASGOW, HERB
Cc:	Cruz, Ruben; Dubiel, Matthew
Subject:	LAX Runway 7L/25R Runway Safety Area and Associated Improvements- Initial Study/ Notice of Preparation
Date:	Wednesday, November 28, 2012 7:43:29 AM

November 28, 2012

Mr. Herb Glasgow, Chief Airport Planning I
City of Los Angeles, World Airports
1 World Way, Room 218 B
Los Angeles, CA 90045

Dear Mr. Glasgow:

INITIAL STUDY/NOTICE OF PREPARATION
LOS ANGELES INTERNATION AIRPORT (LAX)
RUNWAY 7L/25R RUNWAY SAFETY PROJECT (RSP) AND
ASSOCIATED IMPROVEMENTS

Thank you for the opportunity to review the Initial Study/Notice of Preparation for the LAX Runway 7L/25R Runway Safety Project and Associated Improvements. The project would include: (1) Runway 7L/25R Improvements including extending the Runway 7L/25R pavements; (2) Pavement Reconstruction of the eastern portions of Runway 7L/25R and Taxiway B including connecting taxiways and installation of in-pavement approach lights; (3) Taxiway C Extension and Demolition of Air Freight Building No. 8 site; (4) Construction of a Ground Service Equipment Facility and associated improvements. The project area is located on the south airfield of LAX in the City of Los Angeles with the Central Terminal Area and Century Boulevard immediately to the north; Aviation Boulevard to the east; Imperial Highway to the south; and Pershing Drive to the west.

The following comments are for your consideration and relate to the environmental document only:

Services-Traffic/Access

1. We believe the construction phase for the proposed project has the potential to significantly impact the County roadways and intersections in the area. We would like the opportunity to review the related environmental documents and traffic study upon their completion. The County's methodology shall be used when evaluating the County and/or County/City intersections. A copy of the County's Traffic Impact Analysis Report Guidelines may be obtained on the Department's website at http://dpw.lacounty.gov/traffic.

   If you have any questions regarding the traffic/access comment, please contact Isaac Wong

at (626) 300-4796 or iswong@dpw.lacounty.gov.

If you have any other questions or require additional information, please contact Ruben Cruz at (626) 458-4921 or rcruz@dpw.lacounty.gov.

Jarrett Yanez,
CEQA || CUP || Ordinance Review Unit
Land Development Division
(626) 458-7152
jyanez@dpw.lacounty.gov

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APPENDIX B

AIR QUALITY AND GREENHOUSE GAS EMISSIONS APPENDIX

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AIR QUALITY AND GREENHOUSE GAS EMISSIONS APPENDIX

LAX RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) AND ASSOCIATED IMPROVEMENTS PROJECT

(RSA IMPROVEMENTS, PAVEMENT RECONSTRUCTION OF PORTIONS OF RUNWAY 7L/25R AND TAXIWAY B)

Los Angeles International Airport
Los Angeles, Los Angeles County, California

Prepared for:
LOS ANGELES WORLD AIRPORTS
One World Way
Los Angeles, CA 90045

Prepared by:

URS Corporation and Ricondo and Associates, Inc.

September 2013

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Appendix B1 Construction Phase Air Quality Calculations

List of Acronyms and Abbreviations

AB	Assembly Bill
AERMOD	American Meteorological Society/EPA Regulatory Model
ALS	Approach Lighting System
AMS	American Meteorological Society
ANOMS	Aircraft Noise and Operations Monitoring System
APU	Auxiliary Power Unit
AQMP	Air Quality Management Plans
Basin	South Coast Air Basin
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
Caltrans	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CBA	Community Benefits Agreement
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CFCs	chlorofluorocarbons
CH_4	methane
CNRA	California Natural Resources Agency
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalents
EDMS	Emissions Dispersion & Modeling System
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EMFAC	Emission Factors
FAA	Federal Aviation Administration
g/mi	grams per mile
GAO	U.S. General Accounting Office
GHG	greenhouse gas
GRI	Global Reporting Initiative
GSE	Ground Support Equipment
GWP	global warming potential
H_2S	Hydrogen Sulfide
HFCs	Hydroflourocarbons
IPCC	Intergovernmental Panel on Climate Change
LADBS	Los Angeles Department of Building & Safety

LADWP	Los Angeles Department of Water and Power
LAGBC	Los Angeles Green Building Code
LAMC	Los Angeles Municipal Code
LAWA	Los Angeles World Airports
LAX	Los Angeles International Airport
LCFS	Low Carbon Fuel Standard
LEED	Leadership in Energy and Environmental Design
$\mu g/m^3$	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
MMRP	Mitigation Monitoring and Reporting Program
Mpg	miles per gallon
mph	miles per hour
MPO	metropolitan planning organization
MT	Metric Tons
N_2O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
ND	No Data
NHTSA	National Highway Traffic Safety Administration
NO_2	nitrogen dioxide
NO_x	nitrogen oxides
O_3	Ozone
OPR	Office of Planning and Research
Pb	Lead
PFCs	perfluorocarbons
PM	particulate matter
PM_{10}	particulate matter less than or equal to 10 microns in diameter
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
ppb	parts per billion
ppm	parts per million
Protocol	Kyoto Protocol
ROG	reactive organic gas
RPS	Renewables Portfolio Standard
RSA	Runway Safety Area
RTAC	Regional Targets Advisory Committee
RTP	Regional Transportation Plan
SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	sulfur hexafluoride
SIP	State Implementation Plan

SO_2	sulfur dioxide
SO_x	sulfur oxide gas
SPAS	Specific Plan Amendment Study
TAF	Terminal Area Forecast
tons/yr	tons per year
ULSD	Ultra-low sulfur diesel
UNFCC	United Nations Framework Convention on Climate Change
USEPA	U.S. Environmental Protection Agency
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compound
WRCC	Western Regional Climate Center

1.0 INTRODUCTION

This Air Quality and Greenhouse Gas Emissions Appendix was developed to assist with the public disclosure requirements established under the California Environmental Quality Act (CEQA). The Draft EIR addresses the potential impact to air quality and climate change from the development of the proposed Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) and Associated Improvements Project, including the pavement reconstruction of portions of Runway 25R, Taxiway B, and an aircraft parking apron west of Air Freight Building No. 8 (hereafter referred collectively to as the proposed Project). This Air Quality and Greenhouse Gases appendix identifies the technical assumptions, methodologies, databases, and models that were used to conduct the Air Quality, Greenhouse Gas Emissions, and Human Health Risk Assessment analyses for the EIR. The purpose of the Protocol is to document the data collection, data analysis, the approach to the analysis, and to ensure consistency with other LAWA efforts.

1.1 Project Location

The Airport is located on the western end of the Los Angeles Basin and is bounded on the north by the City of Los Angeles communities of Westchester and Playa Del Rey (which form the Westchester-Playa Del Rey Community Plan Area), on the east by the City of Inglewood and the community of Lennox (unincorporated Los Angeles County), to the south by the City of El Segundo and the community of Del Aire (unincorporated Los Angeles County), and to the west by the Pacific Ocean. The Project site is located on the South Airfield at LAX in the City of Los Angeles, generally south of Westchester Parkway, west of I-405, north of Imperial Highway, and east of Pershing Drive. The location of the project components are show in **Figure 2**.

1.2 Project Components

The RSA Project would:

- Extend Runway 7L 832 feet to the west. The Runway 7L threshold will remain at its current location for landings, resulting in an 832-foot displaced threshold;
- Implement declared distances to maintain existing take-off run available and take-off distance available;
- Grade and compact the RSA, approximately 500 feet wide by 168 feet long, beyond the new Runway 7L runway end;
- Grade but not pave an additional area approximately 500 feet wide by 957 feet long to RSA standards beyond the Runway 7L safety area;
- Construct a blast pad west of the Runway 7L extension;
- Extend parallel Taxiway H 832 feet to the west;
- Construct a new taxiway connector (B17) from Taxiway H to Taxiway C;
- Decommission Taxiway B16 from Taxiway H to Taxiway C;
- Reconstruct a portion of Taxiway B at the intersection with new Taxiway B17;
- Reconstruct a portion of Taxiway U from Taxiway B to Runway 7L-25R;

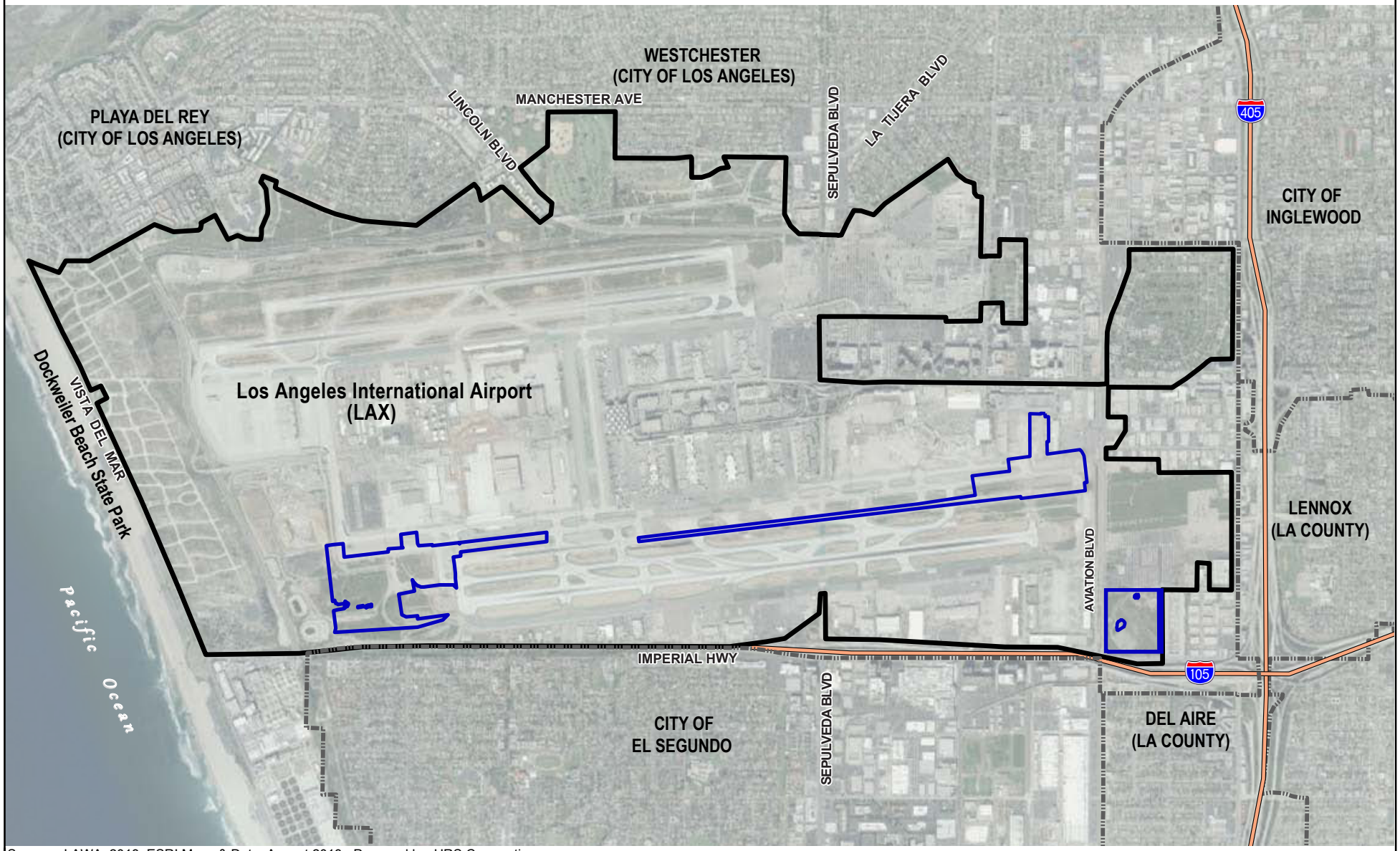
- Relocate the existing Localizer Antenna to the west;
- Relocate Runway 25R Localizer shelter and FAA equipment shelters west of Taxiway B17;
- Relocate existing service road west, beyond the proposed 957- foot grading extension and provide access roads to navaids and equipment shelters;
- Replace existing Approach Lighting System (ALS) towers where the new runway pavement would be constructed with in-pavement lights; and
- Modify the existing Runway and Taxiway lighting and markings in the newly constructed pavements.

The Pavement Reconstruction project elements include:

- Full-depth reconstruction of existing pavement from the Runway 25R threshold to Taxiway F (1,225 feet long by 150 feet wide by approximately 6 feet deep);
- Full-depth reconstruction of the keel section of Runway 7L/25R from Taxiway F westward to Taxiway J (1,328 feet long by 50 feet wide by approximately 6 feet deep);
- Replace existing pavement surface of the keel section of Runway 7L/25R keel from Taxiway J west to the Taxiway N (5,986 feet long by 50 feet wide);
- Full-depth reconstruction of Taxiway B, from Taxiway C2 to its terminus near the Runway 25R threshold, including connecting taxiways (2,100 feet long by 176 feet wide by approximately 6 feet deep);
- Replace existing asphalt pavement surface for the aircraft parking apron located between Taxilane C1 and Air Freight Building No. 8;
- Replace existing jet blast fence east of Runway 25R; and
- Installation of in-pavement lights.

Source: LAWA 2013; ESRI Maps and Data - August 2013; Prepared by: URS Corporation

FIGURE 1	**Regional Map**	**Air Quality and Greenhouse Gas Emissions Appendix Runway 7L/25R RSA and Associated Improvements Project**



Sources: LAWA, 2013; ESRI Maps & Data, August 2013 ; Prepared by: URS Corporation.

FIGURE 2	**Project Components**	**Air Quality and Greenhouse Gas Emissions Appendix Runway 7L/25R RSA and Associated Improvements Project**

2.0 REGULATORY SETTING

Air Quality is regulated by federal, state and local laws. On the federal level, air quality is governed by the federal Clean Air Act (CAA) administered by the United States Environmental Protection Agency (USEPA). Additionally, air quality in California is governed by regulations under the California Clean Air Act (CCAA), administered by the California Air Resources Board (CARB) and by the regional air quality management districts. Air quality in the Los Angeles region is subject to the rules and regulations established by CARB and the South Coast Air Quality Management District (SCAQMD).

2.1 Federal/International

2.1.1 Criteria Pollutants

The USEPA is responsible for implementation of the federal Clean Air Act (CAA). Under the authority granted by the CAA, USEPA has established National Ambient Air Quality Standards (NAAQS) for the following criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter sized 10 microns or less (PM10), particulate matter sized 2.5 microns or less (PM2.5), sulfur dioxide (SO_2), and lead (Pb). Table 2-1 presents the NAAQS that are currently in effect for criteria air pollutants. O_3 is a secondary pollutant, meaning that it is formed from reactions of precursor compounds under certain conditions. The primary precursor compounds that can lead to the formation of O_3 include reactive organic gas (ROG) and oxides of nitrogen (NO_x).

The CAA also specifies future dates for achieving compliance with the NAAQS and mandates that states submit and implement a State Implementation Plan (SIP) for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met. The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones.

The Project site is located within the South Coast Air Basin (Basin), which is a sub-region of the South Coast Air Quality Management District's (SCAQMD's) jurisdiction including all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Basin is designated as a federal non-attainment area for O_3, $PM_{2.5}$, and Pb. The nonattainment designation under the CAA for O_3 is categorized into levels of severity based on the level of concentration above the standard, which is also used to set the required attainment date. The Basin is classified as an extreme nonattainment area for O_3. The Basin was reclassified on September 22, 1998 to attainment/maintenance for NO_2 and on June 11, 2007 for CO since concentrations of these pollutants dropped below the NO_2 and CO NAAQS for several years. More recently, the Los Angeles Basin was reclassified to attainment/maintenance for PM_{10} on July 26, 2013. Attainment/maintenance means that the pollutant is currently in attainment and that measures are included in the SIP to ensure that the NAAQS for that pollutant are not exceeded again. The federal and State ambient air quality standards are presented in **Table 1**. Attainment/maintenance means that the pollutant is currently in attainment and that measures are included in the SIP to ensure that the NAAQS for that

pollutant are not exceeded again. **Table 2** presents the attainment designation for each of the federal criteria air pollutants.

Table 1

National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
			Primary	Secondary
Ozone (O_3)	8-Hour	0.070 ppm (137 µg/m^3)	0.075 ppm (147 µg/m^3)	Same as Primary Standard
	1-Hour	0.09 ppm (180 µg/m^3)	N/A	N/A
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	N/A
	1-Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	N/A
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary Standard
	1-Hour	0.18 ppm (339 µg/m^3)	100 ppb (188 µg/m^3)	N/A[a]
Sulfur Dioxide (SO_2)[b]	Annual	N/A	0.030 ppm (80 µg/m^3)	N/A
	24-Hour	0.04 ppm (105 µg/m^3)	0.14 ppm (365 µg/m^3)	N/A
	3-Hour	N/A	N/A	0.5 ppm (1300 µg/m^3)
	1-Hour	0.25 ppm (655 µg/m^3)	75 ppb (196 µg/m^3)	N/A
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	N/A	N/A
	24-Hour	50 µg/m^3	150 µg/m^3	Same as Primary Standard
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 µg/m^3	12.0 µg/m^3	15 µg/m^3
	24-Hour	N/A	35 µg/m^3	Same as Primary Standard
Lead (Pb)	Rolling 3-Month Average	N/A	0.15 µg/m^3	Same as Primary Standard
	Quarterly	N/A[c]	1.5 µg/m^3 (for certain areas)	N/A
	30-Day Average	1.5 µg/m^3	N/A	N/A

Table 1

National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards	
			Primary	Secondary
Visibility Reducing Particles	8-Hour (State)	Extinction of 0.23 per km	N/A	N/A
	8-Hour (Lake Tahoe)	Extinction of 0.07 per km	N/A	N/A
Sulfates	24-Hour	25 µg/m^3	N/A	N/A
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	N/A	N/A
Vinyl Chloride	24-Hour	0.01 ppm (26 µg/m^3)	N/A	N/A

Notes:
NAAQS = National Ambient Air Quality Standards
CAAQS = California Ambient Air Quality Standards
ppm = parts per million (by volume)
µg/m^3 = micrograms per cubic meter
N/A = Not applicable
mg/m^3 = milligrams per cubic meter

[a] On August 1, 2011, the USEPA proposed a 1-hour secondary NO_2 standard that would be set at a level of 100 parts per billion (ppb) and a 1-hour secondary SO_2 standard that would be set at 75 ppb. These secondary standards would be identical to the NO_2 and SO_2 primary 1-hour standards (76 Federal Register [FR] 46084).

[b] On June 22, 2010, the 1-hour SO_2 NAAQS was updated and the previous 24-hour and annual primary NAAQS were revoked. The previous 1971 SO_2 NAAQS (24-hour: 0.14 ppm; annual: 0.030 ppm) remain in effect until one year after an area is designated for the 2010 NAAQS (75 FR 35520). On June 20, 2011, CARB recommended to USEPA that all of California be designated attainment; however, USEPA has not yet finalized area designations (Goldstene, James N., Executive Officer, CARB, Letter to Jared Blumenfeld, Regional Administrator, USEPA, June 20, 2011). On June 29, 2011, the USEPA responded that the USEPA intends to designate all areas of California as unclassifiable/attainment (Blumenfeld, Jared, Regional Administrator, USEPA, Letter to Governor Brown, California, June 29, 2011).

[c] The NAAQS for Pb is no longer applicable in California since the final area designations for the 2008 Pb NAAQS became effective on December 31, 2010 (75 FR 3086).

Source: California Air Resources Board, 2013.

Table 2

Los Angeles - South Coast Air Basin Criteria Pollutant Attainment Status

Criteria Pollutant	National Standards	California Standards
Ozone (O_3)	Nonattainment - Extreme	Nonattainment
Carbon Monoxide (CO)	Attainment - Maintenance	Attainment
Nitrogen Dioxide (NO_2)	Attainment - Maintenance	Nonattainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Respirable Particulate Matter (PM_{10})	Attainment - Maintenance	Nonattainment
Fine Particulate Matter ($PM_{2.5}$)	Nonattainment	Nonattainment
Lead (Pb)	Nonattainment	Nonattainment

Source: U.S. Environmental Protection Agency. Green Book. Available at http://www.epa.gov/air/oaqps/greenbook/index.html. As of July 31, 2013; California Air Resources Board. "Area Designations Maps/State and National." Available at www.arb.ca.gov/desig/adm/adm.htm. Effective 04/01/1013.

2.1.2 Greenhouse Gases

2.1.2.1 International Governmental Panel on Climate Change

In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change (IPCC) to assess "the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation."

2.1.2.2 United Nations Framework Convention on Climate Change

On March 21, 1994, the U.S. joined other countries around the world in signing the United Nations Framework Convention on Climate Change (UNFCCC). Under the UNFCCC, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

2.1.2.3 Kyoto Protocol

The Kyoto Protocol (or Protocol) is a treaty made under the UNFCCC. Countries can sign the treaty to demonstrate their commitment to reduce their emissions of GHGs or engage in emissions trading. More than 160 countries, accounting for 55 percent of global emissions, are under the protocol. The U.S. symbolically signed the Protocol in 1998. However, in order for the Protocol to be formally ratified, it must be adopted by the U.S. Senate, which has not been done to date. The original GHG reduction commitments made under the Protocol expired at the end of 2012. A second commitment period was agreed to at the Doha, Qatar, meeting held December 8, 2012, which extended the commitment period to December 31, 2020.

2.1.2.4 Massachusetts et al. v. United States Environmental Protection Agency et al.

Massachusetts et. al. v. Environmental Protection Agency et. al. (549 U.S. 497 [2007]) was argued before the U.S. Supreme Court on November 29, 2006, in which it was petitioned that USEPA regulate four GHGs, including CO_2, under Section 202(a)(1) of CAA. The Court issued an opinion on April 2, 2007, in which it held that petitioners have standing to challenge the USEPA and that the USEPA has statutory authority to regulate emissions of GHGs from motor vehicles.

2.1.2.5 Endangerment Finding

The USEPA subsequently published its endangerment finding for GHGs in the Federal Register, which responds to Massachusetts et. al. v. Environmental Protection Agency et. al. The USEPA Administrator determined that six GHGs, taken in combination, endanger both the public health and welfare of current and future generations. Although the endangerment finding discusses the effects of six GHGs, it acknowledges that transportation sources only emit four of the key GHGs: CO_2, CH_4, N_2O, and HFCs. Further, the USEPA Administrator found that the combined emissions of these GHGs from new motor vehicles contribute to air pollution that endangers the public health and welfare under the CAA, Section 202(a).

2.1.2.6 GHG and Fuel Efficiency Standards for Passenger Cars and Light-Duty Trucks

In April 2010, the USEPA and National Highway Traffic Safety Administration (NHTSA) finalized GHG standards for new (model year 2012 through 2016) passenger cars, light-duty trucks, and medium-duty passenger vehicles. Under these standards, CO_2 emission limits would decrease from 295 grams per mile (g/mi) in 2012 to 250 g/mi in 2016 for a combined fleet of cars and light trucks. If all of the necessary emission reductions were made from fuel economy improvements, then the standards would correspond to a combined fuel economy of 30.1 miles per gallon (mpg) in 2012 and 35.5 mpg in 2016. The agencies issued a joint Final Rule for a coordinated National Program for model years 2017 to 2025 light-duty vehicles on August 28, 2012, that would correspond to a combined fuel economy of 36.6 mpg in 2017 and 54.5 mpg in 2025.

2.1.2.7 GHG and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles

In October 2010, the USEPA and NHTSA announced a program to reduce GHG emissions and to improve fuel efficiency for medium- and heavy-duty vehicles (model years 2014 through 2018). These standards were signed into law on August 9, 2011. The two agencies' complementary standards form a new Heavy-Duty National Program that has the potential to reduce GHG emissions by 270 million metric tons and to reduce oil consumption by 530 million barrels over the life of the affected vehicles.

2.2 State of California

2.2.1 Criteria Pollutants

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS are at least as stringent as, and in several cases more stringent than, the NAAQS and include several more pollutants such as visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride. The currently applicable CAAQS are presented with the NAAQS in **Table 1**. The attainment status with regard to the CAAQS is presented in **Table 2** along with the federal attainment status for each criteria pollutant. The area is attainment for sulfates and unclassified for hydrogen sulfide and visibility reducing particles.

California Air Resources Board (CARB) has been granted jurisdiction over a number of air pollutant emission sources that operate in the state. Specifically, CARB has the authority to develop emission standards for on-road motor vehicles, as well as for stationary sources and some off-road mobile sources. In turn, CARB has granted authority to the regional air pollution control and air quality management districts to develop stationary source emission standards, issue air quality permits, and enforce permit conditions.

2.2.2 Greenhouse Gases

2.2.2.1 California Assembly Bill 1493 (AB 1493) – Pavley

Enacted on July 22, 2002, this bill required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light-duty trucks. Regulations adopted by CARB apply to 2009 and later model year vehicles. CARB estimates that the regulation will reduce GHG emissions from the light-duty and passenger vehicle fleet by an estimated 18 percent in 2020 and by 27 percent in 2030, compared to recent years. In 2011, the U.S. Department of Transportation, USEPA, and California announced a single timeframe for proposing fuel and economy standards, thereby aligning the Pavley standards with the federal standards for passenger cars and light-duty trucks.

2.2.2.2 Executive Order S-3-05

California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets for all of California: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; and by 2050, reduce GHG emissions to 80 percent below 1990 levels.

2.2.2.3 California Assembly Bill 32 (AB 32)

AB 32, titled The California Global Warming Solutions Act of 2006 and signed by Governor Schwarzenegger in September 2006, requires CARB to adopt regulations to require the reporting and verification of Statewide GHG emissions and to monitor and enforce compliance with the program. In general, the bill requires CARB to reduce Statewide GHG emissions to the equivalent of those in 1990 by 2020. CARB adopted regulations in December 2007 for

mandatory GHG emissions reporting. On August 24, 2011, CARB adopted the scoping plan indicating how emission reductions will be achieved. Part of the scoping plan includes an economy-wide cap-and-trade program. The final cap-and-trade plan was approved on October 21, 2011 and went into effect on January 1, 2013.

2.2.2.4 California Senate Bill 375 (SB 375)

SB 375 requires CARB to set regional targets for 2020 and 2035 to reduce GHG emissions from passenger vehicles. A regional target was developed for each of the 18 metropolitan planning organizations (MPOs) in the State; the Southern California Association of Governments (SCAG) is the MPO that has jurisdiction over the Project area. A Regional Targets Advisory Committee (RTAC) was appointed by CARB to provide recommendations to be considered and methodologies to be used in CARB's target setting process. The final RTAC report was released on January 23, 2009.

Each MPO is required to develop Sustainable Community Strategies through integrated land use and transportation planning and to demonstrate an ability to attain the proposed reduction targets by 2020 and 2035. CARB issued an eight percent per capita reduction target to the SCAG region for 2020 and a target of 13 percent by 2035. SCAG adopted the Regional Transportation Plan/Sustainable Community Strategies for the six-county Southern California region on April 4, 2012.

2.2.2.5 Executive Order S-01-07 and the Low Carbon Fuel Standard (LCFS)

California Executive Order S-01-07 established a statewide goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020 from 2005. The Executive Order also mandated the creation of an LCFS for transportation fuels. The LCFS requires that the life-cycle GHG emissions for the mix of fuels sold in California decline on average. Each fuel provider may meet the standard by selling fuel with lower carbon content, using previously banked credits from selling fuel that exceeded the LCFS, or purchasing credit from other fuel providers who have earned credits. On December 29, 2011, U.S. District Judge Lawrence O'Neill granted an injunction to prevent CARB from implementing the LCFS because it violates a federal law on interstate commerce. CARB's motion to stay the decision was also subsequently denied on January 24, 2012 (Rocky Mountain Farmers Union v. Goldstene, E.D. Cal., No. 09-cv-02234).

2.2.2.6 California Senate Bill 97 (SB 97)

SB 97 requires the Office of Planning and Research (OPR) to prepare guidelines to submit to the California Natural Resources Agency (CNRA) regarding feasible mitigation of GHG emissions or the effects of GHG emissions as required by CEQA. The CNRA adopted amendments to the State CEQA Guidelines for GHG emissions on December 30, 2009. The amendments became effective on March 18, 2010. The guidelines apply retroactively to any incomplete EIR, negative declaration, mitigated negative declaration, or other related document, and are reflected in this EIR.

2.2.2.7 California Senate bill 1078 (SB 1078)

SB 1078, also known as The Renewables Portfolio Standard (RPS), requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010. In November 2008, Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's RPS to 33 percent renewable power by 2020. Pursuant to Executive Order S-21-09, CARB was also preparing regulations to supplement the RPS with a Renewable Energy Standard that will result in a total renewable energy requirement for utilities of 33 percent by 2020. But on April 12, 2011, Governor Jerry Brown signed SB X1-2 to increase California's RPS to 33 percent by 2020. Notably, unlike the prior 20 percent RPS, the current 33 percent RPS applies to Publicly Owned Utilities, such as Los Angeles Department of Water and Power (LADWP), which is the utility provider for the City of Los Angeles.

2.2.2.8 CARB Guidance

The CARB has published draft guidance for setting interim GHG significance thresholds (October 24, 2008). The guidance is the first step toward developing the recommended statewide interim thresholds of significance for GHG emissions that may be adopted by local agencies for their own use. The guidance does not attempt to address every type of project that may be subject to CEQA, but instead focuses on common project types that are responsible for substantial GHG emissions (i.e., industrial, residential, and commercial projects). The CARB believes that thresholds in these important sectors will advance climate objectives, streamline project review, and encourage consistency and uniformity in the CEQA analysis of GHG emissions throughout the state.

2.3 Regional

2.3.1 South Coast Air Quality Management District Criteria Pollutants

The SCAQMD has jurisdiction over an area of 10,743 square miles consisting of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties, and the Riverside County portions of the Salton Sea Air Basin and Mojave Desert Air Basin. The Basin is a sub-region of SCAQMD's jurisdiction and covers an area of 6,745 square miles. While air quality in this area has improved, the Basin requires continued diligence to meet air quality standards.

Since 1997, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the CAAQS and NAAQS. SCAQMD and CARB have since adopted the 2012 AQMP which incorporates the latest scientific and technological information and planning assumptions, including the 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), and updated emission inventory methodologies for various source categories. The Final 2012 AQMP was adopted by the AQMD Governing Board on December 7, 2012. Therefore, the 2012 AQMP is the most appropriate plan to use for consistency analysis. The AQMP builds upon other agencies' plans to achieve federal standards for air quality in the Basin. It incorporates a comprehensive strategy aimed at controlling pollution from all sources,

including stationary sources, and on-road and off-road mobile sources. The 2012 AQMP builds upon improvements in previous plans, and includes new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches. In addition, it highlights the significant amount of emission reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under the federal CAA.

SCAQMD also adopts rules to implement portions of the AQMP. At least one of these rules is applicable to the construction phase of the RSA. Rule 403 requires the implementation of best available fugitive dust control measures during active construction activities capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads.

The project is located in the jurisdiction of the SCAQMD, which administers air quality regulations developed at the Federal, State, and local levels. The SCAQMD regulates air pollutants from stationary sources within the South Coast Air Basin and acts as a commenting agency relative to CEQA documentation.

2.4 Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the metropolitan planning organization (MPO) representing six counties, including Los Angeles, and serving as a forum for the discussion of various planning and policy initiatives. As the federally designated MPO for the southern California region, SCAG is mandated by the federal government to research and develop plans for transportation, hazardous waste management, growth management, and air quality. Under the federal CAA, SCAG is also responsible for determining conformity of transportation projects, plans, and programs with applicable air quality plans.

2.4.1 California Air Pollution Control Officers Association (CAPCOA) Greenhouse Gases Guidance

CAPCOA published a white paper to provide a common platform of information and tools to address climate change in CEQA analyses, including the evaluation and mitigation of GHG emissions from proposed projects and identifying significance thresholds options. The white paper addresses issues inherent in establishing CEQA thresholds, evaluates tools, catalogues mitigation measures, and provides air districts and lead agencies with options for incorporating climate change into their programs.

2.4.2 SCAQMD Greenhouse Gases Guidance

The SCAQMD has convened a GHG CEQA Significance Threshold Working Group to provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents. Members of the working group include government agencies implementing CEQA and representatives from various stakeholder groups that will provide input to the SCAQMD staff on developing GHG CEQA significance thresholds. On December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold for

projects where the SCAQMD is lead agency. The SCAQMD has not adopted guidance for CEQA projects under other lead agencies.

2.5 Local

2.6 City of Los Angeles

The City of Los Angeles CEQA significance thresholds for resources discussed in this appendix, including air quality, greenhouse gas emissions, and human health risk assessment, are shown in **Table 3**.

Table 3

CEQA Significance Thresholds

CEQA Category	CEQA Subcategory	CEQA Significance Threshold
Air Quality	Construction Emissions	• Would site preparation or construction activities for the proposed project result in substantial emissions that would not be controlled on site by existing regulations? • Considers: o Combustion Emissions from Construction Equipment Fugitive Dust o Grading, Excavation and Hauling o Heavy-Duty Equipment Travel on Unpaved Roads o Other Mobile Source Emissions
	Operational Emissions	• Result in a development and/or activity level equal to or greater than the thresholds provided in the CEQA Air Quality Handbook's Screening Table for Operation – Daily Thresholds of Potential Significance for Air Quality? • Conflict with the regional population forecast and distribution in the most recent Air Quality Management Plan (AQMP)? • Have the potential to create or be subjected to an objectionable odor or localized CO hot spot that could impact sensitive receptors? • Operational emissions exceed any of the daily thresholds presented in Table 1-2. • Causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 parts per million (ppm), respectively, at an intersection or roadway within 1/4 mile of a sensitive receptor.
Greenhouse Gas Emissions	N/A	No CEQA Significance Thresholds have been established by the City of Los Angeles

Table 3

CEQA Significance Thresholds

CEQA Category	CEQA Subcategory	CEQA Significance Threshold
Human Health Risk Assessment	Toxic Air Contaminants	• Would the project use, store, or process carcinogenic or non-carcinogenic toxic air contaminants which could result in airborne emissions? • The determination of significance shall be made on a case-by-case basis, considering the following factors: o The regulatory framework for the toxic material(s) and process(es) involved; o The proximity of the toxic air contaminants to sensitive receptors; o The quantity, volume and toxicity of the contaminants expected to be emitted; o The likelihood and potential level of exposure; and o The degree to which project design will reduce the risk of exposure. If the potential for exposure to air contaminants is likely, then impacts to health risk would be evaluated against the SCAQMD thresholds for acute, chronic, and carcinogenic risk levels for the general public. Health risks for on-site workers would be evaluated against OSHA TLVs.

Notes;
N/A = Not Available
Source: City of Los Angeles, L.A. CEQA Thresholds Guide, 2006, http://www.ci.la.ca.us/ead/programs/table_of_contents.htm (accessed April 18, 2013).
Prepared by: Ricondo & Associates, Inc., April 2013

2.6.1 Green LA

In May 2007, the City of Los Angeles introduced *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming*. Green LA presents a framework targeted to reduce the City's GHG emissions by 35 percent below 1990 levels by 2030. The plan calls for an increase in the City's use of renewable energy to 35 percent by 2020 in combination with promoting water conservation, improving the transportation system, reducing waste generation, greening the ports and airports, creating more parks and open space, and greening the economic sector. Green LA identifies objectives and actions in various focus areas, including airports. The goal for airports is to "green the airports," and the following actions are identified: 1) fully implement the Sustainability Performance Improvement Management System (discussed below); 2) develop and implement policies to meet the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) green building rating standards in future construction; 3) improve recycling, increase use of alternative fuel sources, increase use of recycled water, increase water conservation, reduce energy needs, and reduce GHG emissions; and 4) evaluate options to reduce aircraft-related GHG emissions.

2.6.2 Climate LA

In 2008, the City of Los Angeles followed up Green LA with an implementation plan called Climate LA Municipal Program Implementing the Green LA Climate Action Plan. A Departmental Action Plan for LAWA is included in Climate LA, which identifies goals to reduce CO_2 emissions 35 percent below 1990 levels by 2030 at LAX and the other three LAWA

airports, implement sustainability practices, and develop programs to reduce the generation of waste and pollutants. Actions are specified in the areas of aircraft operations, ground vehicles, electrical consumption, building, and other actions.

2.6.3 Executive Directive No. 10

In July 2007, Mayor Antonio Villaraigosa issued Executive Directive No. 10 regarding environmental stewardship practices. Executive Directive No. 10 requires that City departments, including LAWA, create and adopt a "Statement of Sustainable Building Policies," which should encompass sustainable design, energy and atmosphere, materials and resources, water efficiency, landscaping, and transportation resources. In addition, City departments and offices must create and adopt sustainability plans that include all the policies, procedures, programs, and policies that are designed to improve internal environmental efficiency. Finally, City departments are required to submit annual sustainability reports to the Mayor for review.

2.6.4 LAWA Sustainability Plan

LAWA's Sustainability Plan developed in April 2008 describes LAWA's current sustainability practices and sets goals and actions that LAWA will undertake to implement the initiatives described above (Green LA, Climate LA, and Sustainability Visions and Principles Policy. The Sustainability Plan presents initiatives for the fiscal year 2008-2009 and long-term objectives and targets to meet the fundamental objectives identified above.

LAWA has developed Sustainable Airport Planning, Design and Construction Guidelines for Implementation on All Airport Projects. The Guidelines were developed to provide a comprehensive set of performance standards focusing on sustainability specifically for Airport projects on a project-level basis. A portion of the Guidelines is based on the LEED® rating systems for buildings. The Guidelines incorporate a "LAWA-Sustainable Rating System" based on the number of planning and design points and construction points a project achieves, as based on the criteria and performance standards defined in the Guidelines.

Based on the above, LAWA has taken steps to increase its sustainability practices related to daily Airport operations, many of which directly or indirectly contribute to a reduction in GHG emissions. Actions that LAWA has been undertaking include promoting and expanding the Fly Away non-stop shuttle service to the Airport in an effort to reduce the number of vehicle trips to the Airport, establishment of an employee Rideshare Program, use of alternative fuel vehicles, purchasing renewably generated Green Power from LADWP, and reducing electricity consumption by installing energy-efficient lighting, variable demand motors on terminal escalators, and variable frequency drives on fan units at terminals and LAWA buildings.

LAWA is currently conducting a comprehensive GHG emission inventory that will be used to quantify emissions, identify areas for improvement, and assess the effectiveness of reduction measures. Additionally, LAWA has completed an Air Quality Apportionment Study that seeks to quantify contribution by LAX to the total emissions and concentrations of air pollutants in the surrounding communities. This study provides an updated baseline to be used for measuring the effectiveness of LAWA's efforts to reduce adverse air emissions.

LAWA defines sustainability (and measures our sustainable performance) as the Triple Bottom Line, consistent with the Global Reporting Initiative (GRI) and CEQA, which are the social,

economic, and environmental impacts of our organization. All projects are subject to various sustainable requirements in the City of Los Angeles and at LAWA, including, but not limited to:

- Los Angeles Green Building Code (LAGBC) (Ordinance 181479);
- Low Impact Development (Ordinance 181899);
- Standard Urban Stormwater Mitigation Plan (Ordinance 173494);
- Demolition Debris Recycling Program (Ordinance 181519);
- LAX Construction & Maintenance Services – Recycling Program; and
- LAX Master Plan – Mitigation Monitoring and Reporting Program (MMRP). Highlights of the LAX Master Plan MMRP include, but are not limited to the following measures:
  - C-1: Work with LAWA to approve and coordinate staging areas, haul routes, etc.;
  - MM-AQ-2: Utilize on-site rock-crushing facility, when feasible, during construction to reuse rock/concrete and minimize off-site truck-haul trips; and
  - W-1: Maximize use of Reclaimed Water.

All building projects in the City of Los Angeles are subject to the LAGBC, which is based on CALGreen with some modifications unique to the City of Los Angeles. The LAGBC is a code-requirement that is part of Title 24, and is enforced by the Los Angeles Department of Building & Safety (LADBS).

Given that the LAGBC has replaced LEED® in the Los Angeles Municipal Code (LAMC), LAWA has based its new sustainable construction standards on the mandatory and voluntary tiers defined in the LAGBC. All building projects with an LADBS permit-valuation over $200,000 shall achieve LAGBC Tier 1 conformance, to be certified by LADBS during final plan check (on the issued building permit) and validated by the LADBS inspector during final inspection. Should a project pose unique issues/circumstances based on the scope and/or location of work, LAWA may require more prescriptive approaches to resolving issues such as energy performance, site drainage, etc.

2.6.5 Sustainability Vision and Principles Policy

In 2007, the Los Angeles Board of Airport Commissioners adopted a Sustainability Vision and Principles Policy that includes a commitment to integrating sustainable practices into operations and administration processes under a set of six principles related to environmental stewardship, economic growth, and social responsibility. LAWA has since adopted several plans and policies aimed at implementing the Sustainability Vision and Principles Policy.

3.0 ENVIRONMENTAL SETTING

3.1 Criteria Air Pollutants

As stated, the Federal and State governments have established ambient air quality standards for seven criteria pollutants: CO, O_3, PM_{10}, $PM_{2.5}$, NO_2, SO_2, and Pb. O_3 and PM are generally seen as regional pollutants because they or their precursors affect air quality across a region. Pollutants such as CO, NO_2, SO_2, and Pb are local pollutants in that they tend to accumulate in

the air locally. In addition to being a regional pollutant, PM is also considered a local pollutant. In the areas surrounding the Project site, VOCs, NO_x, PM_{10}, and $PM_{2.5}$ are of particular concern.

3.1.1 Carbon Monoxide (CO)

CO is a public health concern because it combines readily with hemoglobin in human blood, reducing the amount of oxygen transported in the bloodstream. Effects on humans range from slight headaches to nausea to death. State and Federal CO standards have been set for both one-hour and eight-hour averaging times. The State one-hour standard is 20 parts per million (ppm) by volume, and the Federal one-hour standard is 35 ppm. Both the State and Federal standard is 9.0 ppm for the eight-hour averaging period. Motor vehicles are the predominant source of CO emissions in most areas. High levels develop primarily during winter when periods of light wind combine with ground-level temperature inversions. These conditions result in reduced dispersion of the CO in vehicle emissions. In addition, motor vehicles emit more CO in cool temperatures than in warm temperatures.

3.1.2 Ozone (O_3)

O_3 is not directly emitted into the air but is formed by a photochemical reaction in the atmosphere. O_3 precursors, which include NO_x and ROGs, react in the atmosphere in the presence of sunlight to form O_3. State and Federal ambient air quality standards for O_3 have been set for a one-hour and an eight-hour averaging time. The State requires that O_3 concentration not exceed .09 ppm produced in a given area in one hour. The Federal one-hour O_3 standard is .12 ppm, but it does not apply in California. The Federal eight-hour O_3 standard is .075 ppm and the State standard is .07 ppm.

3.1.3 Particulate Matter (PM_{10} and $PM_{2.5}$)

PM_{10} and $PM_{2.5}$ emissions are generated by a wide variety of sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic and construction equipment, and secondary aerosols formed by reactions in the atmosphere. The NAAQS for PM applies to two classes of particulate: $PM_{2.5}$ and PM_{10}. The State PM_{10} standards are 50 micrograms per cubic meter ($\mu g/m^3$) as a 24-hour average and 20 $\mu g/m^3$ as an annual arithmetic mean. There is no separate Federal standard for annual PM_{10}. The Federal PM_{10} standards are 150 $\mu g/m^3$ as a 24-hour average. The State standard for $PM_{2.5}$ is 12 $\mu g/m^3$ as an annual arithmetic mean. There is no separate State standard for 24-hour $PM_{2.5}$. The Federal standards for $PM_{2.5}$ are 12 $\mu g/m^3$ and 35 $\mu g/m^3$ for annual and 24 hours respectively.

3.1.4 Nitrogen Dioxide (NO_2)

NO_2 belongs to a family of highly reactive gases called nitrogen oxides (NO_x). These gases form when fuel is burned at high temperatures, and come principally from motor vehicle exhaust and stationary sources such as electric utilities and industrial boilers. A suffocating, brownish gas, NO_2 is a strong oxidizing agent that reacts in air to form corrosive nitric acid, as well as toxic organic nitrates. It also plays a major role in the atmospheric reactions that produce ground-level O_3 (or smog). The State standard annual arithmetic mean is 0.030 ppm and the State one-

hour standard is 0.18 ppm. The EPA's health-based annual national air quality standard for NO_2 is .053 ppm and the one-hour standard is 0.100 ppm.

3.1.5 Sulfur Dioxide (SO_2)

SO_2 belongs to the family of sulfur oxide gases (SO_x). These gases are formed when fuel containing sulfur (mainly coal and oil) is burned, and during metal smelting and other industrial processes. The State 24-hour standard is 0.04 ppm and the State one-hour standard is 0.025 ppm. The USEPA's health-based national air quality standard for SO_2 is .030 ppm (measured on an annual average) and 0.14 ppm (measured over 24 hours).

3.1.6 Lead (Pb)

Pb is a metal found naturally in the environment as well as in manufactured products. The major sources of Pb emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is the major source of Pb emissions to the air today. The highest levels of Pb in air are generally found near Pb smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. The State 30-day average is 1.5 $\mu g/m^3$. The Federal calendar quarter standard is 1.5 $\mu g/m^3$ and the three-month rolling average standard is 0.15 $\mu g/m^3$.

3.1.7 California-Specific Pollutants

3.1.7.1 Visibility Reducing Particles

Any particles in the atmosphere that obstruct the range of visibility. The eight-hour standard extinction coefficient of 0.23 per kilometer visibility of ten miles or more (0.07—30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent.

3.1.7.2 Sulfates

Pungent solids formed primarily by the combustion of sulfur-containing fossil fuels, especially coal and oil. Considered major air pollutants, sulfates may impact human health and damage vegetation. The 24-our standard is 25 $\mu g/m^3$ using the ion chromatography method.

3.1.7.3 Hydrogen Sulfide (H_2S)

A colorless, flammable, poisonous compound having a characteristic rotten-egg odor. It is used in industrial processes and may be emitted into the air. The one-our standard is 0.03 ppm (42 $\mu g/m^3$) as determined by ultraviolet fluorescence.

3.1.7.4 Vinyl Chloride

Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites,

due to microbial breakdown of chlorinated solvents. The 24-hour standard is 0.01 ppm (26 $\mu g/m^3$) as determined by gas chromatography.

3.2 Greenhouse Gases

Parts of the earth's atmosphere act as an insulating blanket, trapping sufficient solar energy to keep the global average temperature in a suitable range. The blanket is a collection of atmospheric gases called GHGs. These gases – primarily water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone (O_3), chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) – all act as effective global insulators, reflecting back to earth visible light and infrared radiation. Human activities, such as producing electricity and driving vehicles, have elevated the concentrations of these gases in the atmosphere. Many scientists believe that these elevated levels, in turn, are causing the earth's temperature to rise. A warmer earth may lead to changes in rainfall patterns, much smaller polar ice caps, a rise in sea level, and a wide range of impacts on plants, wildlife, and humans.

Climate change is driven by "forcings" and "feedbacks." A feedback is "an internal climate process that amplifies or dampens the climate response to a specific forcing." Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. The global warming potential (GWP) is the potential of a gas or aerosol to trap heat in the atmosphere; it is the "cumulative radiative forcing effects of a gas over a specified time horizon resulting from the emission of a unit mass of gas relative to a reference gas." Individual GHG species have varying GWP and atmospheric lifetimes. The carbon dioxide equivalent (CO_2e) -- the mass emissions of an individual GHG multiplied by its GWP is a consistent methodology for comparing GHG emissions because it normalizes various GHG emissions to a consistent metric. The reference gas for GWP is CO_2; CO_2 has a GWP of 1. Compared to CH4's GWP of 21, CH_4 has a greater global warming effect than CO_2 on a molecule-per-molecule basis.

3.3 Existing Conditions

3.3.1 Climate and Meteorology of the Basin

The Project site is located in the City of Los Angeles, which is within the South Coast Air Basin (Basin) that includes Orange, Los Angeles (non-desert portions), Riverside (non-desert portion), and San Bernardino (non-desert portion) counties. The SCAQMD administers air quality regulation in the Basin.

Meteorological (short-term) and climatological (long-term) conditions influence ambient air quality. The proposed Project is located in central Orange County, which is situated in the southwestern part of the Basin. The Basin both transports to and receives air pollutants from the coastal portions of Ventura and Santa Barbara Counties. The Basin also receives air pollutants from oil and gas development operations on the outer continental shelf in Santa Monica Bay and the San Pedro Channel.

Temperatures for the area are markedly higher during the summer months. Using the 12-year (i.e., 1996 to 2008) monthly climate summary from the nearest meteorological station, the Western Regional Climate Center (WRCC) at LAX, the average annual maximum temperature

was 69.9 degrees - Fahrenheit °F, with an average minimum annual temperature of 56.2°F. The average annual temperature is 63°F.

During the winter months, a semi-permanent, subtropical high-pressure system over the eastern Pacific Ocean moves south, allowing frontal systems that normally are blocked and forced to the north of the area to pass through the region. This results in most of the area's annual precipitation, which totals 13.16 inches. Average maximum monthly rainfall occurs in February (i.e., 3.95 inches), with minimum rainfall in August (i.e., 0.01 inches) (WRCC).

On occasion during fall and winter months, a high-pressure system develops over Nevada and Utah and pushes air south and southwestward over the San Gabriel and San Bernardino Mountains. The resulting wind is known as a Santa Ana wind. Santa Ana winds can be very strong, with wind speeds through mountain passes sometimes exceeding 62 miles per hour, and are usually warm and dry. They tend to clear the Basin of accumulated air pollutants, but can also cause dust storms and high particulate levels.

The topographical features in the region around the Project site restrict air movement through and out of the valley (especially in the northern portion). The San Gabriel and Santa Ana Mountains hinder wind access into the valley from the northwest, north, west, and southwest; the Agua Tibia range hinders winds from the south; and the San Bernardino and San Jacinto Mountains are significant barriers to the northeast, east, and southeast, causing a weak air flow through the valley. This weak air flow is also frequently blocked vertically by temperature inversions.

Air pollutants depend on buoyant forces (the polluted air being warmer than the surrounding atmosphere) enabling it to rise and disperse. When cool air flows into the Basin from the ocean, it sinks, pushes the warm air up, and creates a subsidence temperature inversion (i.e., atmospheric temperature increases with elevation). Subsidence inversions occur during warmer summer months. As the cooler ocean air absorbs pollutants and begins to rise, it becomes "trapped" by the warm air above and settles back into the Basin. As the sun warms the ground, the temperature of the lower atmosphere approaches the temperature of the base of the inversion (upper) layer and eventually becomes warmer than the warm air above, causing the inversion layer to finally break, and allowing vertical mixing within both layers. This phenomenon is observed from early to late afternoons on hot summer days, when the smog appears to suddenly clear up. Until the inversion breaks, the stagnant conditions can lead to high ground-level pollutant concentrations.

During evenings, mainly in the cooler winter months, surface or radiation inversions are formed when the ground surface becomes cooler than the air above it. The earth's surface undergoes such a process on clear nights with low wind speeds when heat energy is transferred from the ground to the cooler night sky. As the earth's surface cools during the evening hours, the air directly above it also cools, but the atmosphere at higher altitudes remains relatively warm. This type of inversion persists until sunrise when heat from the sun warms the ground and stimulates the air at ground level to break up the inversion. During winter months, these radiation temperature inversions usually break by mid-morning.

Temperature inversions play a significant role in determining O_3 formation. O_3 precursors (i.e., NO_X and VOCs) will mix and undergo photochemical reactions to produce smog. Temperature inversions close to the ground will keep high concentrations of O_3 precursors in an area, allow the chemical reactions to take place in the presence of abundant sunlight and, hence, create ground-level O_3. Concentration levels of O_3 are directly related to inversion layer heights due to the limitation of the vertical mixing space.

On days with no temperature inversion or when high velocity winds are present, the concentration of air pollutants is generally lower. Conversely, during days of temperature inversion or when low wind speeds are present, air pollutants generated in the urbanized areas of the Basin are transported into Riverside and San Bernardino Counties and frequently create the highest concentrations. Summer wind flow patterns represent worst-case conditions, as this is the period of higher temperatures, generally lower wind speeds, and more sunlight, which result in O_3 formation

3.3.2 Existing Ambient Air Quality for Criteria Pollutants

The SCAQMD monitors air quality at more than 36 locations throughout the Basin. The monitoring station nearest to LAX is the Southwest Coastal Los Angeles monitoring station, located at 7201 W. Westchester Parkway, in the City of Los Angeles, approximately 1.5 miles northwest of the Central Terminal Area. Criteria pollutants monitored at this location include O_3, CO, NO_2, SO_2, and PM10. A summary of the monitored pollutants from 2008 through 2012 is provided in **Table 4**. Since $PM_{2.5}$ has not been monitored at the Southwest Coastal Los Angeles Monitoring Station, data for this pollutant were obtained from North Long Beach Monitoring Station located at 3648 North Long Beach Boulevard, 12 miles to the southeast of the airport. As shown, the data show a trend of generally improving (i.e., lower) concentrations of criteria pollutants at LAX and, consequently, in the Project site.

Existing sources of air pollution associated with the Project site such as aircraft currently using the runway and taxiways, ground support equipment, boilers, fueling stations, furnaces, maintenance activities, as well as vehicle trips from airport visitors and passengers, delivery vehicles, and employee commutes.

Table 4

Southwest Coastal Los Angeles and South Coastal Los Angeles County Monitoring Station Ambient Air Quality Data

Pollutant	Monitoring Data by Calendar Year				
	2008	2009	2010	2011	2012
Ozone (O_3)					
Maximum Concentration 1-Hour Period (ppm)	0.086	0.077	0.089	0.078	0.106
Days over State Standard (0.09 ppm)	0	0	0	0	1
Maximum Concentration 8-Hour Period (ppm)	0.075[1]	0.070	0.070	0.067	0.075
Days over State Standard (0.07 ppm)	1	0	0	0	1
Days over Federal Standard (0.075 ppm)	0	0	0	0	0
Nitrogen Dioxide (NO_2)					
Maximum Concentration 1-Hour Period (ppm)	0.094	0.077	0.076	0.098	0.077
98th Percentile 1-Hour Average (ppm)	0.076	0.069	0.061	0.065	0.055
Days over State Standard (0.18 ppm)	0	0	0	0	0
Annual Arithmetic Mean (ppm)	0.014	*	0.012	0.013	*
Exceed State Standard? (0.030 ppm)	No	No	No	No	No

Table 4

Southwest Coastal Los Angeles and South Coastal Los Angeles County Monitoring Station Ambient Air Quality Data

Pollutant	Monitoring Data by Calendar Year				
	2008	2009	2010	2011	2012
Carbon Monoxide (CO)					
Maximum Concentration 1-Hour Period (ppm)	4	3	3	2	3
Days over State Standard (20.0 ppm)	0	0	0	0	0
Maximum Concentration 8-Hour Period (ppm)	3	2	2	2	2
Days over State Standard (9.0 ppm)	0	0	0	0	0
Sulfur Dioxide (SO_2)					
Maximum Concentration 1-Hour Period (ppb)	15	12	16	8	5
Days over State Standard (75 ppb)	0	0	0	0	0
Maximum Concentration 24-Hour Period (ppb)	4	6	2	2	1
Days over State Standard (140 ppb)	0	0	0	0	0
Respirable Particulate Matter (PM_{10})					
Maximum Concentration 24-Hour Period ($\mu g/m^3$)	50	52	37	41	31
Days over State Standard (50 $\mu g/m^3$)	0	6	*	0	0
Days over Federal Standard (150 $\mu g/m^3$)	0	0	0	0	0
Annual Concentration ($\mu g/m^3$)	25.5	25.5	*	21.4	19.6
Exceed State Standard? (20 $\mu g/m^3$)	Yes	Yes	*	Yes	No
Fine Particulate Matter ($PM_{2.5}$)[2]					
Maximum Concentration 24-Hour Period ($\mu g/m^3$)	57.2	63.0	35.0	39.7	49.8
Days over Federal Standard (35 $\mu g/m^3$)	8	6	0	2	4
Annual Concentration ($\mu g/m^3$)	14.1	12.8	10.3	11.3	10.6
Exceed State Standard? (12 $\mu g/m^3$)	Yes	Yes	No	No	No

Notes:
$\mu g/m^3$ = micrograms per cubic meter
PM_{10} = particulate matter equal to less than 10 microns in diameter
$PM_{2.5}$ = particulate matter equal to less than 2.5 microns in diameter
ppm = parts per million
* Insufficient data to determine the value
[1] State and federal statistics may differ for the following reasons: State statistics are based on California-approved samplers, whereas national statistics are based on samplers using federal reference or equivalent methods. State and national statistics may therefore be based on different samplers. In 2008, the federal method resulted in an ozone concentration of 0.075 ppm (which does not exceed the federal standard); the State method resulted in an ozone concentration of 0.076 and there is 1 day that exceeded the State standard.
[2] $PM_{2.5}$ data not recorded at the Westchester Parkway Monitoring Station. For informational purposes, data from North Long Beach monitoring station located 12 miles to the southeast of the airport is provided.
Source: California Air Resources Board, State and Local Air Quality Monitoring Plan, iAdam, Air Quality Data Statistics, http://www.arb.ca.gov/adam/netrpt, 2013; United States Environmental Protection Agency, AirData Monitor Values Report, http://www.epa.gov/airdata/, 2013.

The data shows the following pollutant trends (refer to Table 1 for NAAQS and CAAQS standards):

Ozone - The maximum 1-hour O_3 concentration recorded during the 2008 to 2012 period was 0.106 ppm, recorded in 2012. During this period, the California standard was not exceeded. The maximum 8-hour O_3 concentration was 0.075 ppm recorded in 2008 and 2012. The California standards were exceeded once during the reporting period, while the NAAQS were not violated.

Nitrogen Dioxide - The highest 1-hour NO_2 concentration recorded was 0.098 ppm in 2011. The highest recorded NO_2 annual arithmetic mean was 0.014 ppm recorded in 2008. As shown, the standards were not exceeded during the five-year period.

Carbon Monoxide - The highest 1-hour CO concentration recorded was 4 ppm, recorded in 2008. The maximum 8-hour CO concentration recorded was 3 ppm recorded in 2008. As demonstrated by the data, the standards were not exceeded during the five-year period.

Sulfur Dioxide - The highest 1-hour concentration of SO_2 was 16 ppb recorded in 2010. The maximum 24-hour concentration was 6 ppb, recorded in 2009. As shown, the standards were not exceeded during the five-year period.

Respirable Particulate Matter (PM_{10}) - The highest recorded 24-hour PM_{10} concentration recorded was 52 µg/m^3 in 2009. During the period 2008 to 2012, the CAAQS for 24-hour PM_{10} was exceeded between 0 and 1.6 percent of the time; the NAAQS was not violated. The maximum annual arithmetic mean recorded was 25.5 µg/m^3 in 2008 and 2009.

Fine Particulates ($PM_{2.5}$) - The maximum 24-hour $PM_{2.5}$ concentration recorded was 63.0 µg/m^3 in 2008. The 24-hour NAAQS was exceeded between 0 and 2.2 percent annually from 2008-2012. The highest annual geometric mean of 14.1 was recorded in 2008.

Lead (Pb) – The monitored area for the proposed Project site is in compliance with the CAAQS and NAAQS for ambient concentrations of lead. The Los Angeles County portion of the Basin is currently in nonattainment with the California and National standards for Pb primarily as the result of lead emissions from an industrial lead-acid battery recycling facility in the City of Commerce. The SCAQMD currently maintains a network of three source-oriented lead monitors around the facility. Monitoring is only conducted periodically elsewhere in the Basin because the primary sources of atmospheric Pb, leaded gasoline and lead-based paint, are no longer available in the Basin.

3.3.3 Existing LAX Greenhouse Gas Emissions

According to most international reviews, aviation-related emissions account for a small but potentially important percentage of anthropogenic GHGs and other emissions that contribute to global warming. The IPCC estimates that global aircraft emissions account for about 3.5 percent of the total GHGs produced from human activities, as referenced in the U.S. General Accounting Office (GAO) 2000 publication, Aviation and the Environment - Aviation's Effects on the Global Atmosphere Are Potentially Significant and Expected to Grow.

In terms of U.S. activities contributing to GHG emissions, the GAO reports that aviation accounts for about 3 percent of total U.S. GHG emissions from human sources as compared with other industrial sources, including the remainder of the transportation sector (23 percent) and industry (41 percent). LAX, therefore, is assumed to contribute to the 3 percent of total GHG emissions from aviation activities.

The baseline airport-related operational emissions (2011), including those from aircraft, GSE, and Auxiliary Power Unit (APU) operations, on-airport and off-airport roadways, and parking lots and structures are shown in **Table 5**.

Table 5

Existing Operational GHG Emissions

Emission Source	Annual Emissions metric tons CO_2e [a,b] per year				Baseline Emissions Percent of Total
	CO_2 [c]	CH_4 [d]	N_2O [e]	Total	
Aircraft [f]	625,910	2,098	6,416	634,424	27.99%
Ground Support Equipment	59,778	192	581	60,551	2.67%
Auxiliary Power Units [g]	N/A	N/A	N/A	0	N/A
Parking Facilities [f]	104,740	1,285	2,759	108,784	4.80%
On-Airport Roadways [f]	47,049	577	1,239	48,865	2.16%
On-Airport Stationary	7,738	4	22	7,763	0.34%
On-Airport Subtotal	**845,215**	**4,155**	**11,017**	**860,387**	**37.97%**
Building Electricity	66	<1	<1	66	<0.01%
Solid Waste Disposal	154	191	<1	345	0.02%
Indoor/Outdoor Water Usage	597	35	16	646	0.03%
Off-Airport Roadways	1,315,179	18,577	71,021	1,404,778	61.99%
Off-Airport Subtotal	**1,315,996**	**18,803**	**71,037**	**1,405,835**	**62.03%**
Total Baseline Emissions	**2,161,211**	**22,959**	**82,053**	**2,266,222**	**100.00%**

Notes:
Totals may not add due to rounding.
[a] CO_2e = carbon dioxide equivalent
[b] CO_2e emissions are determined by multiplying the individual pollutant emissions by its respective GWP. The GWPs used in this analysis are from the IPCC's *Second Assessment Report* (1995). The GWP for CH_4 is 21 and the GWP for N_2O is 310.
[c] CO_2 = carbon dioxide
[d] CH_4 = methane
[e] N_2O = nitrous oxide
[f] CH_4 and N_2O emissions were estimated from the Los Angeles World Airports *GHG Emissions Inventory* (CDM, 2008).
[g] The EDMS model does not provide GHG emissions or fuel consumption data for APUs; therefore, GHG emissions cannot be estimated.
Source: Los Angeles World Airports, *LAX Specific Plan Amendment Study Draft EIR*, 2012.

4.0 Methodology

The air quality analysis conducted for the proposed Project addresses construction and operations emissions. Construction activities analyzed include on-site and off-site construction equipment, fugitive dust, fugitive VOCs, and worker vehicle trips that would occur during the temporary construction period, estimated to be approximately 2 years. Operational sources

including aircraft, ground support equipment specific to the proposed Project were also analyzed.

4.1 Scope of Analysis

This section discusses the overall approach to the EIR air quality analysis, including: scenarios and years to be analyzed, types of analysis to be performed, pollutants to be considered, and cumulative impacts.

4.1.1 Scenarios

The notice of preparation (NOP) for the EIR was issued in October 2012; thus, 2011 was used as the baseline for the EIR as this represents the last full year of available data. The air quality analysis conducted for the proposed Project will address construction-related impacts for the approximately 2 years of proposed construction activities, and operations-related impacts for the future horizon year of 2015.

Analysis for the following scenarios will be conducted in the EIR:

- Baseline (existing 2011 condition)
- Future 2015
  - Without Project – the baseline with 2015 activity levels
  - With Project – including the proposed Project with 2015 activity levels

4.1.2 Pollutants of Interest

Six criteria pollutants were evaluated in the proposed Project air quality analysis, namely CO, NO_2, O_3, PM_{10}, $PM_{2.5}$, and SO_2. These pollutants will be analyzed because they were shown to have significant impacts in the air quality analysis conducted for the LAX Master Plan Final EIR and tiered EIRs. Although Pb is a criteria pollutant, it will not be evaluated in the Air Quality analysis of the EIR. Following standard industry practice, the evaluation of O_3 was conducted by evaluating precursor pollutant emissions of VOC and NO_x. Ozone is a secondary regional pollutant and ambient concentrations can only be predicted using regional photochemical models that account for all sources of precursors, which is beyond the scope of this analysis. Therefore, no photochemical O_3 modeling was conducted for this EIR.

4.1.3 Types of Analysis

Below is an overview of the types of analyses to be performed for the EIR, including: inventory, dispersion modeling and human health risk assessment. A detailed approach including technical assumptions, methodologies, databases, and models that were used to conduct the air quality analysis can be found in Sections 5.2 through 5.5.

4.1.3.1 Inventory

Criteria pollutant emission inventories will be developed for construction and operational sources for the 2011 baseline conditions and 2015 with and without the proposed Project. The overview of the inventory process is provided below for both construction and operations.

Construction:

- Direct and indirect project-related emissions:
- Identify construction-related emissions sources associated with the proposed Project.
- Capture construction activities of site-preparation, construction of paved and concrete surface, building erection-related activities, material delivery, and construction employee work commute.
- Prepare emissions inventory of construction emissions for all construction years.
- Compare emissions inventories with appropriate CEQA thresholds for construction.
- Identify potential construction-related mitigation measures beyond LAX Master Plan commitments and mitigation measures (if required).

Operations:

- Identify operational emission sources potentially affected by the proposed Project.
- Develop annual and daily operational emissions inventories for the identified sources.
- Compare emissions inventories with the appropriate CEQA thresholds for operations.

4.1.3.2 Localized Concentration Modeling

The project-specific air quality modeling of localized construction impacts was done in a manner consistent with SCAQMD methodology. The USEPA and SCAQMD-approved dispersion model, AMS/EPA Regulatory Model (AERMOD),[1] was used to model the air quality impacts of NO_X, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions. Dispersion of the on-airport aircraft emissions was predicted using FAA's Emissions and Dispersion Modeling System (EDMS), Version 5.1.3.[2] EDMS is the FAA-required model for airport air quality analysis of aviation sources and was used to develop projected concentrations of aircraft air pollutants associated with the proposed Project.

Basic components of dispersion modeling include inputting inventory, meteorological data, and receptor locations into AERMOD. Output concentrations were then compared to CEQA Thresholds.

[1] Lakes Environmental, AERMOD VIEW Software.

[2] U.S. Department of Transportation, Federal Aviation Administration, Emissions and Dispersion Modeling System (EDMS 5.1.3) User's Manual (FAA-AEE-07-01 Rev. 8 - 11/15/10), 2010.

4.1.3.3 Human Health Risk Assessment

The human health risk assessment utilized the inventories prepared in the air quality analysis to address potential health impacts for people exposed to (TAC) anticipated to be released during construction and operation of the proposed Project.

The assessment was conducted in four steps:

- Identification of chemicals (TAC) that may be released in sufficient quantities to present a public health risk (Hazard Identification);
- Analysis of ways in which people might be exposed to chemicals (TAC) (Exposure Assessment);
- Evaluation of the toxicity of chemicals (TAC) that may present public health risks (Toxicity Assessment); and
- Characterization of the magnitude of health risks for the exposed community and of locations in the community where the greatest risks or hazards may be realized (Risk Characterization).

A detailed methodology can be found in Section 5.5.

4.1.4 Cumulative Impacts

The construction of various on-going and anticipated future projects at LAX would potentially occur simultaneously with the proposed Project. Inventories were conducted for these projects and the sum of the total cumulative emissions were compared against CEQA thresholds.

4.2 Direct and Indirect Project Emission Inventory Methodology

The criteria pollutant emission inventories were developed using standard industry software/models and federal, state, and locally approved methodologies. Results of the emission inventories were compared to mass daily emissions thresholds established by SCAQMD for the Basin.

The air quality assessment for the proposed Project was conducted in accordance with the *L.A. CEQA Thresholds Guide* and the *SCAQMD's CEQA Air Quality Handbook* for evaluating air quality impacts. Emissions estimating and modeling used in this analysis are consistent with those used in the preparation of the following documents:

- The LAX Master Plan Final EIR;[3]
- The Final General Conformity Determination;
- The Final EIR for the South Airfield Improvement Project (SAIP);[4]

[3] City of Los Angeles, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements*, April 2004.

[4] City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) South Airfield Improvement Project,* August 2005.

- The Final EIR for the Crossfield Taxiway Project (CFTP);[5]
- The Final EIR for the Bradley West Project;[6] and
- The Final EIR for the LAX Specific Plan Amendment Study (SPAS).[7]

Mass emissions inventories were prepared for the 2011 baseline year and for 2015 with and without the proposed Project. These inventories will identify peak year construction emissions associated with completing the proposed Project between 2014 and 2015. Operational emissions were calculated for future condition 2015 with and without the Project. The following section discusses the assumptions associated with each project-related inventory (construction and operation); cumulative effects are discussed in Section 5.4.

4.2.1 Construction Sources

Construction of the proposed Project is expected to occur in 2014 and 2015. Construction activity emissions inventories for criteria pollutants (CO, VOC, NO_x, SO_2, PM_{10} and $PM_{2.5}$) were developed for emissions sources outlined below:

- Off-Road Equipment
- On-Road Equipment
- Fugitive Dust
- Fugitive VOCs
- Worker Commute Trips
- Aircraft Operational Emissions during Construction

Air emissions occurring as the result of construction activity vary, based on the proposed Project's duration and level of activity. Construction emissions occur mostly as exhaust products from the operation of construction equipment and vehicles, but can also occur as fugitive dust emissions from land disturbance during material staging, demolition, and movement. Evaporative emissions also result from asphalt paving operations. The type of construction equipment commonly used can be categorized as both off-road and on-road equipment. Off-road equipment is typically used for earthwork, paving, demolition, and other onsite activities, while on-road equipment is typically used to transport and deliver supplies, materials, and employees.

Daily emissions during construction were forecasted from a construction schedule and applicable emissions factors from various EPA, FAA, CARB and SCAQMD references. In order to estimate construction emissions, resource requirements and activity schedules were developed by a construction subtask. Monthly estimates of equipment usage (in hours) were also developed for each piece of equipment expected to be used during construction of the proposed Project. From the resource information provided, peak daily emissions estimates were developed for each construction phase during the construction period.

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5 City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Crossfield Taxiway Project,* January 2009.

6 City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Bradley West Project,* September 2009.

7 City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study*, January 2013.

A summary of construction source pollutants and models/references to be used is shown in **Table 6**.

Table 6

Construction Sources Pollutant and Model Summary

Construction Source	Pollutant	Model/Reference
Off-Road Equipment	CO, SO_2	OFFROAD2011[8]
	VOC, NO_X, PM_{10}	2011 Inventory Model[9]
On-Road Equipment	CO, VOC, NO_X, PM_{10}	EMFAC2011
Fugitive Dust	PM_{10}, $PM_{2.5}$	USEPA AP42
Fugitive VOCs	VOC	CalEEMod[10]
Aircraft Operations during Construction	CO, SO_2, VOC, NO_X, PM_{10}, $PM_{2.5}$	EDMS

Source: Ricondo & Associates, Inc., September 2013.
Prepared by: Ricondo & Associates, Inc., September 2013.

4.2.1.1 Off-Road Equipment Emissions Inventory

Off-road construction equipment includes dozers, loaders, sweepers and other heavy-duty construction equipment that is not licensed for travel on public roadways. Off-road construction equipment and fuel types, estimated horsepower, and estimated annual hours of operation were developed by construction subtasks. The annual hours of operation were based on the material use and production rates; generally as a result of a 10-hour-per-day, 6-day-per-week workweek. Non-road exhaust emission factors were developed based on calendar year 2014 emissions rates from the CARB OFFROAD2011 emissions model.

Daily emission inventories for off-road equipment were calculated by multiplying the appropriate emission factor by the horsepower, load factor, and daily operational hours for each type of equipment as shown in **Equation 1** below.

8 California Air Resources Board, OFFROAD2011 Model, available: www.arb.ca.gov/msei/offroad/offroad.htm (accessed January 25, 2013).
9 California Air Resources Board, 2011 Inventory Model for In-Use Off-Road Equipment, available: www.arb.ca.gov/msei/ categories.htm#offroad_motor_vehicles (accessed January 25, 2013).
10 South Coast Air Quality Management District, California Emissions Estimator Model, prepared by ENVIRON International Corporation, available: http://www.caleemod.com/

Equation 1

Off-Road Equipment Emissions

$$E = HP \times L \times n \times H \times EF$$

Where:

E = emissions (lb/day)

HP = project equipment horsepower

L = load factor

n = number of pieces of equipment in a specified equipment category

H = hours per day of equipment operation

EF = emission factor (lb/hp-hr)

Source: Ricondo & Associates, Inc., March 2013.
Prepared by: Ricondo & Associates, Inc., March 2013.

4.2.1.2 On-Road Equipment Emissions Inventory

On-road on-site equipment includes shuttle vans transporting construction employees from the employee parking areas to the construction site, on-site pickup trucks, crew vans, water trucks, dump trucks, haul trucks and other on-road vehicles (i.e., vehicles licensed to travel on public roadways).

Activity levels and engine assignments for on-road construction vehicles were developed based on the requirements and schedule for the proposed Project. Exhaust emissions from on-road on-site sources were calculated using calendar year 2014 emission factors for CO, VOC, NOx, and PM_{10} from the CARB EMFAC2011 emissions model, taking into account other factors including region, season, model year, speed and fuel type for each equipment type. A schedule of planned construction activities, including vehicle miles traveled estimates for on-road construction vehicles, was developed by construction subtask.

The EMFAC2011 model outputs emission rates in grams/mile for each equipment type. To calculate the total emissions, roundtrip distances for on-site travel were determined for each equipment category and substituted into **Equation 2** shown below. The EMFAC factors account for start-up, running and idling. In addition, VOC emission factors include diurnal, hot soak, running, and resting emissions, and the PM_{10} and $PM_{2.5}$ factors include tire and brake wear.

Equation 2

On-Road On-Site Equipment Emissions

$$E = VMT \times EF$$

Where:

E = emissions (grams/day)

VMT = vehicle miles traveled per day

EF = emission factor (grams/mile)

Source: Ricondo & Associates, Inc., April 2013.
Prepared by: Ricondo & Associates, Inc., April 2013.

4.2.1.3 Fugitive Dust

Additional sources of PM_{10} and $PM_{2.5}$ emissions associated with construction activities are related to fugitive dust. Fugitive dust includes re-suspended road dust from both off- and on-road vehicles, dust from grading, loading and unloading, hauling and storage activities, as well as rock crushing operations and batch plants. Fugitive dust emissions (PM_{10} and $PM_{2.5}$) were calculated using the guidance from the USEPA's Compilation of Air Pollutant Emission Factors (AP-42)[11] and SCAQMD's CEQA Air Quality Handbook.[12]

Fugitive dust emissions were calculated using an EPA AP-42 worst-case uncontrolled PM_{10} emissions rate of 38.2 pounds per acre-day. This emissions rate was used to calculate uncontrolled PM_{10} emissions using construction task acreage assumptions, as well as construction task durations. Notably, CARB specifies in the CalEEMod model that a maximum of 25 percent of this acreage would be disturbed on any given construction day, and that 20 percent of the PM_{10} emissions would occur as $PM_{2.5}$. Watering, as required under LAWA construction contracts and also being one of the main dust suppression measures recognized in SCAQMD Rule 403, was assumed to reduce fugitive dust emissions by 61 percent.

4.2.1.4 Fugitive VOCs (Paving and Painting)

Construction materials that can be sources of VOC emissions include hot-mix asphalt paving and taxiway striping. VOC emissions from asphalt paving operations result from the evaporation of the petroleum distillate solvent, or diluent, used to liquefy asphalt cement. Asphalt paving emissions were calculated using the CARB default data contained within CalEEMod: an emission factor of 2.62 pounds of VOC per acre of asphalt material. The construction schedule provided the required tons of bituminous surface material. Equivalent acreage was calculated using a weight of asphalt of 2,111 tons per acre, assuming an 8-inch pavement depth, based on data available from the National Asphalt Pavement Association and FAA Advisory Circular 150/5320-6E, *Airport Pavement Design and Evaluation*.

[11] U.S. Environmental Protection Agency, *Compilation of Air Pollutant Emission Factors AP-42*, Fifth Ed, 1995.
[12] South Coast Air Quality Management District, *CEQA Air Quality Handbook*, 1993 and on-line updates.

4.2.1.5 Worker Commute Trips

Emissions from worker commute trips were calculated using emission factors and assumed default commute distances, as provided in CalEEMod. The number of workers during each construction phase was calculated using the construction resource schedule. Construction-worker vehicle emissions were calculated using SCAQMD default assumptions for vehicle fleet mix, travel distance, and average travel speeds. Assumptions included:

- 1 out of every 11 workers participate in a carpool; and
- An average commute distance for construction employees of 13.3 miles (26.6 miles round trip).

In general, the EMFAC2011 emissions factors were multiplied by the total VMT to obtain emissions in pounds per day, similar to Equation 2 in Section 5.2.1.2.

Worker commute trip emissions include: vehicle exhaust, tire wear, brake wear, and paved road dust using SCAQMD default assumptions for vehicle fleet mix, travel distance, and average travel speeds.

4.2.1.6 Aircraft Operations during Construction

To allow for the rehabilitation of portions of the Runway 7L/25R pavement, the runway must be temporarily closed for an extended period of time (estimated at 3.5 months). During this time, the aircraft operations from this runway must be accommodated through the use of other runways at LAX. This shift in operations may cause airfield and/or airspace delays resulting in increased arrival and departure taxi times. An increase in taxi travel times can result in increased emissions.

To determine the taxi times during the runway closure period, real-time ASDE-X data was used from a period of seven days in 2013 for which Runway 7L/25R was closed due to the installation of runway status lights. Based on conversations with FAA air traffic controllers at LAX, this historical data would be a reasonable indicator of operations with the runway closure required for the proposed improvements. The taxi-in and taxi-out times for arrivals and departures were averaged over the period for which the runway was closed (January 26, 2013 – February 2, 2013) and when the runway was operating (January 1, 2013 – January 25, 2013; February 3, 2013 – March 31, 2013). The resulting difference in taxi times was added to the 2015 Without Project taxi times to establish the construction period taxi times for the runway closure period. The 2015 Without Project EDMS file was modified for the runway closure period taxi times. Annual emissions for the runway closure, and normal operations, were then normalized based on a 110-day closure. With the exception of aircraft taxi times, aircraft times in mode (i.e., approach, climbout, and takeoff) do not change during the runway closure period.

4.2.2 Operational Sources

Operational emissions reflect the emissions associated with the ongoing operation of the airport. In the context of CEQA, operational emissions provide an indication of the changes in emissions that completing and operating a proposed project would have when comparing operational emissions without the proposed Project. A forecasted increased demand for air travel in 2015, anticipated independently of the proposed Project, would result in an increase of total aircraft activity. The proposed Project would not result in additional or increased operational activities

and would not result in net new trips to LAX. There would be no changes to air traffic patterns or an increase in airport operations.

In order to determine impacts from the proposed Project, the incremental increase in regional daily air pollutant emissions of criteria pollutants were compared to the existing (2011) airport uses and the 2015 Without Project scenario. Sources of emissions are generally divided into two categories: mobile and stationary. Examples of LAX-related mobile sources include aircraft, on-board auxiliary power units (APUs), ground support equipment (GSE), and on-road motor vehicles. Examples of LAX-related stationary sources include utility equipment such as air conditioning and water heating/cooling units.

4.3 Dispersion Analysis

Dispersion is the process by which atmospheric pollutants disseminate due to wind and vertical stability. Air dispersion modeling is used to predict ground-level ambient air concentrations of pollutants in the vicinity of known air emission sources. The results of a dispersion analysis are used to assess pollutant concentrations at or near an airport. The base data for the dispersion analysis are the operations emissions inventories described in Section 5.2.2 above. The results of the analysis allow a direct comparison of predicted concentrations of pollutants to the NAAQS/CAAQS.

The project-specific air quality modeling of localized impacts was done in a manner consistent with SCAQMD methodology. The USEPA and SCAQMD-approved dispersion model, AMS/EPA Regulatory Model (AERMOD), was used to model the air quality impacts of NO_X, CO, SO_x, PM_{10}, and $PM_{2.5}$ emissions. AERMOD can estimate the air quality impacts of single or multiple point, area, or volume sources using historical meteorological conditions. Volume sources were used to represent the emissions from trucks and heavy-duty construction equipment. Volume sources are three-dimensional sources of emissions that can be used to model releases from a variety of industrial uses, including moving diesel trucks and equipment. Area sources were used to model fugitive dust emissions of PM_{10}, and $PM_{2.5}$. Area sources are two-dimensional surface-based sources of emissions that can be used to model releases from emissions that occur over a wide area, such as fugitive dust. For the purpose of the dispersion modeling, the maximum daily emissions that could occur due to construction activities from any construction phase were selected for the LST analysis. Dispersion of the on-airport aircraft emissions was predicted using EDMS.

The SCAQMD requires that AERMOD be run using USEPA regulatory default options, unless non-default options are justified; therefore, AERMOD was run using USEPA regulatory default options. Additional modeling options are listed below:

- Urban dispersion (Los Angeles County population of 9,862,049, as per SCAQMD guidance);
- Averaging periods: 1-hour (CO and NO_2), 8-hour (CO), 24-hour (PM_{10} and $PM_{2.5}$); Annual (NO_2, PM_{10} and $PM_{2.5}$)
- Flagpole receptor heights: 1.8 meters; and
- No building downwash (no point sources modeled).

Air dispersion modeling was used to predict pollutant concentrations for normal airport operations for the 2011 baseline conditions and the proposed Project construction period. The incremental difference of pollutant concentrations between the baseline conditions and the

construction period were added to the background concentrations (as outlined in Section 4.3.2) for each criteria pollutant. These concentrations were compared against the SCAQMD daily concentration thresholds (outlined in Section 2.3.1).

4.3.1 Source/Receptor Locations

Construction activities were assumed to be located in the Project site and the construction staging area. Aircraft operations during construction were located on respective taxiways and runways.

Receptor points are the geographic locations where the air dispersion model will calculate air pollutant concentrations. A total of 327 discrete Cartesian receptors were used to determine air quality impacts in the vicinity of the Project site. Field receptors were placed at the boundary of LAX (along the fence line), as well as at the Theme Building. The receptor locations near the fence-line are generally the closest locations with unrestricted access to airport emission sources. Modeled concentrations at these locations would therefore be higher than concentrations modeled farther away from the airport.

4.3.2 Meteorology

The meteorological data from the monitoring station located at the LAX Hastings site was used in the analysis. The meteorological data were obtained from the SCAQMD website and have been preprocessed using AERMET.[13] AERMET is a meteorological preprocessor for organizing available meteorological data into a format suitable for use in AERMOD air quality dispersion model. These files were also developed by the SCAQMD using site specific surface characteristics (i.e., surface albedo, surface roughness, and Bowen ratio) obtained using AERSURFACE. AERSURFACE is a tool that provides realistic and reproducible surface characteristic values, including albedo, Bowen ratio, and surface roughness length, for input into AERMET. The dataset used consisted of five years of hourly surface data collected at LAX for calendar years 2005 through 2009; the data included ambient temperature, wind speed, wind direction, and atmospheric stability parameters, as well as mixing height parameters from the appropriate upper air station. All five years of data were run using AERMOD to determine the meteorological year that is most conducive to air pollutant formation based on the proposed Project construction schedule (which wind direction/speed creates the worst-case condition). The results of met year 2005 is presented in this analysis.

4.3.3 Ozone Limiting Method for NO_2 Modeling

AERMOD contains the ozone limiting method (OLM) and Plume Volume Molar Ratio Method (PVMRM) options, which are used to model the conversion of NO_X to NO_2. The OLM option was used in this modeling analysis. The SCAQMD provides hourly O_3 data for modeling conversion of NO_X to NO_2 using the OLM option. In addition, the following values were used in the analysis:

- Ambient Equilibrium NO_2/NO_X Ratio: 0.90 (default)

[13] South Coast Air Quality Management District, AQMD Meteorological Data for AERMOD, www.aqmd.gov/smog/metdata/AERMOD.html. 2010.

- In-stack NO_2/NO_X Ratio: 0.10 (default)
- Default Ozone Value: 40 parts per billion (used only for missing data in the hourly O_3 data file provided by the SCAQMD)

4.3.4 Localized Significance Thresholds

The LSTs for NO_2 were developed based on the 1-hour NO_2 CAAQS of 0.18 parts per million (ppm). The 1-hour NO_2 NAAQS was considered in this analysis because of the potential for construction of the proposed Project to last several years. An exceedance of the 1-hour NO_2 NAAQS is determined based on the USEPA standard, which is the 3-year average of the 98th percentile of the daily maximum 1-hour average. The LSTs for CO were developed based on the 1-hour and 8-hour CAAQS of 20 ppm and 9.0 ppm, respectively. With respect to CO, the CAAQS are more stringent than the NAAQS; therefore, the NAAQS need not be specifically addressed. For PM_{10} and $PM_{2.5}$, the LSTs were derived based on requirements in SCAQMD Rule 403, Fugitive Dust.

4.4 Human Health Risk Assessment

The Human Health Risk Assessment (HHRA) of the EIR addresses potential health impacts for people exposed to TAC anticipated to be released during construction and operation of the proposed Project.

Cancer risk and chronic and acute non-cancer health hazard assessments all depend on estimating TAC concentrations in air in two steps:

- Estimation of emissions of TAC associated with construction and subsequent modeling of dispersion of those TAC to downwind receptor locations; and
- Estimation of health risks associated with inhalation of TAC.

Estimated emission rates were used, along with meteorological and geographic information, as inputs to the air dispersion model. The dispersion model predicts possible concentrations of TAC released during airport construction and operations within the study area around the airport. Modeled concentrations were then used to estimate human health cancer risks and health hazards, which will serve as the basis of the significance determinations for the proposed Project.

Incremental cancer risks and chronic non-cancer health hazards are estimated as the difference between risks and hazards associated with the proposed Project and risks and hazards associated with 2011 baseline conditions. Results of the analysis were then interpreted by comparing incremental cancer risks and chronic non-cancer health hazards to regulatory thresholds. For purposes of assessing the significance of any health impacts, these comparisons were made for maximally exposed individuals (MEI) at locations where maximum concentrations of TAC were predicted by air dispersion modeling. An impact was considered significant if cancer risks and/or chronic non-cancer health hazards for MEI exceeds regulatory thresholds. In addition, the range of possible risks and hazards will be addressed by evaluating risks for all modeled locations within the defined study area.

4.4.1 Methodology

The HHRA was conducted in four steps as defined in SCAQMD, CalEPA, and USEPA guidance[14,15,16] consisting of:

- Identification of chemicals (TAC) that may be released in sufficient quantities to present a public health risk (Hazard Identification);
- Analysis of ways in which people might be exposed to chemicals (TAC) (Exposure Assessment);
- Evaluation of the toxicity of chemicals (TAC) that may present public health risks (Toxicity Assessment); and
- Characterization of the magnitude of health risks for the exposed community, and of locations in the community where the greatest risks or hazards may be realized (Risk Characterization).

HHRA analyses for the proposed Project addresses the following issues and provide additional information on the potential for human health impacts:

- Quantitative assessment of cancer risks and chronic non-cancer health hazards due to release of TAC associated with construction activities for the proposed Project.
- Quantitative evaluation of possible acute non-cancer health hazards due to release of TAC during construction associated with the proposed Project.

Protective methods that are likely to overestimate rather than underestimate possible health risks were used to estimate cancer risks and chronic non-cancer health hazards. Incremental risks and hazards associated with the proposed Project will be calculated for individuals assumed to live, work, or attend school at locations where TAC concentrations are predicted to be highest. The analysis assumes that these individuals will be exposed to TAC for almost all days of the year and for many years to maximize estimates of possible exposure. These maximally exposed individuals, or MEI, are hypothetical individuals used to help ensure that the HHRA is protective.

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[14] South Coast Air Quality Management District, *Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics Hot Spots Information and Assessment Act (AB2588)*, July 2005.

[15] California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I: Technical Support Document for the Determination of Acute Reference Exposure Levels for Airborne Toxicants,* March 1999; California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, *Air Toxic Hot Spots Program Risk Assessment Guidelines, Part IV: Technical Support Document for Exposure Assessment and Stochastic Analysis,* September 2000; California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part III: The Determination of Chronic Reference Exposure Levels for Airborne Toxicants*, February 23, 2000; California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part II: Technical Support Document for Describing Available Cancer Potency Factors*, updated August 2003; California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments,* August 2003.

[16] U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, *Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part F), Final, EPA-540-R-070-002,* January 2009.

The HHRA for the proposed Project also evaluated the potential for short-term (1-hour) exposures to cause immediate, or acute, non-cancer health impacts. These estimates were also intentionally conservative.

4.4.1.1 Selecting TAC of Concern

In general, TAC of concern to be used in the HHRA are based on TAC identified under California Assembly Bill AB2588 and for which the California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA) has developed cancer slope factors, chronic reference levels, and/or acute reference levels.

The list of TAC of concern to be used in the EIR HHRA was selected using regulatory lists, emissions estimates, human toxicity information, results of the LAX Master Plan HHRA, and a review of health risk assessments included in the Long Beach Airport Terminal Area Improvement Project EIR,[17] LAX South Airfield Improvement Project (SAIP) Final EIR, LAX Crossfield Taxiway Project (CFTP) Final EIR, LAX Bradley West Project Final EIR, LAX Central Utility Plant Replacement Project (CUP-RP) Final EIR,[18] Specific Plan Amendment Study (SPAS) Final EIR, LAX Master Plan Final EIR, Oakland International Airport - Airport Development Program (ADP) Final Supplemental EIR,[19] and the Civilian Reuse of MCAS El Toro Final EIR, Draft Supplemental Analysis.[20]

The list of TAC was further refined to include only TAC with chronic Reference Exposure Levels (RELs), acute RELs, and cancer potency values identified by the California OEHHA. Methods for identifying TAC for construction sources are described in Section 5.4.2.

4.4.1.2 Exposure Assessment

Exposure Populations

For analysis of the proposed Project, the HHRA used the following receptors for quantitative evaluation: on-airport workers, off-airport workers, off-airport adult residents, off-airport child residents, and off-airport school children. Analysis of these receptors represents the most affected populations surrounding LAX; by protecting the most exposed individuals, the general population is protected.

Exposure Pathways

Different receptors (exposure populations) could be exposed to TAC in several ways, deemed exposure pathways. An exposure scenario will be developed for each receptor that considers various pathways by which they might be exposed to TAC. An exposure pathway consists of four parts:

- A TAC source (e.g., construction equipment fuel combustion)

[17] City of Long Beach, *Long Beach Airport Terminal Area Improvement Project Draft EIR*, September 2005.

[18] City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Central Utility Plant Replacement Project*, October 2009.

[19] Port of Oakland, *Draft Oakland International Airport - Airport Development Program (ADP) Supplemental Environmental Impact Report*, September 2003.

[20] County of Orange, *Draft Environmental Impact Report No. 573 for the Civilian Reuse of MCAS El Toro and the Airport System Master Plan for John Wayne Airport and Proposed Orange County International Airport, Draft Supplemental Analysis*, April 2001.

- A release mechanism (e.g., construction equipment engine exhaust)
- A means of transport from point of release to point of exposure (e.g., local winds)
- A route of exposure (e.g., inhalation)

If any of these elements of an exposure pathway is absent, no exposure can take place and the pathway is considered incomplete and will not be evaluated in the EIR HHRA. Numerous potentially complete exposure pathways exist for receptors at or near LAX. For the EIR HHRA, the inhalation pathway is the most important complete exposure pathway, contributing the majority of risk associated with the proposed Project, and were therefore quantitatively evaluated for all receptors. Exposure pathways via the soil and water were not evaluated.

Exposure Concentrations

Analyses of cancer risk and non-cancer health hazards, both chronic and acute, were included in the exposure assessment for all exposure population receptors. Chronic and acute exposure to TAC from the proposed Project construction and operational activities were estimated by:

- Estimation of construction and operation source emissions for annual (for chronic exposure) and operation source emissions for peak daily (for acute exposure).
- Dispersion modeling of construction and operational emissions over an area that consists of the airport property and adjacent urban areas.

In the LAX Master Plan EIS/EIR and other tiered LAX EIRs (SAIP EIR, CFTP EIR, Bradley West Project EIR, and CUP-RP EIR), average long-term daily intakes were used to estimate risk and hazards for cancer and non-cancer risk assessment in accordance with Risk Assessment Guidance for Superfund (RAGS), Part A[21] (RAGS Part A). RAGS Part A methodology estimates intake of a contaminant in air via inhalation using inhalation rate and body weight, as described later in this section. However, in 2009, the EPA released the Risk Assessment Guidance for Superfund (RAGS), Part F[22] (RAGS Part F), which recommends the inhalation dosimetry methodology. In this approach, the concentration of the chemical in air is the exposure metric (e.g., mg/m^3), and risks are estimated using a unit risk that predicts cancer risk for each mg/m^3, as shown in **Equation 3** below. Inhalation rate and body weight are no longer used in the calculations.

Although the SPAS Final EIR calculated risks and hazards using both RAGS methodologies, the EIR HRRA only used the RAGS Part F methodology as it represents the most current EPA approach.

[21] U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, *Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part A), Interim Final, EPA/540/1-89/002*, December, 1989.

[22] U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, *Risk Assessment Guidance for Superfund, Vol. I, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment), Final, EPA-540-R-070-002, OSWER 9285.7-82*, January 2009.

Equation 3

RAGS Part F Exposure Concentration

$$EC = (CA \times ET \times EF \times ED)/AT$$

Where:

EC = exposure concentration (µg/m^3)

CA = chemical concentration in air (µg/m^3)

ET = exposure time (hours/day)

EF = exposure frequency (days/year)

ED = exposure duration (years)

AT = average time; e.g. the period over which exposure is averaged (hours)

Source: U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, *Risk Assessment Guidance for Superfund Vol. I, Human Health Evaluation Manual (Part F) Final, EPA/540/R-070/002*, January 2009.
Prepared by: Ricondo & Associates, Inc., March 2013.

As shown above, the RAGS Part F equation requires exposure time, a parameter that was not previously defined for the LAX Master Plan EIS/EIR and other tiered LAX EIRs because it was not required for the RAGS Part A methodology. To maintain consistency with the SPAS Final EIR, the following assumptions were used:

- Exposure time:
  - Residents will be exposed 24 hours a day.
  - A school child will exposed eight hours per day.
  - An adult worker will be exposed 10 hours per day.
- Averaging time for estimation of cancer risks is 70 years or 25,550 days.

Cancer risk is evaluated as the lifetime average daily dose (LADD) according to CalEPA and USEPA guidance. Averaging time for estimation of non-cancer health hazards is the duration of exposure, expressed in days. Non-cancer health hazards are evaluated as average daily dose (ADD) over the period of exposure, again, following CalEPA and USEPA guidance.

Cancer risks and the non-cancer health hazards were then calculated using **Equation 4** and **Equation 5**, respectively.

Equation 4

Cancer Risks

$$\boldsymbol{Risk = IUR \times EC}$$

Where:

IUR = inhalation unit risk $(\mu g/m^3)^{-1}$

EC = exposure concentration $(\mu g/m^3)$

Equation 5

Non-Cancer Health Hazards

$$\boldsymbol{HQ = EC/(RfC \times 1000\,\mu g/m^3)^{-1}}$$

Where:

IUR = inhalation unit risk $(\mu g/m^3)^{-1}$

EC = exposure concentration $(\mu g/m^3)$

HQ = hazard quotient

RfC = reference concentration (mg/m^3)

Source: U.S. Environmental Protection Agency, Office of Emergency and Remedial Response, *Risk Assessment Guidance for Superfund Vol. I, Human Health Evaluation Manual (Part F) Final, EPA/540/R-070/002*, January 2009.
Prepared By: Ricondo & Associates, Inc., March 2013.

4.4.1.3 Toxicity Assessment

Risks from exposure to TAC are calculated by combining estimates of potential exposure with chemical-specific toxicity criteria developed by CalEPA and/or USEPA. The toxicity assessment initially examined quantitative toxicity criteria for TAC selected from regulatory lists.

A toxicity assessment for TAC of concern was conducted for the LAX Master Plan Final EIR, as described in Technical Report 14a of that EIR. Conclusions of that assessment have not changed materially. However, all toxicity information provided in Technical Report 14a were reviewed and updated as appropriate by researching recent information available from USEPA and CalEPA OEHHA. Acute RELs developed by the State of California will be used in the characterization of potential acute non-cancer health hazards associated with the proposed Project. Other sources of acute toxicity criteria were also evaluated as a source of acute criteria as part of this re-assessment of toxicity information.

Cancer unit risk factors, cancer slope factors, and chronic RELs developed by the State of California were used to characterize cancer risks and chronic non-cancer health hazards associated with longer term inhalation of emissions from construction and operational activities.

Both types of toxicity criteria are based on studies of chronic exposure in animals or, in some cases, to people.

4.4.1.4 Risk Characterization

Methods for Evaluating Cancer Risks and Non-Cancer Health Hazards

Cancer risks are estimated by multiplying exposure estimates for carcinogenic chemicals by corresponding cancer slope factors. Results are risk estimates expressed as the odds of developing cancer. Commonly, risks (or odds) of developing cancer of one to ten in one million (1×10^{-6} to 10×10^{-6}) or less are considered *de minimis*. Higher risks may be deemed significant in some instances. Cancer risks will be based on an exposure duration of 70 years. The following methodology was used in determining cancer risks:

- Chronic non-cancer health hazard estimates were calculated by dividing exposure estimates by reference doses to obtain a hazard quotient (HQ).
- An HQ greater than one indicates an exposure concentration greater than that considered safe. An HQ ratio that is less than one indicates that Project-related (incremental) exposure is less than the highest exposure level that would not cause an adverse health effect and, hence, no impact to human health would be expected.
- Impacts of exposure to multiple chemicals are accounted for by adding cancer risk estimates for exposure to all carcinogenic chemicals, and by adding estimated HQs for non-carcinogenic chemicals that affect the same target organ or tissue in the body. Addition of HQs for TAC that produce effects in similar organs and tissues results in a Hazard Index (HI) that reflects possible total hazards.
- Incremental human health risks will be compared to CEQA thresholds of significance. These comparisons focused on specific risk thresholds such as ten in one million cancer risk or a hazard index of 1.
- Human health impacts were also compared with data on possible human health impacts of TAC in the Los Angeles basin as determined in the MATES III. These latter comparisons provide a quantitative estimate of the cumulative impacts of the proposed Project on air quality and human health risks associated with TAC of concern within the Los Angeles Basin.

Methodology for Evaluating Acute Impacts

Acute non-cancer risk estimates were calculated by dividing estimated maximum 1-hour TAC concentrations in the air by acute RELs. An acute REL is a concentration in air below which adverse effects are unlikely for people exposed for a short time on an intermittent basis. RELs do not distinguish between adults and children, but are established at levels that are considered protective of sensitive populations. Since margins of safety are incorporated to address data gaps and uncertainties, exceeding the REL does not automatically indicate an adverse health impact.

The assumptions and process of evaluating acute non-cancer risks is as follows:

- Acute adverse health impacts for all TAC with RELs were evaluated.

- Short-term concentrations for TAC were estimated using AERMOD, with the model option for 1-hour maximum concentrations selected. These concentrations represent the highest predicted concentrations of TAC.
- Acute non-cancer health hazards were then estimated at each grid point by dividing estimated maximum 1-hour TAC concentrations in air by acute RELs.
- A hazard index equal to or greater than 1, the threshold of significance for acute non-cancer health impacts, indicates some potential for adverse acute non-cancer health impacts. A hazard index less than 1 suggests that adverse acute non-cancer health impacts are not expected.

4.4.2 TAC Emissions

Both organic and particulate-bound TAC were analyzed in the EIR HHRA. TAC are constituents of either VOC or PM_{10}; therefore these emissions will be developed from VOC and PM_{10} emission inventories for the sources outlined in Section 5.2. CARB speciation profiles for VOC and PM_{10} emissions from individual source types were used to calculate TAC emissions.

4.4.2.1 Construction Emissions

On-airport construction sources of TAC emissions include:

- Off-road heavy duty construction equipment;
- On-road equipment and vehicles;
- Generators; and
- Construction materials (e.g., VOCs from striping and asphalt paving).

The construction schedule combined with the VOC and PM_{10} pollutant emissions inventories were the basis for development of the TAC emissions inventory. The methodology for estimating the proposed Project construction VOC and PM_{10} emissions are outlined in Section 5.2. Short-term exposure will be evaluated using the daily emissions during the peak month of the proposed Project construction. Long-term exposure was evaluated using period-average daily emissions in the peak year of construction to quantify chronic health impacts.

4.4.3 TAC Exposure Concentration (Dispersion)

Air dispersion modeling was used to estimate TAC concentrations from construction sources for the proposed Project. TAC concentrations were estimated in two steps:

1. Estimate total VOC and PM_{10} concentrations at receptor locations through dispersion modeling.
2. Calculate individual organic or particulate TAC concentrations using emissions profiles to speciate total VOC and PM_{10} estimates.

The AERMOD model was used to calculate annual average (chronic and carcinogenic exposure) and peak hour (acute exposure) chemical concentrations associated with each emitting construction and operations source. Inputs for each emitting source will be based on

characterizations of each pollutant. The analysis was used to determine the contribution that the proposed Project would make to airport-related risks and hazards.

TAC concentrations were also estimated at a set number of grid node receptors as discussed in Section 5.3.1.

4.5 Cumulative Impacts

The construction of various on-going and anticipated future projects at LAX would potentially occur simultaneously with construction of the proposed Project. This section identifies past, present, and reasonably foreseeable related projects, including LAX development projects (LAX Master Plan projects and other LAX projects with independent utility) and non-LAX development projects, that could, in conjunction with the proposed Project, result in cumulative impacts to the environment. **Table 7** below lists on-going and future projects at LAX within the immediate area of the proposed Project.

- LAX Master Plan Development Projects: the LAX Master Plan Final EIR addresses the overall effects of the approved LAX Master Plan, essentially providing a cumulative impact analysis of all the improvements that comprise the LAX Master Plan, while also identifying the more notable impacts that are attributable to specific components, where appropriate. The LAX Master Plan provides a comprehensive plan for a number of improvement projects planned to be implemented over many years throughout the Airport.
- LAX Development Projects Independent of the Master Plan: it is anticipated that a number of other, stand-alone construction activities at LAX that were not part of the LAX Master Plan would likely be underway concurrent with the construction of the proposed Project, including both LAWA and tenant projects.
- LAX Specific Plan Amendment Study: In accordance with the LAX Master Plan Stipulated Settlement and Section 7.H. of the LAX Specific Plan, LAWA completed the LAX Specific Plan Amendment Study (SPAS) to identify and evaluate alternatives to certain improvements delineated in the LAX Master Plan. Those proposed Master Plan improvements, generally referred to as the "Yellow-Light Projects," include the Ground Transportation Center (GTC), the Automated People Mover (APM) between the GTC and the CTA, demolition of Terminals 1, 2, and 3, reconfiguration of the north runway complex, and on-airport road improvements associated with the GTC. Nine alternatives comprised of various combinations of airfield, terminal, and ground access improvements are addressed within the SPAS Final EIR, and a Staff-Recommended Alternative (Combination of SPAS Alternatives 1 and 9) was approved by the LA City Council in April 2013. That alternative must still undergo review and approval by FAA in order to be implemented. As such, for related projects included in this EIR, the existing LAX Master Alternative D, which is SPAS Alternative 3, is assumed.
- Non-LAX Planned Development: a list of major development projects in the City of Los Angeles and neighboring communities within the vicinity of the study area is included in Table 7. The list was prepared to document and describe major known local area development projects that may contribute traffic to the proposed Project study area.

Table 7

LAX Development Projects Not Related to the proposed Project Elements

Project	Construction		Description
	Start Date	End Date	
Airfield-Related Improvements			
Runway 6L-24R Safety Area Improvements-North Airfield	Jun-14	Dec-15	Improvements at east end of Runway 6L-24R to meet FAA RSA requirements, and rehabilitate runway pavement.
Terminal-Related Improvements			
LAX Bradley West Project Remaining Work	Nov-13	Dec-17	Completion of replacing existing concourses and aprons at the Tom Bradley International Terminal (TBIT) with new concourses and gates at Bradley West. Remaining work includes demolition of existing TBIT concourses and installation of east gates/aprons along Bradley West concourses. Also includes Taxiway T project and construction of secure/sterile passenger and baggage connection between the TBIT core and Terminal 4 (T-4). Although construction of similar connection between TBIT core and T-3 is also part of the overall Bradley West Project, it is broken out separately below, as its construction would not begin until well after the other Bradley West improvements are completed.
North Terminal Improvements	Aug-13	Aug-17	Major interior improvements and building system upgrades within the North Terminal complex, particularly Terminal 1 (Southwest).
South Terminal Improvements	Nov-11	Feb-18	Major interior improvements and building system upgrades within the South Terminal complex, particularly Terminal 5 (Delta Airlines) and Terminals 6-8 (United).

Table 7

LAX Development Projects Not Related to the proposed Project Elements

Project	Construction		Description
	Start Date	End Date	
Infrastructure/Security/Miscellaneous Improvements			
Central Utility Plant Replacement Project (CUP - RP) Remaining Work	Sep-13	Dec-14	Completion of Replacement CUP and related underground piping network within CTA.
Miscellaneous Projects and Improvements	Jan-14	Jul-20	This includes a wide variety of smaller miscellaneous projects and improvements mostly related to repair/replacement of, and upgrades to, existing facilities at LAX, including, but not limited to, runway repair/rehabilitation, elevators/escalators replacement, CTA second level roadway repairs, terminal taxilanes and aprons rehabilitation, passenger boarding bridge replacements, terminals electrical, plumbing, and facilities upgrades, miscellaneous demolition, and more.
West Aircraft Maintenance Area Project	Jan-14	Dec-18	The proposed West Aircraft Maintenance Area project would allow for more efficient and effective maintenance of existing aircraft at the airport, including Aircraft Design Group (ADG) VI aircraft (Airbus A380s and Boeing 747-8s). The proposed Project would include aircraft parking and maintenance facilities, a ground run-up enclosure, employee parking areas, and related storage, equipment and facilities. The proposed Project would be able to accommodate up to 8 ADG VI aircraft simultaneously or 18 ADG III aircraft (aircraft similar in size to and including Boeing 737's).

Table 7

LAX Development Projects Not Related to the proposed Project Elements

Project	Construction		Description
	Start Date	End Date	
Land Development and Miscellaneous Improvements			
LAX Northside Area Development[a]	Jan-15	Dec-22	Development of LAX Northside area with a mix of employment, retail, restaurant, office, hotel, research and development, education, civic, airport support, recreation, and buffer uses that support the needs of surrounding communities and LAWA. The approved development plan provides entitlements for up to 4.5 million square feet of development, subject to a limitation on the total number of vehicle trips (a "trip cap"). Formulation of a new reduced land use development program for the subject area is currently in process, which will be followed by completion of environmental review studies. Schedule for development to be determined.
LAX Master Plan Alt. D/SPAS Development	Jun-15	Jun-25	In accordance with the LAX Master Plan Stipulated Settlement and Section 7.H. of the LAX Specific Plan, LAWA is completing the LAX Specific Plan Amendment Study (SPAS) to identify and evaluate alternatives to certain improvements delineated in the LAX Master Plan. Those proposed Master Plan improvements, generally referred to as the "Yellow-Light Projects," include the Ground Transportation Center (GTC), the Automated People Mover (APM) between the GTC and the CTA, demolition of Terminals 1, 2, and 3, reconfiguration of the north runway complex, and on-airport road improvements associated with the GTC. Nine alternatives comprised of various combinations of airfield, terminal, and ground access improvements are addressed within the SPAS Final EIR, and a Staff-Recommended Alternative (combination of SPAS Alternatives 1 and 9) was approved by the LA City Council in April 2013. That alternative must still undergo review and approval by FAA in order to be implemented. As such, for related projects included in this EIR, the existing LAX Master Alternative D, which is SPAS Alternative 3, is assumed.

Table 7

LAX Development Projects Not Related to the proposed Project Elements

Project	Construction		Description
	Start Date	End Date	
Other Related (non-LAWA) Projects			
Metro Crenshaw / LAX Transit Corridor and Station[b]	Dec-15	Dec-17	The Los Angeles County Metropolitan Transportation Authority (Metro) recently approved the proposed Crenshaw/LAX Transit Corridor Project, which includes an 8.5-mile light-rail transit line that would connect the existing Metro Green Line and the Metro Expo Line at Crenshaw and Exposition Boulevards. A station is proposed in proximity to LAX, near the intersection of Century Boulevard and Aviation Boulevard.

Notes:
N/A = Not Available
a Assumes only that portion of the overall Metro Crenshaw/LAX Transit Corridor and Station project that occurs in the general vicinity of LAX. Estimated schedule based on information obtained from Crenshaw/LAX Transit Corridor Project FEIR and project website.
b Construction traffic estimates provided by Gibson Transportation Consulting, Inc.
Source: Los Angeles World Airports, July 2013; CDM Smith, August 2013; Ricondo & Associates, August 2013.
Prepared By: Ricondo & Associates, August 2013.

4.6 Greenhouse Gas Emissions Methodology

4.6.1 Introduction

Parts of the earth's atmosphere act as an insulating blanket, trapping sufficient solar energy to keep the global average temperature in a suitable range. The blanket is a collection of atmospheric gases called greenhouse gases GHGs. These gases, including water vapor, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), ozone, chlorofluorocarbons (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6), all act as effective global insulators, trapping heat in the Earth's atmosphere. The potential of these gases or aerosols to trap heat in the atmosphere is known as the global warming potential (GWP). Individual GHG species have varying GWP and atmospheric lifetimes.

Individual GHG emissions are normalized by multiplying individual emissions by its GWP to calculate the carbon dioxide equivalent (CO_{2e}); this produces a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent metric. The reference gas for GWP is carbon dioxide; carbon dioxide has a GWP of one. All other GHGs have a greater global warming effect than carbon dioxide on a molecule-per-molecule basis. The global warming potential of select GHGs are shown in **Table 8**.

Table 8

Global Warming Potentials and Atmospheric Lifetimes of Select Greenhouse Gases

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100 year time horizon)
Carbon Dioxide (CO_2)	50 – 200	1
Methane (CH_4)	12 $\pm$ 3	21
Nitrous Oxide (N_2O)	120	310
HFC-23	264	11,700
HFC-134a	14.6	1,300
HFC-152a	1.5	140
PFC: Perfluromethane (CF_4)	50,000	6,500
PFC: Perfluoroethane (C_2F_6)	10,000	9,200
Sulfur/Hexaflouride	3,200	23,900

Source: Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007.
Prepared by: Ricondo & Associates, Inc., February 2013.

For the GHG analysis, the GHGs of concern are primarily CO_2, CH_4 and N_2O from construction and operational sources. The analysis of greenhouse gas emissions will generally mirror the air quality criteria pollutant emissions inventory, as discussed in Section 5.1.3. This inventory will focus on CO_2 emissions, and where data is available concerning other greenhouse gases, will inventory those pollutants to create a CO_2 equivalent (CO_{2e}).

In preparing the EIR greenhouse gas inventory, it is important to set the boundaries of the evaluation. The EIR inventory will focus on emissions by sources that would be affected by the proposed Project; not all sources at the airport would be affected and thus, the inventory will not be a complete airport inventory. Because the number of aircraft operations will not be affected by the proposed Project, and the effects of the project would be within the airport operating environment, the boundary of aircraft greenhouse gas emissions for this evaluation will be limited to the aircraft landing and takeoff cycle (LTO).

4.6.2 Emissions Inventories and Methodology

The inventory of greenhouse gases provides estimates of the amount of GHGs associated with the construction and long-term operation of the proposed Project.

4.6.2.1 Construction Sources

Project-related construction GHG emissions are associated with construction equipment/vehicle exhaust and from the increase in taxi times when aircraft operations are shifted to other runways during the temporary runway closure. CO_2 emission rates were calculated following the methodology outlined in Section 5.2, as appropriate.

4.6.2.2 Operational Sources

In accordance with the State CEQA Guidelines, the operational impacts of the proposed Project were compared to baseline conditions to determine significance under CEQA. As indicated previously, for purposes of the EIR analysis, the baseline conditions are representative of calendar year 2011.

Section 5.2 discusses the approach to be used in quantifying criteria pollutant emissions from aircraft. Outputs from EDMS include the CO_2 emissions from aircraft. CH_4 and N_2O emissions are not directly estimated by EDMS; therefore, emissions were estimated using other methods. Fuel burn outputs from EDMS and emission factors from the US Energy Information Administration were input into **Equation 6** to calculate the emissions of CH_4 and N_2O. By applying the GWP factor, a CO_2e was calculated for CH_4 and N_2O. The total CO_2e is the sum of these three pollutants, as shown in **Table 9**.

Table 9

GHG Emission Factors

Pollutant/Item	Emission/Conversion Factor	Units
CH_4	0.27	g/gal
N_2O	0.31	g/gal
Jet Fuel	6.84	lbs/gal

Source: U.S. Energy Information Administration, "Voluntary Reporting of Greenhouse Gases Program Fuel Emission Coefficients," January 31, 2011, www.eia.gov/oiaf/1605/coefficients.html#tbl7; Airport Cooperative Research Program, Transportation Research Board, "Guidebook on Preparing Airport Greenhouse Gas Emissions Inventories," 2009.
Prepared by: Ricondo & Associates, Inc., September 2013.

Equation 6

GHG Emissions

$$E = F \times 6.84 \times EF$$

Where:

E = emissions (metric tons)

F = fuel burn from EDMS (lbs)

6.84 = conversion from lbs to gallons of Jet Fuel

EF = emission factor (kg/gal)

Source: Ricondo & Associates, Inc., April 2013.
Prepared by: Ricondo & Associates, Inc., April 2013.

4.7 CEQA Thresholds of Significance

4.7.1 Criteria Pollutants

As noted in the Initial Study, for the purposes of this Draft EIR, and in accordance with Appendix G of the CEQA Guidelines, which is also incorporated in the City of Los Angeles CEQA Thresholds Guide, an impact to air quality is considered significant if the proposed Project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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);
- Expose sensitive receptors to substantial pollutant concentrations;
- Create objectionable odors affecting a substantial number of people;
- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; and
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

The SCAQMD has developed operational and construction-related thresholds of significance for air quality impacts of projects proposed in the Basin. These thresholds, which are included in the SCAQMD *Air Quality Analysis Guidance Handbook*, are utilized for purposes of CEQA, and are summarized in **Table 10** for regional emissions. A significant air quality impact would occur if the estimated incremental increase in operational or construction-related emissions

attributable to the proposed Project would be greater than the daily operational or construction emission thresholds presented in **Table 10**.

Table 10

South Coast Air Quality Management District Significance Thresholds

Pollutant	Mass Daily Thresholds (lbs/day)	
	Construction	Operation
Nitrogen Oxides (NO_x)	100	55
Volatile Organic Compounds (VOC)	75	55
Respirable Particulate Matter (PM_{10})	150	150
Fine Particulate Matter ($PM_{2.5}$)	55	55
Sulfur Oxides (SO_x)	150	150
Carbon Monoxide (CO)	550	550
Lead (Pb)	3	3

Notes: lbs/day = pounds per day
Source: SCAQMD Air Quality Significance Thresholds. Available at www.aqmd.gov/ceqa/handbook/signthres.pdf, March 2011.

The SCAQMD has also developed operational and construction-related thresholds of significance for local project air pollutant concentrations. These thresholds are summarized in **Table 11**. In accordance with the SCAQMD *Air Quality Analysis Guidance Handbook*, a significant air quality impact would occur if the estimated incremental ambient concentrations due to construction-related or operations-related emissions would be greater than the concentration thresholds presented in **Table 11**.

Table 11

SCAQMD CEQA Concentration Thresholds of Significance

Pollutant	Project-Related Concentration Thresholds			
	Averaging Period	Construction	Operation	Project Only or Total
PM_{10}	Annual	1.0 µg/m^3	1.0 µg/m^3	Project Only
	24-hour	10.4 µg/m^3	2.5 µg/m^3	Project Only
$PM_{2.5}$	24-hour	10.4 µg/m^3	2.5 µg/m^3	Project Only
CO	8-hour	9.0 ppm (10 mg/m^3)	9.0 ppm (10 mg/m^3)	Total incl. Background
	1-hour	20 ppm (23 mg/m^3)	20 ppm (23 mg/m^3)	Total incl. Background

Table 11

SCAQMD CEQA Concentration Thresholds of Significance

Pollutant	Project-Related Concentration Thresholds			
	Averaging Period	Construction	Operation	Project Only or Total
NO_2	Annual (State)	0.030 ppm (57 µg/m^3)	0.030 ppm (57 µg/m^3)	Total incl. Background
	1-hour (Federal)	0.100 ppm (188 µg/m^3)	0.100 ppm (188 µg/m^3)	Total incl. Background
	1-hour (State)	0.18 ppm (339 µg/m^3)	0.18 ppm (339 µg/m^3)	Total incl. Background
SO_2	24-hour	0.04 ppm (105 µg/m^3)	0.04 ppm (105 µg/m^3)	Total incl. Background
	1-hour (Federal)	0.075 ppm (196 µg/m^3)	0.075 ppm (196 µg/m^3)	Total incl. Background
	1-hour (State)	0.25 ppm (655 µg/m^3)	0.25 ppm (655 µg/m^3)	Total incl. Background

Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993; as updated by "SCAQMD Air Quality Significance Thresholds," March 2011, Available: http://www.aqmd.gov/CEQA/handbook/signthres.pdf.
Prepared by: Ricondo & Associates, Inc., March 2013.

The following Los Angeles CEQA Thresholds Guide are included for the assessment of community air quality exposure and are applicable to the proposed Project construction air quality impacts analysis. The City of Los Angeles - Project-related factors are used in a case-by-case evaluation of significance include the following:

- Combustion Emissions from Construction Equipment
- Type, number of pieces and usage for each type of construction equipment
- Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment
- Emission factors for each type of equipment
- Fugitive Dust
- Grading, Excavation and Hauling;
- Amount of soil to be disturbed on-site or moved off-site
- Emission factors for disturbed soil
- Duration of grading, excavation and hauling activities
- Type and number of pieces of equipment to be used
- Projected haul route.
- Heavy-Duty Equipment Travel on Unpaved Roads:

- Length and type of road
- Type, number of pieces, weight and usage of equipment
- Type of soil
- Other Mobile Source Emissions
- Number and average length of construction worker trips to Project site, per day
- Duration of construction activities.

4.7.2 Climate Change

CEQA gives wide latitude to lead agencies in determining what impacts are significant and does not prescribe thresholds of significance, analytical methodologies, or specific mitigation measures. CEQA leaves the determination of significance to the reasonable discretion of the lead agency and encourages lead agencies to develop and publish thresholds of significance to use in determining the significance of environmental effects. However, neither the SCAQMD nor the City of Los Angeles has yet established specific quantitative significance thresholds for GHG emissions for residential or commercial projects. In the latest CEQA Guidelines amendments, which went into effect on March 18, 2010, OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. However, the City of Los Angeles has not yet developed a Greenhouse Reduction Plan meeting the requirements set forth in the latest OPR guidelines.

In addition to the above guidelines, in October 2008, CARB published draft preliminary guidance to agencies on how to establish interim significance thresholds for analyzing GHG emissions in *Recommended Approaches for Setting Interim Thresholds for Greenhouse Gases under the California Environmental Quality Act*. For industrial projects, the CARB guidance proposed that projects that emit less than 7,000 Metric Tons (MT) of CO_2 per year (amortized), as well as meeting performance standards for construction and transportation, may be considered less than significant. Since there are currently no formally adopted significance thresholds for daily GHG emissions for either construction or transportation operations, proposed Project emissions were compared to the 7,000 MT of CO_2 interim threshold, which LAWA considers the best guidance available to date.

4.8 Project Design Features

The air quality analysis includes a Project Design Feature related to construction equipment that utilizes the latest technology to reduce emission impacts.

- Tier 4 final Pollution Control Measures for Construction Equipment. In 2004, the EPA established the Tier 4 emission standards for off-road vehicles which require that emissions of PM and NO_x be further reduced by about 90 percent from previous emission standards. These standards would be phased-in over the period of 2008-2015. These standards represent the most stringent limits for off-road vehicle exhaust that has been legislated.

Tier 4 pollution control measures were utilized in the analysis of air quality impacts and are anticipated to be utilized as part of construction of the proposed Project. There are no other specific Project Design Features related to Air Quality other than those already required by regulations and as part of the LAX Master Plan EIS/EIR Commitments.

4.8.1 LAX Master Plan EIS/EIR Commitments

As part of the LAX Master Plan, LAWA adopted several mitigation measures and commitments pertaining to air quality to avoid or reduce environmental impacts, as described in the LAX Master Plan MMRP. Although the proposed Project is not part of the LAX Master Plan, LAWA is committed to implementing the applicable LAX Master Plan commitments to all LAWA projects, including the proposed Project. Of the three commitments and four mitigation measures that were designed to address air quality impacts related to implementation of the LAX Master Plan, none of the commitments are applicable to the proposed Project, but three of the mitigation measures are applicable to the proposed Project and were considered in the air quality analysis herein (denoted below as LAX-AQ-1, LAX-AQ-2, and LAX-AQ-4). The transportation-related control measure (denoted as LAX-AQ-3) is not applicable to the proposed Project because the Project does not include ground transportation access components; thus LAX-AQ-3 was not considered in the air quality analysis herein. The portions of the three air quality control measures that would be applicable to the proposed Project are summarized below.

- **LAX-AQ-1 – General Air Quality Control Measures.** This measure describes a variety of specific actions to reduce air quality impacts associated with projects at LAX, and applies to all projects. Some components of LAX-AQ-1 are not readily quantifiable, but would be implemented as part of LAX Master Plan projects. Specific measures are identified in **Table 12.**

Table 12

General Air Quality Control Measures[a]

Measure Number	Measure	Type of Measure	Quantified Emissions Reduction
1a	Watering (per SCAQMD Rule 403) – twice daily	Fugitive Dust	50% PM_{10} and $PM_{2.5}$
1b	Ultra-low sulfur diesel (ULSD) fuel will be used in construction equipment.	Off-Road Mobile	Assumed in modeling
1c	Post a publicly visible sign with the telephone number and person to contact regarding dust complaints; this person shall respond and take corrective action within 24 hours.	Fugitive Dust	NQ
1d	Prior to final occupancy, the applicant demonstrates that all ground surfaces are covered or treated sufficiently to minimize fugitive dust emissions.	Fugitive Dust	NQ
1e	All roadways, driveways, sidewalks, etc., being installed as part of the project should be completed as soon as possible; in addition, building pads should be laid as soon as possible after grading.	Fugitive Dust	NQ

Table 12

General Air Quality Control Measures[a]

Measure Number	Measure	Type of Measure	Quantified Emissions Reduction
1f	Prohibit idling or queuing of diesel-fueled vehicles and equipment in excess of five minutes. This requirement will be included in specifications for any LAX projects requiring on-site construction.[b]	Nonroad Mobile	NQ
1g	Require that all construction equipment working on-site is properly maintained (including engine tuning) at all times in accordance with manufacturers' specifications and schedules.	Mobile and Stationary	NQ

Notes:
NQ = Not Quantified
[a] These measures are from LAX Master Plan Mitigation Measure MM-AQ-2, unless otherwise noted.
[b] From LAX Master Plan Mitigation Measure MM-AQ-2 and Community Benefits Agreement Measure X.M.
Source: Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, April 2004; Los Angeles World Airports, *Community Benefits Agreement*, 2006.

- **LAX-AQ-2 - Construction-Related Control Measures.**[23] This measure describes numerous specific actions to reduce fugitive dust emissions and exhaust emissions from on-road and off-road mobile and stationary sources used in construction. Some components of LAX-AQ-2 are not readily quantifiable, but would be implemented as part of LAX projects. These control strategies are expected to reduce construction-related emissions. Specific measures are identified in **Table 13.**

[23] The mitigation elements presented in LAX-AQ-2 were derived from LAX Master Plan EIS/EIR Mitigation Measure MM-AQ-3.

Table 13

Construction-Related Air Quality Control Measures[a]

Measure Number	Measure	Type of Measure	Potential Emissions Reduction by Equipment
2a	All diesel-fueled equipment used for construction will be outfitted with the best available emission control devices, where technologically feasible, primarily to reduce emissions of diesel particulate matter (PM), including fine PM ($PM_{2.5}$), and secondarily, to reduce emissions of NO_x. This requirement shall apply to diesel-fueled off-road equipment (such as construction machinery), diesel-fueled on-road vehicles (such as trucks), and stationary diesel-fueled engines (such as electric generators). (It is unlikely that this measure will apply to equipment with Tier 4 engines.) The emission control devices utilized in construction equipment shall be verified or certified by California Air Resources Board or US Environmental Protection Agency for use in on-road or off-road vehicles or engines. For multi-year construction projects, a reassessment shall be conducted annually to determine what constitutes a best available emissions control device.[b]	Off-Road Mobile	85% PM_{10} $PM_{2.5}$, adjusted for compatibility
2b	Watering (per SCAQMD Rule 403) – three times daily	Fugitive Dust	61% PM_{10} and 61% $PM_{2.5}$
2c	Pave all construction access roads at least 100 feet onto the site from the main road.	Fugitive Dust	NQ
2d	To the extent feasible, have construction employees' work/commute during off-peak hours.	On-Road Mobile	NQ
2e	Make available on-site lunch trucks during construction to minimize off-site worker vehicle trips.	On-Road Mobile	NQ
2f	Utilize on-site rock crushing facility, when feasible, during construction to reuse rock/concrete and minimize off-site truck haul trips.	Nonroad Mobile	NQ
2g	Specify combination of electricity from power poles and portable diesel- or gasoline-fueled generators using "clean burning diesel" fuel and exhaust emission controls.	Stationary Point Source Controls	NQ
2h	Suspend use of all construction equipment during a second-stage smog alert in the immediate vicinity of LAX.	Mobile and Stationary	NQ
2i	Utilize construction equipment having the minimum practical engine size (i.e., lowest appropriate horsepower rating for intended job).	Mobile and Stationary	NQ
2j	Prohibit tampering with construction equipment to increase horsepower or to defeat emission control devices.	Mobile and Stationary	NQ
2k	The contractor or builder shall designate a person or persons to ensure the implementation of all components of the construction-related measure through direct inspections, record reviews, and investigations of complaints.	Administrative	NQ

Table 13

Construction-Related Air Quality Control Measures[a]

Measure Number	Measure	Type of Measure	Potential Emissions Reduction by Equipment
2l	LAWA will locate rock-crushing operations and construction material stockpiles for all LAX-related construction in areas away from LAX-adjacent residents, to the extent possible, to reduce impacts from emissions of fugitive dust.[c]	Stationary	Can be quantified in modeling assumptions
2m	LAWA will ensure that there is available and sufficient infrastructure on-site, where not operationally or technically infeasible, to provide fuel to alternative-fueled vehicles to meet all requests for alternative fuels from contractors and other users of LAX. This will apply to construction equipment and to operations-related vehicles on-site. This provision will apply in conjunction with construction or modification of passenger gates related to implementation of the LAX Master Plan relative to the provision of appropriate infrastructure for electric GSE.[d]	Mobile	NQ
2n	On-road trucks used on LAX construction projects with a gross vehicle weight rating of at least 19,500 pounds shall, at a minimum, comply with USEPA 2007 on-road emissions standards for PM10 and NO_x.[e]	On-Road Mobile	Assumed in modeling
2o	Prior to January 1, 2015, all off-road diesel-powered construction equipment greater than 50 horsepower shall meet USEPA Tier 3 off-road emission standards. After December 31, 2014, all off-road diesel-power construction equipment greater than 50 horsepower shall meet USEPA Tier 4 off-road emissions standards. Tier 4 equipment shall be considered based on availability at the time the construction bid is issued. LAWA will encourage construction contractors to apply for SCAQMD "SOON" funds to accelerate clean-up of off-road diesel engine emissions.[f]	Off-Road Mobile	Assumed in modeling

Notes:

[a] These measures are from LAX Master Plan Mitigation Measure MM-AQ-2, unless otherwise noted.

[b] From LAX Master Plan Mitigation Measure MM-AQ-2 and Community Benefits Agreement Measure X.F.

[c] From Community Benefits Agreement Measure X.L.

[d] From Community Benefits Agreement Measure X.N.

[e] From LAX Specific Plan Amendment Study Measure MM-AQ (SPAS)-1.

[f] From LAX Specific Plan Amendment Study Measure MM-AQ (SPAS)-1.

Source: Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, April 2004; Los Angeles World Airports, *Community Benefits Agreement*, 2006; Los Angeles World Airports, *Preliminary LAX Specific Plan Amendment Study Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study*, June 2012.

- **LAX-AQ-4 – Operations-Related Control Measures.** The principle feature of this measure is the conversion of LAX GSE to low and ultra-low emission technology (e.g., electric, fuel cell, and other future low-emission technologies). It should be noted that no estimate of the air quality benefit (i.e., emission reductions) of other secondary measures is made in this analysis. Specific measures are identified in **Table 14**.

Table 14

Operations-Related Air Quality Control Measures[a]

Measure Number	Measure	Type of Measure
4a	LAX GSE will be converted to low- and ultra-low emission technology (e.g., electric, fuel cell, and other future low-emission technologies). Both LAWA- and tenant-owned equipment will be included in this conversion program, which will be implemented in phases. LAWA will assign a GSE coordinator whose responsibility it will be to ensure the successful conversion of GSE in a timely manner. This coordinator will have adequate authority to negotiate on behalf of the City and have sufficient technical support to evaluate technical issues that arise during the implementation of this measure.[b]	Airside Operations
4d	LAWA will require the use of electric lawn mowers and leaf blowers, as these units become available for commercial use, for landscape maintenance associated with the proposed project.[c]	General
4e	LAWA will require the conversion of sweepers to alternative fuels or electric power for ongoing airfield and roadway maintenance. In the 2006 GSE inventory, two of ten sweepers were electric powered and one was either CNG or LPG fueled. HEPA filters will be installed on airport sweepers where the use of HEPA filters is technologically and financially feasible and does not pose a safety hazard to airport operations.[d]	General
4f	LAWA will ensure that there is available and sufficient infrastructure on-site, where not operationally or technically infeasible, to provide fuel to alternative-fueled vehicles to meet all requests for alternative fuels from contractors and other users of LAX. This will apply to construction equipment and to operations-related vehicles on-site. This provision will apply in conjunction with construction or modification of passenger gates related to implementation of the LAX Master Plan relative to the provision of appropriate infrastructure for electric GSE.[e]	Operational Vehicles.

Notes:
a. These measures are from LAX Master Plan Mitigation Measure MM-AQ-4, unless otherwise noted.
b. From Community Benefits Agreement Measure X.F.
c. From LAX Specific Plan Amendment Study Measure MM-AQ (SPAS)-3.
d. From LAX Specific Plan Amendment Study Measure MM-AQ (SPAS)-3.
e. From Community Benefits Agreement Measure X.N.
Sources: Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, April 2004; Los Angeles World Airports, *Community Benefits Agreement*, 2006; Los Angeles World Airports, *Preliminary LAX Specific Plan Amendment Study Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study*, June 2012

4.8.2 Additional Measures

LAWA is committed to mitigating temporary construction-related emissions to the extent practicable and has established some of the most aggressive construction emissions reduction measures in southern California, particularly with regard to requiring construction equipment to be equipped with emissions control devices. The specific means for implementing the project design features described above were first approved and implemented as part of the South Airfield Improvement Project, and would also be applied to the proposed Project.

Project design features described above also include those required by the CBA. These measures establish a commitment and process for incorporating all technically feasible air quality mitigation measures into each component of the LAX Master Plan, as well as LAX projects that are independent of the LAX Master Plan. In addition, the Los Angeles Green Building Code Tier 1 standards, which are applicable to all projects with an Los Angeles Department of Building and Safety permit-valuation over $200,000, require the proposed Project to implement a number of measures that would reduce criteria pollutant and greenhouse gas emissions. These include measures such as: further reduce vehicle and equipment idling times; comply with Tier 4 emission standards for non-road diesel equipment; retrofit existing diesel equipment with particulate filters and oxidation catalysts; replace aging equipment with new low-emission models; and consider the use of alternative fuels for construction equipment.

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APPENDIX B1

Construction Phase Air Quality Calculations

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EQUIPMENT EMISSION DATA

Hours per day --> 10

Emission Rates for Specific Equipment

Equipment	Emission Tier	Brake Horsepower	Hours/day	Emission Rates (lb/hr) ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	Emissions (lbs/day) ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4
Hyd. Crane, 12 Ton	4f	130	10	0.0115	0.392	0.0247	0.001	0.0012	0.001	54.278	0.009	0.12	3.92	0.25	0.01	0.01	0.01	543	0.09
Backhoe Loader, 48 HP	4	83	10	0.0094	0.531	0.1684	0.001	0.0010	0.001	50.331	0.013	0.09	5.31	1.68	0.01	0.01	0.01	503	0.13
Dump Truck, 12 CY, 400 HP	4f	400	10	0.0018	0.0056	0.0237	0.0000	0.0002	0.0002	9.4721	0.0000	0.02	0.06	0.24	0.00	0.00	0.00	95	0.00
Crawler Loader, 3 CY	4f	499	10	0.0557	0.638	0.1193	0.002	0.0060	0.005	236.322	0.017	0.56	6.38	1.19	0.02	0.06	0.05	2,363	0.17
Hyd. Crane 25 tons	4f	130	10	0.0115	0.392	0.0247	0.001	0.0012	0.001	54.278	0.009	0.12	3.92	0.25	0.01	0.01	0.01	543	0.09
Air Compressor, 250 cfm	4	78	10	0.0100	0.343	0.1784	0.001	0.0011	0.001	52.511	0.006	0.10	3.43	1.78	0.01	0.01	0.01	525	0.06
Dozer, 200 HP	4f	305	10	0.0372	0.833	0.0797	0.003	0.0040	0.004	223.653	0.027	0.37	8.33	0.80	0.03	0.04	0.04	2,237	0.27
Sheepsft Roller Towed	4f	232	10	0.0283	0.360	0.0606	0.002	0.0030	0.003	141.940	0.011	0.28	3.60	0.61	0.02	0.03	0.03	1,419	0.11
Dozer, 300 HP	4f	305	10	0.0372	0.833	0.0797	0.003	0.0040	0.004	223.653	0.027	0.37	8.33	0.80	0.03	0.04	0.04	2,237	0.27
Hyd. Excavator, 1 CY	4f	222	10	0.0261	0.314	0.0560	0.002	0.0028	0.002	140.784	0.010	0.26	3.14	0.56	0.02	0.03	0.02	1,408	0.10
Hyd. Excavator, 3.5 CY	4f	428	10	0.0504	0.451	0.1080	0.002	0.0054	0.005	199.898	0.013	0.50	4.51	1.08	0.02	0.05	0.05	1,999	0.13
Hyd. Crane 55 tons	4f	230	10	0.0271	0.271	0.0580	0.001	0.0029	0.003	103.094	0.009	0.27	2.71	0.58	0.01	0.03	0.03	1,031	0.09
S.P. Crane, 4x4, 5 Ton	4f	125	10	0.0111	0.377	0.0238	0.001	0.0012	0.001	52.191	0.009	0.11	3.77	0.24	0.01	0.01	0.01	522	0.09
S.P. Crane, 4x4, 12 Ton	4f	130	10	0.0115	0.392	0.0247	0.001	0.0012	0.001	54.278	0.009	0.12	3.92	0.25	0.01	0.01	0.01	543	0.09
Asphalt Paver, 130 HP	4	200	10	0.0256	0.889	0.2745	0.002	0.0027	0.002	146.480	0.018	0.26	8.89	2.74	0.02	0.03	0.02	1,465	0.18
Tandem Roller, 10 Ton	4	145	10	0.0168	0.491	0.2996	0.001	0.0018	0.002	71.214	0.011	0.17	4.91	3.00	0.01	0.02	0.02	712	0.11
Roller, Pneum., Whl., 12 Ton	4	145	10	0.0168	0.491	0.2996	0.001	0.0018	0.002	71.214	0.011	0.17	4.91	3.00	0.01	0.02	0.02	712	0.11
Grader, 30,000 lbs	4f	275	10	0.0347	0.476	0.0743	0.002	0.0037	0.003	189.155	0.015	0.35	4.76	0.74	0.02	0.04	0.03	1,892	0.15
Paving Machine and Equipment	4f	450	10	0.0493	0.832	0.1056	0.002	0.0053	0.005	209.733	0.018	0.49	8.32	1.06	0.02	0.05	0.05	2,097	0.18
Grader, 30,000 lbs	4f	275	10	0.0347	0.476	0.0743	0.002	0.0037	0.003	189.155	0.015	0.35	4.76	0.74	0.02	0.04	0.03	1,892	0.15
Paving Machine and Equipment	4f	335	10	0.0367	0.814	0.0786	0.003	0.0039	0.003	260.225	0.025	0.37	8.14	0.79	0.03	0.04	0.03	2,602	0.25
Paving Machine and Equipment	4f	200	10	0.0219	0.889	0.0469	0.002	0.0023	0.002	146.480	0.018	0.22	8.89	0.47	0.02	0.02	0.02	1,465	0.18
Paving Machine and Equipment		70	10	0.2243	0.502	0.1991	0.001	0.0157	0.014	39.150	0.017	2.24	5.02	1.99	0.01	0.16	0.14	392	0.17
Concrete Saw		10	10	0.1710	0.027	0.0414	0.000	0.0030	0.003	6.585	0.001	1.71	0.27	0.41	0.00	0.03	0.03	66	0.01
Scraper, Towed, 10 CY	4f	450	10	0.0669	1.089	0.1434	0.003	0.0072	0.006	289.026	0.026	0.67	10.89	1.43	0.03	0.07	0.06	2,890	0.26
Truck Tractor, 6x4, 380 HP	4f	460	10	0.0542	0.006	0.0237	0.000	0.000	0.000	9.472	0.000	0.54	0.06	0.24	0.00	0.00	0.00	95	0.00
Compactor, Roller, Vibratory, 25 Ton	4f	315	10	0.0364	0.489	0.0781	0.002	0.0039	0.003	192.720	0.014	0.36	4.89	0.78	0.02	0.04	0.03	1,927	0.14
Truck Tractor, 6x4, 450 HP	4f	460	10	0.002	0.006	0.0237	0.000	0.000	0.000	9.472	0.000	0.02	0.06	0.24	0.00	0.00	0.00	95	0.00
Hyd. Hammer (1200 lbs) (connect to Excavator)	4f	222	10	0.0261	0.314	0.0560	0.002	0.0028	0.002	140.784	0.010	0.26	3.14	0.56	0.02	0.03	0.02	1,408	0.10
FE Loader, W.M., 4 CY	4f	499	10	0.0557	0.638	0.1193	0.002	0.0060	0.005	236.322	0.017	0.56	6.38	1.19	0.02	0.06	0.05	2,363	0.17
Pavt. Rem. Bucket (connect to Excavator)	4f	222	10	0.0261	0.314	0.0560	0.002	0.0028	0.002	140.784	0.010	0.26	3.14	0.56	0.02	0.03	0.02	1,408	0.10
Dist. Tanker, 3000 Gallon	4f	330	10	0.005	0.014	0.0592	0.000	0.001	0.001	23.680	0.000	0.05	0.14	0.59	0.00	0.01	0.01	237	0.00
Pvmt. Profiler, 750 HP	4f	750	10	0.0697	1.387	0.1494	0.003	0.0075	0.007	349.555	0.031	0.70	13.87	1.49	0.03	0.07	0.07	3,496	0.31
Road Sweeper, S.P., 8' wide	4	170	10	0.005	0.014	0.0592	0.000	0.001	0.001	23.680	0.000	0.05	0.14	0.59	0.00	0.01	0.01	237	0.00
FE Loader, W.M., 1.5 CY	4f	220	10	0.0245	0.324	0.0526	0.001	0.0026	0.002	130.982	0.010	0.25	3.24	0.53	0.01	0.03	0.02	1,310	0.10
Ripper, beam, and shank (connect to Excavator)	4f	222	10	0.0261	0.314	0.0560	0.002	0.0028	0.002	140.784	0.010	0.26	3.14	0.56	0.02	0.03	0.02	1,408	0.10
Stabilizers, 310 HP	4f	430	10	0.0400	0.795	0.0857	0.003	0.0043	0.004	272.689	0.019	0.40	7.95	0.86	0.03	0.04	0.04	2,727	0.19
1 Flatbed Truck, Gas, 3 Ton	4f	360	10	0.002	0.006	0.0237	0.000	0.000	0.000	9.472	0.000	0.02	0.06	0.24	0.00	0.00	0.00	95	0.00
Truck Tractor, 220 HP	4f	220	10	0.002	0.006	0.0237	0.000	0.000	0.000	9.472	0.000	0.02	0.06	0.24	0.00	0.00	0.00	95	0.00
Line Rem., 11 HP, walk behind		11	10	0.0115	0.048	0.0060	0.000	0.0002	0.000	7.405	0.001	0.11	0.48	0.06	0.00	0.00	0.00	74	0.01
Paint Thermo. Striper, TM	4	85	10	0.0109	0.373	0.1944	0.001	0.0012	0.001	57.224	0.006	0.11	3.73	1.94	0.01	0.01	0.01	572	0.06
Heating Kettle, 115 Gallon	4	85	10	0.0109	0.373	0.1944	0.001	0.0012	0.001	57.224	0.006	0.11	3.73	1.94	0.01	0.01	0.01	572	0.06
Crane, Flatbed Mounted, 3 ton	4f	250	10	0.0222	0.295	0.0476	0.001	0.0024	0.002	112.058	0.009	0.22	2.95	0.48	0.01	0.02	0.02	1,121	0.09
Flatbed Truck - 10 Wheel	4f	360	10	0.002	0.006	0.0237	0.000	0.000	0.000	9.472	0.000	0.02	0.06	0.24	0.00	0.00	0.00	95	0.00
Crane RT 50 Ton	4f	200	10	0.0178	0.236	0.0381	0.001	0.0019	0.002	89.647	0.008	0.18	2.36	0.38	0.01	0.02	0.02	896	0.08
Crane - Track	4f	287	10	0.0255	0.338	0.0546	0.001	0.0027	0.002	128.643	0.011	0.25	3.38	0.55	0.01	0.03	0.02	1,286	0.11
Front End Loader	4f	220	10	0.0245	0.324	0.0526	0.001	0.0026	0.002	130.982	0.010	0.25	3.24	0.53	0.01	0.03	0.02	1,310	0.10
Motor Grader	4	140	10	0.0176	0.587	0.3151	0.001	0.0019	0.002	99.048	0.011	0.18	5.87	3.15	0.01	0.02	0.02	990	0.11
Compactor		33	10	0.1228	0.145	0.1535	0.000	0.0052	0.005	22.216	0.002	1.23	1.45	1.54	0.00	0.05	0.05	222	0.02
Light Plant		16.5	10	0.3397	0.072	0.0639	0.000	0.0053	0.005	11.108	0.001	3.40	0.72	0.64	0.00	0.05	0.05	111	0.01
Welder		38.9	10	0.3397	0.171	0.1507	0.000	0.0125	0.011	26.188	0.003	3.40	1.71	1.51	0.00	0.13	0.11	262	0.03
Fork Lift	4	80	10	0.0099	0.351	0.1771	0.001	0.0011	0.001	53.857	0.006	0.10	3.51	1.77	0.01	0.01	0.01	539	0.06
Truckmixer, 10 CY	4f	360	10	0.002	0.006	0.0237	0.000	0.0002	0.000	9.472	0.000	0.02	0.06	0.24	0.00	0.00	0.00	95	0.00
Concrete Pump	4f	290	10	0.0371	1.274	0.0796	0.002	0.0040	0.004	195.233	0.022	0.37	12.74	0.80	0.02	0.04	0.04	1,952	0.22
Generator	4f	749	10	0.0959	3.291	0.2056	0.006	0.0103	0.009	504.240	0.057	0.96	32.91	2.06	0.06	0.10	0.09	5,042	0.57
Vibrator		8	10	0.3397	0.035	0.0310	0.000	0.0026	0.002	5.386	0.001	3.40	0.35	0.31	0.00	0.03	0.02	54	0.01

EQUIPMENT EMISSION DATA

Onroad Vehicles	Distance	Speed	Emission Rates (grams/mile) ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4	Emission Rates (lbs) ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
Employee vehicles	26.6	40 mph	0.035	1.345	0.122	0.000	0.002	0.001	297.823	0.00	0.0021	0.0788	0.0071	-	0.0001	0.0001	17	-
3/4 ton pickup truck Ford F250	2	20 mph	0.264	3.668	0.512	0.000	0.004	0.003	1,006.07	0.00	0.0012	0.0162	0.0023	-	0.0000	0.0000	4	-
T7 tractor	2	20 mph	0.416	1.276	5.372	0.000	0.056	0.052	2,150.17	0.00	0.0018	0.0056	0.0237	-	0.0002	0.0002	9	-
1 Dist. Tanker, 3000 Gallon	5	20 mph	0.416	1.276	5.372	0.000	0.056	0.052	2,150.17	0.00	0.0046	0.0140	0.0592	-	0.0006	0.0006	24	-
1 Road Sweeper, S.P., 8' wide	5	20 mph	0.416	1.276	5.372	0.000	0.056	0.052	2,150.17	0.00	0.0046	0.0140	0.0592	-	0.0006	0.0006	24	-

Emissions by Crew

Crews:	Quantities	Usage Rate	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
2 Carp			**0.0048**	**0.1801**	**0.0164**	**-**	**0.0002**	**0.0002**	**40.0324**	**-**
Employee vehicles	2	1.124	0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Pickup Trucks, 3/4 Ton	0.5	37%	0.0002	0.0030	0.0004	-	0.0000	0.0000	0.8199	-
2 Clab			**0.0047**	**0.1786**	**0.0162**	**-**	**0.0002**	**0.0002**	**39.6224**	**-**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
2 Elec			**0.0047**	**0.1786**	**0.0162**	**-**	**0.0002**	**0.0002**	**39.6224**	**-**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
2 Rodmen			**0.0047**	**0.1786**	**0.0162**	**-**	**0.0002**	**0.0002**	**39.6224**	**-**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
B-1B			**0.0789**	**2.7127**	**0.1812**	**0.0038**	**0.0079**	**0.0070**	**405.5478**	**0.0540**
Employee vehicles	**4**		0.0092	0.3542	0.0320	-	0.0004	0.0004	78.4249	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Hyd. Crane,12 Ton	1	60%	0.07	2.36	0.15	0.00	0.01	0.01	326.71	0.05
B-6			**0.0498**	**2.6697**	**0.7870**	**0.0029**	**0.0049**	**0.0044**	**287.1699**	**0.0606**
Employee vehicles	**3**		0.0069	0.2656	0.0240	-	0.0003	0.0003	58.8187	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Backhoe Loader, 48 HP	1	45%	0.04	2.40	0.76	0.00	0.00	0.00	227.94	0.06
B-8			**0.3747**	**6.0613**	**1.1990**	**0.0143**	**0.0400**	**0.0357**	**1,732.5691**	**0.1301**
Employee vehicles	**8**		0.0185	0.7083	0.0640	-	0.0008	0.0008	156.8498	-
1 Dump Truck, 12 CY, 400 HP	2	94%	0.03	0.11	0.45	0.00	0.00	0.00	178.33	0.00
1 Crawler Loader, 3 CY	1	45%	0.25	2.89	0.54	0.01	0.03	0.02	1070.27	0.08
1 Hyd. Crane 25 tons	1	60%	0.07	2.36	0.15	0.00	0.01	0.01	326.71	0.05
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
B-9			**0.0448**	**1.5810**	**0.6321**	**0.0020**	**0.0041**	**0.0036**	**272.6362**	**0.0196**
Employee vehicles	**5**		0.0116	0.4427	0.0400	-	0.0005	0.0005	98.0311	-
1 Air Compressor, 250 cfm	1	33%	0.03	1.14	0.59	0.00	0.00	0.00	174.20	0.02
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
B-10D			**0.5704**	**10.1002**	**1.2269**	**0.0352**	**0.0609**	**0.0542**	**3,157.7984**	**0.3102**
Employee vehicles	**1.5**		0.0035	0.1328	0.0120	-	0.0002	0.0001	29.4093	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Dozer, 200 HP	1	76%	0.28	6.36	0.61	0.02	0.03	0.03	1708.58	0.20
Sheepsft Roller Towed	1	100%	0.28	3.60	0.61	0.02	0.03	0.03	1419.40	0.11
B-10M			**0.2876**	**6.4964**	**0.6208**	**0.0192**	**0.0306**	**0.0272**	**1,738.4001**	**0.2046**
Employee vehicles	**1.5**		0.0035	0.1328	0.0120	-	0.0002	0.0001	29.4093	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Dozer, 300 HP	1	76%	0.28	6.36	0.61	0.02	0.03	0.03	1708.58	0.20
B-11A			**0.2888**	**6.5406**	**0.6248**	**0.0192**	**0.0306**	**0.0273**	**1,748.2032**	**0.2046**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Dozer, 200 HP	1	76%	0.28	6.36	0.61	0.02	0.03	0.03	1708.58	0.20
B-12A			**0.1802**	**2.2873**	**0.3922**	**0.0106**	**0.0190**	**0.0169**	**984.4978**	**0.0668**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Hyd. Excavator, 1 C.Y.	1	67%	0.18	2.11	0.38	0.01	0.02	0.02	944.88	0.07
B-12D			**0.3430**	**3.2040**	**0.7411**	**0.0132**	**0.0365**	**0.0325**	**1,381.2454**	**0.0898**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Hyd. Excavator, 3.5 C.Y.	1	67%	0.34	3.03	0.72	0.01	0.04	0.03	1341.62	0.09
B-13			**0.0858**	**2.9783**	**0.2052**	**0.0038**	**0.0082**	**0.0073**	**464.3664**	**0.0540**
Employee vehicles	**7**		0.0162	0.6198	0.0560	-	0.0007	0.0007	137.2436	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Hyd. Crane 25 tons	1	60%	0.07	2.36	0.15	0.00	0.01	0.01	326.71	0.05
B-13B			**0.1793**	**2.2521**	**0.4056**	**0.0070**	**0.0182**	**0.0162**	**758.1976**	**0.0519**
Employee vehicles	**7**		0.0162	0.6198	0.0560	-	0.0007	0.0007	137.2436	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Hyd. Crane 55 tons	1	60%	0.16	1.63	0.35	0.01	0.02	0.02	620.54	0.05

	Usage Rates
Aerial Lifts	18%
Asphalt Pavers	19%
Bore/Drill Rigs	39%
Cement and Mortar Mixers	4%
Concrete/Industrial Saws	29%
Cranes	60%
Crawler Tractors	49%
Crushing/Proc. Equipment	46%
Dumpers/Tenders	32%
Excavators	67%
Generator Sets	6%
Graders	45%
Off-Highway Tractors	52%
Off-Highway Trucks	94%
Other Construction Equipment	33%
Pavers	39%
Paving Equipment	40%
Plate Compactors	10%
Pressure Washers	6%
Rollers	33%
Rough Terrain Forklifts	54%
Rubber Tired Dozers	76%
Rubber Tired Loaders	46%
Scrapers	53%
Signal Boards	36%
Skid Steer Loaders	15%
Skid Steer Loaders	40%
Surfacing Equipment	24%
Surfacing Equipment	21%
Tampers/Rammers	9%
Tractors/Loaders/Backhoes	45%
Trenchers	30%
Welders	10%
Air Compressors	27%
Sweepers/Scrubbers	25%
Plate Compactors	29%

EQUIPMENT EMISSION DATA

B-21			**0.0416**	**1.4446**	**0.0998**	**0.0018**	**0.0040**	**0.0035**	**226.1053**	**0.0260**
Employee vehicles	**3.5**		0.0081	0.3099	0.0280	-	0.0004	0.0003	68.6218	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 S.P. Crane, 4x4, 5 Ton	0.5	60%	0.03	1.13	0.07	0.00	0.00	0.00	157.07	0.03
B-21A			**0.0812**	**2.8012**	**0.1892**	**0.0038**	**0.0080**	**0.0071**	**425.1540**	**0.0540**
Employee vehicles	**5**		0.0116	0.4427	0.0400	-	0.0005	0.0005	98.0311	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 S.P. Crane, 4x4, 12 Ton	1	60%	0.07	2.36	0.15	0.00	0.01	0.01	326.71	0.05
B-21B			**0.0544**	**1.8929**	**0.1318**	**0.0024**	**0.0051**	**0.0046**	**299.2280**	**0.0332**
Employee vehicles	**5**		0.0116	0.4427	0.0400	-	0.0005	0.0005	98.0311	-
1 Pickup Trucks, 3/4 Ton	0.25	33%	0.0001	0.0013	0.0002	-	0.0000	0.0000	0.3676	-
1 S.P. Crane, 4x4, 12 Ton	1	37%	0.04	1.45	0.09	0.00	0.00	0.00	200.83	0.03
B-25			**0.1864**	**5.9455**	**2.6128**	**0.0087**	**0.0184**	**0.0164**	**970.8560**	**0.1066**
Employee vehicles	**11**		0.0254	0.9739	0.0880	-	0.0012	0.0011	215.6684	-
1 Asphalt Paver, 130 HP	1	19%	0.05	1.69	0.52	0.00	0.01	0.00	278.88	0.03
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Tandem Roller, 10 Ton	1	33%	0.06	1.64	1.00	0.00	0.01	0.01	237.95	0.04
1 Roller, Pneum., Whl., 12 Ton	1	33%	0.06	1.64	1.00	0.00	0.01	0.01	237.95	0.04
B-25C			**0.1188**	**3.8638**	**1.5718**	**0.0059**	**0.0119**	**0.0106**	**634.8741**	**0.0708**
Employee vehicles	**6**		0.0139	0.5312	0.0480	-	0.0006	0.0006	117.6373	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Asphalt Paver, 130 HP	1	19%	0.05	1.69	0.52	0.00	0.01	0.00	278.88	0.03
1 Tandem Roller, 10 Ton	1	33%	0.06	1.64	1.00	0.00	0.01	0.01	237.95	0.04
B-26			**0.3767**	**6.4175**	**0.8408**	**0.0177**	**0.0388**	**0.0345**	**1,896.8157**	**0.1396**
Employee vehicles	**11**		0.0254	0.9739	0.0880	-	0.0012	0.0011	215.6684	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Grader, 30,000 lbs	1	45%	0.15	2.13	0.33	0.01	0.02	0.01	844.83	0.07
Paving Machine and Equipment	1	40%	0.20	3.32	0.42	0.01	0.02	0.02	835.91	0.07
B-26A			**1.8594**	**17.0463**	**2.5781**	**0.0389**	**0.1511**	**0.1345**	**3,917.3964**	**0.3945**
Employee vehicles	**11**		0.0254	0.9739	0.0880	-	0.0012	0.0011	215.6684	-
Grader, 30,000 lbs	1	45%	0.15	2.13	0.33	0.01	0.02	0.01	844.83	0.07
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Paving Machine and Equipment	1	40%	0.20	8.32	1.06	0.02	0.05	0.05	2,097	0.18
Paving Machine and Equipment	1	40%	0.09	3.54	0.19	0.01	0.01	0.01	583.81	0.07
Paving Machine and Equipment	1	40%	0.89	2.00	0.79	0.00	0.06	0.06	156.04	0.07
Concrete Saw	1	29%	0.50	0.08	0.12	0.00	0.01	0.01	19.31	0.00
B-33B			**0.7106**	**13.8268**	**1.5281**	**0.0389**	**0.0759**	**0.0675**	**3,687.8334**	**0.3915**
Employee vehicles	**1.75**		0.0040	0.1549	0.0140	-	0.0002	0.0002	34.3109	-
Dozer, 300 HP	1.25	76%	0.36	7.95	0.76	0.02	0.04	0.03	2135.73	0.26
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Scraper, Towed, 10 C.Y.	1	53%	0.35	5.72	0.75	0.01	0.04	0.03	1517.39	0.14
B-34C			**0.0197**	**0.1429**	**0.2310**	**-**	**0.0024**	**0.0022**	**109.1814**	**-**
Employee vehicles	**1**		0.0023	0.0885	0.0080	-	0.0001	0.0001	19.6062	-
1 Truck Tractor, 6x4, 380 H.P.	1	94%	0.02	0.05	0.22	0.00	0.00	0.00	89.17	0.00
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
B-36C			**0.5895**	**10.6200**	**1.4643**	**0.0360**	**0.0629**	**0.0561**	**3,384.9612**	**0.3186**
Employee vehicles	**5**		0.0116	0.4427	0.0400	-	0.0005	0.0005	98.0311	-
1 Grader, 30,000 lbs	1	45%	0.15	2.13	0.33	0.01	0.02	0.01	844.83	0.07
Dozer, 300 HP	1	76%	0.28	6.36	0.61	0.02	0.03	0.03	1708.58	0.20
1 Compactor, Roller,Vibratory, 25 Ton	1	33%	0.12	1.63	0.26	0.01	0.01	0.01	643.94	0.05
1 Truck Tractor, 6x4, 450 HP	1	94%	0.02	0.05	0.22	0.00	0.00	0.00	89.17	0.00
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
B-38			**0.6615**	**9.9989**	**2.1039**	**0.0349**	**0.0702**	**0.0624**	**3,303.4418**	**0.2714**
Employee vehicles	**5**		0.0116	0.4427	0.0400	-	0.0005	0.0005	98.0311	-
Backhoe Loader, 48 HP	1	45%	0.04	2.40	0.76	0.00	0.00	0.00	227.94	0.06
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
Hyd. Hammer (1200 lbs) (connect to Excavator)	1	67%	0.18	2.11	0.38	0.01	0.02	0.02	944.88	0.07
FE Loader, W.M., 4 CY	1	46%	0.26	2.93	0.55	0.01	0.03	0.02	1087.31	0.08
Pavt. Rem. Bucket (connect to Excavator)	1	67%	0.18	2.11	0.38	0.01	0.02	0.02	944.88	0.07
B-45			**0.5578**	**0.3637**	**0.7959**	**-**	**0.0084**	**0.0077**	**351.7005**	**-**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Dist. Tanker, 3000 Gallon	1	94%	0.04	0.13	0.56	0.00	0.01	0.01	222.91	0.00
1 Truck Tractor, 6x4, 380 H.P.	1	94%	0.51	0.05	0.22	0.00	0.00	0.00	89.17	0.00
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-

EQUIPMENT EMISSION DATA

B-71			**0.4185**	**7.6737**	**1.0405**	**0.0205**	**0.0442**	**0.0394**	**2,192.2199**	**0.1685**
Employee vehicles	**7**		0.0162	0.6198	0.0560	-	0.0007	0.0007	137.2436	-
1 Pvmt. Profiler, 750 HP	1	40%	0.28	5.53	0.60	0.01	0.03	0.03	1393.18	0.12
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Road Sweeper, S.P., 8' wide	1	25%	0.01	0.03	0.15	0.00	0.00	0.00	58.75	0.00
1 FE Loader, W.M., 1.5 CY	1	46%	0.11	1.49	0.24	0.01	0.01	0.01	602.64	0.05
B-74			**0.8066**	**12.9700**	**1.9385**	**0.0518**	**0.0858**	**0.0764**	**4,853.7222**	**0.3343**
Employee vehicles	**8**		0.0185	0.7083	0.0640	-	0.0008	0.0008	156.8498	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Grader, 30,000 lbs	1	45%	0.15	2.13	0.33	0.01	0.02	0.01	844.83	0.07
1 Ripper, beam and 1 shank (connect to Excavator)	1	67%	0.18	2.11	0.38	0.01	0.02	0.02	944.88	0.07
1 Stabailizers, 310 HP	2	40%	0.32	6.34	0.68	0.02	0.03	0.03	2173.65	0.15
1 Compactor, Roller,Vibratory, 25 Ton	1	33%	0.12	1.63	0.26	0.01	0.01	0.01	643.94	0.05
1 Truck Tractor, 220 HP	1	94%	0.02	0.05	0.22	0.00	0.00	0.00	89.17	0.00
B-78B			**0.0466**	**0.3742**	**0.0755**	**0.0003**	**0.0011**	**0.0010**	**85.0061**	**0.0028**
Employee vehicles	**2.25**		0.0052	0.1992	0.0180	-	0.0002	0.0002	44.1140	-
1 Pickup Trucks, 3/4 Ton	1	37%	0.0004	0.0060	0.0008	-	0.0000	0.0000	1.6398	-
1 Line Rem., 11 H.P., walk behind	1	33%	0.04	0.16	0.02	0.00	0.00	0.00	24.57	0.00
1 Road Sweeper, S.P., 8' wide	0.25	25%	0.00	0.01	0.04	0.00	0.00	0.00	14.69	0.00
B-79			**0.1019**	**2.9852**	**1.5544**	**0.0045**	**0.0106**	**0.0095**	**570.1320**	**0.0426**
Employee vehicles	**5**		0.0116	0.4427	0.0400	-	0.0005	0.0005	98.0311	-
1 Paint Thermo. Striper, TM	1	33%	0.04	1.24	0.64	0.00	0.00	0.00	189.83	0.02
1 Heating Kettle, 115 Gallon	1	33%	0.04	1.24	0.64	0.00	0.00	0.00	189.83	0.02
1 Flatbed Truck, Gas, 3 Ton	1	94%	0.02	0.05	0.22	0.00	0.00	0.00	89.17	0.00
1 Pickup Trucks, 3/4 Ton	2	37%	0.0009	0.0120	0.0017	-	0.0000	0.0000	3.2797	-
B-80B			**0.1430**	**2.1283**	**0.3187**	**0.0076**	**0.0147**	**0.0131**	**753.3392**	**0.0565**
Employee vehicles	**4**		0.0092	0.3542	0.0320	-	0.0004	0.0004	78.4249	-
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-
1 Crane, Flatbed Mounted, 3 ton	1	60%	0.13	1.77	0.29	0.01	0.01	0.01	674.50	0.06
B-89			**0.5233**	**0.3095**	**0.3603**	**0.0002**	**0.0113**	**0.0101**	**147.6899**	**0.0021**
Employee vehicles	**2**		0.0046	0.1771	0.0160	-	0.0002	0.0002	39.2124	-
1 Flatbed Truck, Gas, 3 Ton	1	94%	0.02	0.05	0.22	0.00	0.00	0.00	89.17	0.00
1 Concrete Saw	1	29%	0.50	0.08	0.12	0.00	0.01	0.01	19.31	0.00
Building (Estimated)			**4.4632**	**18.5673**	**7.3047**	**0.0519**	**0.2078**	**0.1852**	**5,327.9596**	**0.4082**
Employee vehicles	**20**		0.0462	1.7708	0.1601	-	0.0021	0.0019	392.1244	-
Crane RT 50 Ton	1	60%	0.11	1.42	0.23	0.01	0.01	0.01	539.60	0.05
Crane - Track	2	60%	0.31	4.07	0.66	0.02	0.03	0.03	1548.66	0.13
Flatbed Truck - 10 Wheel	4	94%	0.07	0.21	0.89	0.00	0.01	0.01	356.66	0.00
Front End Loader	2	46%	0.23	2.98	0.48	0.01	0.02	0.02	1205.28	0.09
Motor Grader	1	45%	0.08	2.62	1.41	0.00	0.01	0.01	442.38	0.05
Compactor	1	29%	0.36	0.42	0.45	0.00	0.02	0.01	64.43	0.01
Light Plant	6	6%	1.13	0.24	0.21	0.00	0.02	0.02	36.85	0.00
Welder	6	10%	2.04	1.03	0.90	0.00	0.08	0.07	157.13	0.02
Fork Lift	2	54%	0.11	3.80	1.91	0.01	0.01	0.01	581.56	0.07
1 Pickup Trucks, 3/4 Ton	2	37%	0.0009	0.0120	0.0017	-	0.0000	0.0000	3.2797	-
Electrical (Estimated)			**0.0584**	**1.7824**	**0.2394**	**0.0018**	**0.0055**	**0.0049**	**339.7196**	**0.0260**
Employee vehicles	**7**		0.0162	0.6198	0.0560	-	0.0007	0.0007	137.2436	-
1 S.P. Crane, 4x4, 5 Ton	0.5	60%	0.03	1.13	0.07	0.00	0.00	0.00	157.07	0.03
1 Flatbed Truck	0.5	94%	0.01	0.03	0.11	0.00	0.00	0.00	44.58	0.00
1 Pickup Trucks, 3/4 Ton	0.5	37%	0.0002	0.0030	0.0004	-	0.0000	0.0000	0.8199	-
Foundation (Estimated)			**4.0476**	**4.0481**	**0.6837**	**0.0050**	**0.0394**	**0.0351**	**728.0589**	**0.0480**
Employee vehicles	**14**		0.0324	1.2396	0.1120	-	0.0015	0.0013	274.4871	-
Truckmixer, 10 CY	6	4%	0.00	0.01	0.06	0.00	0.00	0.00	25.14	0.00
Concrete Pump	1	4%	0.02	0.56	0.04	0.00	0.00	0.00	86.35	0.01
Generator	1	6%	0.05	1.82	0.11	0.00	0.01	0.01	278.79	0.03
Vibrator	4	29%	3.94	0.41	0.36	0.00	0.03	0.03	62.47	0.01
1 Pickup Trucks, 3/4 Ton	0.5	37%	0.0002	0.0030	0.0004	-	0.0000	0.0000	0.8199	-
Field Check (Estimated)			**0.0143**	**0.5474**	**0.0503**	**-**	**0.0006**	**0.0006**	**122.0693**	**-**
Employee vehicles	**6**		0.0139	0.5312	0.0480	-	0.0006	0.0006	117.6373	-
Pickup Trucks, 3/4 Ton	1	37%	0.0004	0.0162	0.0023	-	0.0000	0.0000	4	-
Setup (Estimated)			**0.0764**	**1.5914**	**0.2718**	**0.0033**	**0.0077**	**0.0069**	**435.9094**	**0.0300**
Employee vehicles	**5**		0.0116	0.4427	0.0400	-	0.0005	0.0005	98.0311	-
1 Hyd. Crane 25 tons	0.25	60%	0.02	0.59	0.04	0.00	0.00	0.00	81.68	0.01
Grader, 30,000 lbs	0.25	45%	0.04	0.53	0.08	0.00	0.00	0.00	211.21	0.02
1 Flatbed Truck, Gas, 3 Ton	0.5	94%	0.01	0.03	0.11	0.00	0.00	0.00	44.58	0.00
1 Pickup Trucks, 3/4 Ton	0.25	37%	0.0001	0.0015	0.0002	-	0.0000	0.0000	0.4100	-

EQUIPMENT EMISSION DATA

Tiered Emission Factors for Nox, ROG, and PM

HP		Tier 3 (g/bhp-hr)			Tier 4 (g/bhp-hr)			
		NOx	ROG	PM	NOx (interim)	NOx (final[2])	ROG	PM
75	99	3.325	0.175	0.3	2.5	0.3	0.14	0.015
100	174	2.85	0.15	0.22	2.5	0.3	0.14	0.015
175	299	2.85	0.15	0.15	1.5	0.3	0.14	0.015
300	600	2.85	0.15	0.15	1.5	0.3	0.14	0.015

Tiered Emissions Expanded by HP to allow Vlookup

HP	Tier 3 (g/bhp-hr)			Tier 4 (g/bhp-hr)			
	NOx	ROG	PM	NOx (interim)	NOx (final[2])	ROG	PM
75	3.325	0.175	0.3	2.5	0.3	0.14	0.015
76	3.325	0.175	0.3	2.5	0.3	0.14	0.015
77	3.325	0.175	0.3	2.5	0.3	0.14	0.015
78	3.325	0.175	0.3	2.5	0.3	0.14	0.015
79	3.325	0.175	0.3	2.5	0.3	0.14	0.015
80	3.325	0.175	0.3	2.5	0.3	0.14	0.015
81	3.325	0.175	0.3	2.5	0.3	0.14	0.015
82	3.325	0.175	0.3	2.5	0.3	0.14	0.015
83	3.325	0.175	0.3	2.5	0.3	0.14	0.015
84	3.325	0.175	0.3	2.5	0.3	0.14	0.015
85	3.325	0.175	0.3	2.5	0.3	0.14	0.015
86	3.325	0.175	0.3	2.5	0.3	0.14	0.015
87	3.325	0.175	0.3	2.5	0.3	0.14	0.015
88	3.325	0.175	0.3	2.5	0.3	0.14	0.015
89	3.325	0.175	0.3	2.5	0.3	0.14	0.015
90	3.325	0.175	0.3	2.5	0.3	0.14	0.015
91	3.325	0.175	0.3	2.5	0.3	0.14	0.015
92	3.325	0.175	0.3	2.5	0.3	0.14	0.015
93	3.325	0.175	0.3	2.5	0.3	0.14	0.015
94	3.325	0.175	0.3	2.5	0.3	0.14	0.015
95	3.325	0.175	0.3	2.5	0.3	0.14	0.015
96	3.325	0.175	0.3	2.5	0.3	0.14	0.015
97	3.325	0.175	0.3	2.5	0.3	0.14	0.015
98	3.325	0.175	0.3	2.5	0.3	0.14	0.015
99	3.325	0.175	0.3	2.5	0.3	0.14	0.015
100	2.85	0.15	0.22	2.5	0.3	0.14	0.015
101	2.85	0.15	0.22	2.5	0.3	0.14	0.015
102	2.85	0.15	0.22	2.5	0.3	0.14	0.015
103	2.85	0.15	0.22	2.5	0.3	0.14	0.015
104	2.85	0.15	0.22	2.5	0.3	0.14	0.015
105	2.85	0.15	0.22	2.5	0.3	0.14	0.015
106	2.85	0.15	0.22	2.5	0.3	0.14	0.015
107	2.85	0.15	0.22	2.5	0.3	0.14	0.015
108	2.85	0.15	0.22	2.5	0.3	0.14	0.015
109	2.85	0.15	0.22	2.5	0.3	0.14	0.015
110	2.85	0.15	0.22	2.5	0.3	0.14	0.015
111	2.85	0.15	0.22	2.5	0.3	0.14	0.015
112	2.85	0.15	0.22	2.5	0.3	0.14	0.015
113	2.85	0.15	0.22	2.5	0.3	0.14	0.015
114	2.85	0.15	0.22	2.5	0.3	0.14	0.015
115	2.85	0.15	0.22	2.5	0.3	0.14	0.015
116	2.85	0.15	0.22	2.5	0.3	0.14	0.015
117	2.85	0.15	0.22	2.5	0.3	0.14	0.015
118	2.85	0.15	0.22	2.5	0.3	0.14	0.015
119	2.85	0.15	0.22	2.5	0.3	0.14	0.015
120	2.85	0.15	0.22	2.5	0.3	0.14	0.015

Load Factors

EquipmentTypeID	Adj ARB LF
A/C Tug Narrow Body	0.536
A/C Tug Wide Body	0.536
Baggage Tug	0.3685
Belt Loader	0.335
Bobtail	0.3685
Cargo Loader	0.335
Cargo Tractor	0.3618
Forklift (GSE)	0.201
Lift (GSE)	0.335
Other GSE	0.335
Bore/Drill Rigs	0.5025
Cranes	0.2881
Crawler Tractors	0.4288
Excavators	0.3819
Graders	0.4087
Off-Highway Tractors	0.4355
Off-Highway Trucks	0.3819
Other Construction Equipment	0.4154
Pavers	0.4154
Paving Equipment	0.3551
Rollers	0.3752
Rough Terrain Forklifts	0.402
Rubber Tired Dozers	0.3953
Rubber Tired Loaders	0.3618
Scrapers	0.4824
Skid Steer Loaders	0.3685
Surfacing Equipment	0.3015
Tractors/Loaders/Backhoes	0.3685
Trenchers	0.5025
Aerial Lifts	0.3082
Forklifts	0.201
Other General Industrial	0.3417
Other Material Handling	0.3953
Drill Rig (Mobile)	0.5025
Workover Rig (Mobile)	0.5025
Sweepers/Scrubbers	0.4556
Passenger Stand	0.3953

121	2.85	0.15	0.22	2.5	0.3	0.14	0.015
122	2.85	0.15	0.22	2.5	0.3	0.14	0.015
123	2.85	0.15	0.22	2.5	0.3	0.14	0.015
124	2.85	0.15	0.22	2.5	0.3	0.14	0.015
125	2.85	0.15	0.22	2.5	0.3	0.14	0.015
126	2.85	0.15	0.22	2.5	0.3	0.14	0.015
127	2.85	0.15	0.22	2.5	0.3	0.14	0.015
128	2.85	0.15	0.22	2.5	0.3	0.14	0.015
129	2.85	0.15	0.22	2.5	0.3	0.14	0.015
130	2.85	0.15	0.22	2.5	0.3	0.14	0.015
131	2.85	0.15	0.22	2.5	0.3	0.14	0.015
132	2.85	0.15	0.22	2.5	0.3	0.14	0.015
133	2.85	0.15	0.22	2.5	0.3	0.14	0.015
134	2.85	0.15	0.22	2.5	0.3	0.14	0.015
135	2.85	0.15	0.22	2.5	0.3	0.14	0.015
136	2.85	0.15	0.22	2.5	0.3	0.14	0.015
137	2.85	0.15	0.22	2.5	0.3	0.14	0.015
138	2.85	0.15	0.22	2.5	0.3	0.14	0.015
139	2.85	0.15	0.22	2.5	0.3	0.14	0.015
140	2.85	0.15	0.22	2.5	0.3	0.14	0.015
141	2.85	0.15	0.22	2.5	0.3	0.14	0.015
142	2.85	0.15	0.22	2.5	0.3	0.14	0.015
143	2.85	0.15	0.22	2.5	0.3	0.14	0.015
144	2.85	0.15	0.22	2.5	0.3	0.14	0.015
145	2.85	0.15	0.22	2.5	0.3	0.14	0.015
146	2.85	0.15	0.22	2.5	0.3	0.14	0.015
147	2.85	0.15	0.22	2.5	0.3	0.14	0.015
148	2.85	0.15	0.22	2.5	0.3	0.14	0.015
149	2.85	0.15	0.22	2.5	0.3	0.14	0.015
150	2.85	0.15	0.22	2.5	0.3	0.14	0.015
151	2.85	0.15	0.22	2.5	0.3	0.14	0.015
152	2.85	0.15	0.22	2.5	0.3	0.14	0.015
153	2.85	0.15	0.22	2.5	0.3	0.14	0.015
154	2.85	0.15	0.22	2.5	0.3	0.14	0.015
155	2.85	0.15	0.22	2.5	0.3	0.14	0.015
156	2.85	0.15	0.22	2.5	0.3	0.14	0.015
157	2.85	0.15	0.22	2.5	0.3	0.14	0.015
158	2.85	0.15	0.22	2.5	0.3	0.14	0.015
159	2.85	0.15	0.22	2.5	0.3	0.14	0.015
160	2.85	0.15	0.22	2.5	0.3	0.14	0.015
161	2.85	0.15	0.22	2.5	0.3	0.14	0.015
162	2.85	0.15	0.22	2.5	0.3	0.14	0.015
163	2.85	0.15	0.22	2.5	0.3	0.14	0.015
164	2.85	0.15	0.22	2.5	0.3	0.14	0.015
165	2.85	0.15	0.22	2.5	0.3	0.14	0.015
166	2.85	0.15	0.22	2.5	0.3	0.14	0.015
167	2.85	0.15	0.22	2.5	0.3	0.14	0.015
168	2.85	0.15	0.22	2.5	0.3	0.14	0.015
169	2.85	0.15	0.22	2.5	0.3	0.14	0.015
170	2.85	0.15	0.22	2.5	0.3	0.14	0.015
171	2.85	0.15	0.22	2.5	0.3	0.14	0.015
172	2.85	0.15	0.22	2.5	0.3	0.14	0.015
173	2.85	0.15	0.22	2.5	0.3	0.14	0.015
174	2.85	0.15	0.22	2.5	0.3	0.14	0.015
175	2.85	0.15	0.15	1.5	0.3	0.14	0.015
176	2.85	0.15	0.15	1.5	0.3	0.14	0.015
177	2.85	0.15	0.15	1.5	0.3	0.14	0.015
178	2.85	0.15	0.15	1.5	0.3	0.14	0.015
179	2.85	0.15	0.15	1.5	0.3	0.14	0.015
180	2.85	0.15	0.15	1.5	0.3	0.14	0.015
181	2.85	0.15	0.15	1.5	0.3	0.14	0.015
182	2.85	0.15	0.15	1.5	0.3	0.14	0.015
183	2.85	0.15	0.15	1.5	0.3	0.14	0.015
184	2.85	0.15	0.15	1.5	0.3	0.14	0.015
185	2.85	0.15	0.15	1.5	0.3	0.14	0.015
186	2.85	0.15	0.15	1.5	0.3	0.14	0.015
187	2.85	0.15	0.15	1.5	0.3	0.14	0.015
188	2.85	0.15	0.15	1.5	0.3	0.14	0.015
189	2.85	0.15	0.15	1.5	0.3	0.14	0.015
190	2.85	0.15	0.15	1.5	0.3	0.14	0.015
191	2.85	0.15	0.15	1.5	0.3	0.14	0.015
192	2.85	0.15	0.15	1.5	0.3	0.14	0.015
193	2.85	0.15	0.15	1.5	0.3	0.14	0.015
194	2.85	0.15	0.15	1.5	0.3	0.14	0.015
195	2.85	0.15	0.15	1.5	0.3	0.14	0.015
196	2.85	0.15	0.15	1.5	0.3	0.14	0.015
197	2.85	0.15	0.15	1.5	0.3	0.14	0.015
198	2.85	0.15	0.15	1.5	0.3	0.14	0.015
199	2.85	0.15	0.15	1.5	0.3	0.14	0.015
200	2.85	0.15	0.15	1.5	0.3	0.14	0.015
201	2.85	0.15	0.15	1.5	0.3	0.14	0.015
202	2.85	0.15	0.15	1.5	0.3	0.14	0.015
203	2.85	0.15	0.15	1.5	0.3	0.14	0.015
204	2.85	0.15	0.15	1.5	0.3	0.14	0.015
205	2.85	0.15	0.15	1.5	0.3	0.14	0.015
206	2.85	0.15	0.15	1.5	0.3	0.14	0.015
207	2.85	0.15	0.15	1.5	0.3	0.14	0.015

208	2.85	0.15	0.15	1.5	0.3	0.14	0.015
209	2.85	0.15	0.15	1.5	0.3	0.14	0.015
210	2.85	0.15	0.15	1.5	0.3	0.14	0.015
211	2.85	0.15	0.15	1.5	0.3	0.14	0.015
212	2.85	0.15	0.15	1.5	0.3	0.14	0.015
213	2.85	0.15	0.15	1.5	0.3	0.14	0.015
214	2.85	0.15	0.15	1.5	0.3	0.14	0.015
215	2.85	0.15	0.15	1.5	0.3	0.14	0.015
216	2.85	0.15	0.15	1.5	0.3	0.14	0.015
217	2.85	0.15	0.15	1.5	0.3	0.14	0.015
218	2.85	0.15	0.15	1.5	0.3	0.14	0.015
219	2.85	0.15	0.15	1.5	0.3	0.14	0.015
220	2.85	0.15	0.15	1.5	0.3	0.14	0.015
221	2.85	0.15	0.15	1.5	0.3	0.14	0.015
222	2.85	0.15	0.15	1.5	0.3	0.14	0.015
223	2.85	0.15	0.15	1.5	0.3	0.14	0.015
224	2.85	0.15	0.15	1.5	0.3	0.14	0.015
225	2.85	0.15	0.15	1.5	0.3	0.14	0.015
226	2.85	0.15	0.15	1.5	0.3	0.14	0.015
227	2.85	0.15	0.15	1.5	0.3	0.14	0.015
228	2.85	0.15	0.15	1.5	0.3	0.14	0.015
229	2.85	0.15	0.15	1.5	0.3	0.14	0.015
230	2.85	0.15	0.15	1.5	0.3	0.14	0.015
231	2.85	0.15	0.15	1.5	0.3	0.14	0.015
232	2.85	0.15	0.15	1.5	0.3	0.14	0.015
233	2.85	0.15	0.15	1.5	0.3	0.14	0.015
234	2.85	0.15	0.15	1.5	0.3	0.14	0.015
235	2.85	0.15	0.15	1.5	0.3	0.14	0.015
236	2.85	0.15	0.15	1.5	0.3	0.14	0.015
237	2.85	0.15	0.15	1.5	0.3	0.14	0.015
238	2.85	0.15	0.15	1.5	0.3	0.14	0.015
239	2.85	0.15	0.15	1.5	0.3	0.14	0.015
240	2.85	0.15	0.15	1.5	0.3	0.14	0.015
241	2.85	0.15	0.15	1.5	0.3	0.14	0.015
242	2.85	0.15	0.15	1.5	0.3	0.14	0.015
243	2.85	0.15	0.15	1.5	0.3	0.14	0.015
244	2.85	0.15	0.15	1.5	0.3	0.14	0.015
245	2.85	0.15	0.15	1.5	0.3	0.14	0.015
246	2.85	0.15	0.15	1.5	0.3	0.14	0.015
247	2.85	0.15	0.15	1.5	0.3	0.14	0.015
248	2.85	0.15	0.15	1.5	0.3	0.14	0.015
249	2.85	0.15	0.15	1.5	0.3	0.14	0.015
250	2.85	0.15	0.15	1.5	0.3	0.14	0.015
251	2.85	0.15	0.15	1.5	0.3	0.14	0.015
252	2.85	0.15	0.15	1.5	0.3	0.14	0.015
253	2.85	0.15	0.15	1.5	0.3	0.14	0.015
254	2.85	0.15	0.15	1.5	0.3	0.14	0.015
255	2.85	0.15	0.15	1.5	0.3	0.14	0.015
256	2.85	0.15	0.15	1.5	0.3	0.14	0.015
257	2.85	0.15	0.15	1.5	0.3	0.14	0.015
258	2.85	0.15	0.15	1.5	0.3	0.14	0.015
259	2.85	0.15	0.15	1.5	0.3	0.14	0.015
260	2.85	0.15	0.15	1.5	0.3	0.14	0.015
261	2.85	0.15	0.15	1.5	0.3	0.14	0.015
262	2.85	0.15	0.15	1.5	0.3	0.14	0.015
263	2.85	0.15	0.15	1.5	0.3	0.14	0.015
264	2.85	0.15	0.15	1.5	0.3	0.14	0.015
265	2.85	0.15	0.15	1.5	0.3	0.14	0.015
266	2.85	0.15	0.15	1.5	0.3	0.14	0.015
267	2.85	0.15	0.15	1.5	0.3	0.14	0.015
268	2.85	0.15	0.15	1.5	0.3	0.14	0.015
269	2.85	0.15	0.15	1.5	0.3	0.14	0.015
270	2.85	0.15	0.15	1.5	0.3	0.14	0.015
271	2.85	0.15	0.15	1.5	0.3	0.14	0.015
272	2.85	0.15	0.15	1.5	0.3	0.14	0.015
273	2.85	0.15	0.15	1.5	0.3	0.14	0.015
274	2.85	0.15	0.15	1.5	0.3	0.14	0.015
275	2.85	0.15	0.15	1.5	0.3	0.14	0.015
276	2.85	0.15	0.15	1.5	0.3	0.14	0.015
277	2.85	0.15	0.15	1.5	0.3	0.14	0.015
278	2.85	0.15	0.15	1.5	0.3	0.14	0.015
279	2.85	0.15	0.15	1.5	0.3	0.14	0.015
280	2.85	0.15	0.15	1.5	0.3	0.14	0.015
281	2.85	0.15	0.15	1.5	0.3	0.14	0.015
282	2.85	0.15	0.15	1.5	0.3	0.14	0.015
283	2.85	0.15	0.15	1.5	0.3	0.14	0.015
284	2.85	0.15	0.15	1.5	0.3	0.14	0.015

285	2.85	0.15	0.15	1.5	0.3	0.14	0.015
286	2.85	0.15	0.15	1.5	0.3	0.14	0.015
287	2.85	0.15	0.15	1.5	0.3	0.14	0.015
288	2.85	0.15	0.15	1.5	0.3	0.14	0.015
289	2.85	0.15	0.15	1.5	0.3	0.14	0.015
290	2.85	0.15	0.15	1.5	0.3	0.14	0.015
291	2.85	0.15	0.15	1.5	0.3	0.14	0.015
292	2.85	0.15	0.15	1.5	0.3	0.14	0.015
293	2.85	0.15	0.15	1.5	0.3	0.14	0.015
294	2.85	0.15	0.15	1.5	0.3	0.14	0.015
295	2.85	0.15	0.15	1.5	0.3	0.14	0.015
296	2.85	0.15	0.15	1.5	0.3	0.14	0.015
297	2.85	0.15	0.15	1.5	0.3	0.14	0.015
298	2.85	0.15	0.15	1.5	0.3	0.14	0.015
299	2.85	0.15	0.15	1.5	0.3	0.14	0.015
300	2.85	0.15	0.15	1.5	0.3	0.14	0.015
301	2.85	0.15	0.15	1.5	0.3	0.14	0.015
302	2.85	0.15	0.15	1.5	0.3	0.14	0.015
303	2.85	0.15	0.15	1.5	0.3	0.14	0.015
304	2.85	0.15	0.15	1.5	0.3	0.14	0.015
305	2.85	0.15	0.15	1.5	0.3	0.14	0.015
306	2.85	0.15	0.15	1.5	0.3	0.14	0.015
307	2.85	0.15	0.15	1.5	0.3	0.14	0.015
308	2.85	0.15	0.15	1.5	0.3	0.14	0.015
309	2.85	0.15	0.15	1.5	0.3	0.14	0.015
310	2.85	0.15	0.15	1.5	0.3	0.14	0.015
311	2.85	0.15	0.15	1.5	0.3	0.14	0.015
312	2.85	0.15	0.15	1.5	0.3	0.14	0.015
313	2.85	0.15	0.15	1.5	0.3	0.14	0.015
314	2.85	0.15	0.15	1.5	0.3	0.14	0.015
315	2.85	0.15	0.15	1.5	0.3	0.14	0.015
316	2.85	0.15	0.15	1.5	0.3	0.14	0.015
317	2.85	0.15	0.15	1.5	0.3	0.14	0.015
318	2.85	0.15	0.15	1.5	0.3	0.14	0.015
319	2.85	0.15	0.15	1.5	0.3	0.14	0.015
320	2.85	0.15	0.15	1.5	0.3	0.14	0.015
321	2.85	0.15	0.15	1.5	0.3	0.14	0.015
322	2.85	0.15	0.15	1.5	0.3	0.14	0.015
323	2.85	0.15	0.15	1.5	0.3	0.14	0.015
324	2.85	0.15	0.15	1.5	0.3	0.14	0.015
325	2.85	0.15	0.15	1.5	0.3	0.14	0.015
326	2.85	0.15	0.15	1.5	0.3	0.14	0.015
327	2.85	0.15	0.15	1.5	0.3	0.14	0.015
328	2.85	0.15	0.15	1.5	0.3	0.14	0.015
329	2.85	0.15	0.15	1.5	0.3	0.14	0.015
330	2.85	0.15	0.15	1.5	0.3	0.14	0.015
331	2.85	0.15	0.15	1.5	0.3	0.14	0.015
332	2.85	0.15	0.15	1.5	0.3	0.14	0.015
333	2.85	0.15	0.15	1.5	0.3	0.14	0.015
334	2.85	0.15	0.15	1.5	0.3	0.14	0.015
335	2.85	0.15	0.15	1.5	0.3	0.14	0.015
336	2.85	0.15	0.15	1.5	0.3	0.14	0.015
337	2.85	0.15	0.15	1.5	0.3	0.14	0.015
338	2.85	0.15	0.15	1.5	0.3	0.14	0.015
339	2.85	0.15	0.15	1.5	0.3	0.14	0.015
340	2.85	0.15	0.15	1.5	0.3	0.14	0.015
341	2.85	0.15	0.15	1.5	0.3	0.14	0.015
342	2.85	0.15	0.15	1.5	0.3	0.14	0.015
343	2.85	0.15	0.15	1.5	0.3	0.14	0.015
344	2.85	0.15	0.15	1.5	0.3	0.14	0.015
345	2.85	0.15	0.15	1.5	0.3	0.14	0.015
346	2.85	0.15	0.15	1.5	0.3	0.14	0.015
347	2.85	0.15	0.15	1.5	0.3	0.14	0.015
348	2.85	0.15	0.15	1.5	0.3	0.14	0.015
349	2.85	0.15	0.15	1.5	0.3	0.14	0.015
350	2.85	0.15	0.15	1.5	0.3	0.14	0.015
351	2.85	0.15	0.15	1.5	0.3	0.14	0.015
352	2.85	0.15	0.15	1.5	0.3	0.14	0.015
353	2.85	0.15	0.15	1.5	0.3	0.14	0.015
354	2.85	0.15	0.15	1.5	0.3	0.14	0.015
355	2.85	0.15	0.15	1.5	0.3	0.14	0.015
356	2.85	0.15	0.15	1.5	0.3	0.14	0.015
357	2.85	0.15	0.15	1.5	0.3	0.14	0.015
358	2.85	0.15	0.15	1.5	0.3	0.14	0.015
359	2.85	0.15	0.15	1.5	0.3	0.14	0.015
360	2.85	0.15	0.15	1.5	0.3	0.14	0.015
361	2.85	0.15	0.15	1.5	0.3	0.14	0.015
362	2.85	0.15	0.15	1.5	0.3	0.14	0.015
363	2.85	0.15	0.15	1.5	0.3	0.14	0.015
364	2.85	0.15	0.15	1.5	0.3	0.14	0.015
365	2.85	0.15	0.15	1.5	0.3	0.14	0.015
366	2.85	0.15	0.15	1.5	0.3	0.14	0.015
367	2.85	0.15	0.15	1.5	0.3	0.14	0.015
368	2.85	0.15	0.15	1.5	0.3	0.14	0.015
369	2.85	0.15	0.15	1.5	0.3	0.14	0.015
370	2.85	0.15	0.15	1.5	0.3	0.14	0.015
371	2.85	0.15	0.15	1.5	0.3	0.14	0.015
372	2.85	0.15	0.15	1.5	0.3	0.14	0.015
373	2.85	0.15	0.15	1.5	0.3	0.14	0.015
374	2.85	0.15	0.15	1.5	0.3	0.14	0.015
375	2.85	0.15	0.15	1.5	0.3	0.14	0.015
376	2.85	0.15	0.15	1.5	0.3	0.14	0.015
377	2.85	0.15	0.15	1.5	0.3	0.14	0.015
378	2.85	0.15	0.15	1.5	0.3	0.14	0.015
379	2.85	0.15	0.15	1.5	0.3	0.14	0.015
380	2.85	0.15	0.15	1.5	0.3	0.14	0.015
381	2.85	0.15	0.15	1.5	0.3	0.14	0.015

382	2.85	0.15	0.15	1.5	0.3	0.14	0.015
383	2.85	0.15	0.15	1.5	0.3	0.14	0.015
384	2.85	0.15	0.15	1.5	0.3	0.14	0.015
385	2.85	0.15	0.15	1.5	0.3	0.14	0.015
386	2.85	0.15	0.15	1.5	0.3	0.14	0.015
387	2.85	0.15	0.15	1.5	0.3	0.14	0.015
388	2.85	0.15	0.15	1.5	0.3	0.14	0.015
389	2.85	0.15	0.15	1.5	0.3	0.14	0.015
390	2.85	0.15	0.15	1.5	0.3	0.14	0.015
391	2.85	0.15	0.15	1.5	0.3	0.14	0.015
392	2.85	0.15	0.15	1.5	0.3	0.14	0.015
393	2.85	0.15	0.15	1.5	0.3	0.14	0.015
394	2.85	0.15	0.15	1.5	0.3	0.14	0.015
395	2.85	0.15	0.15	1.5	0.3	0.14	0.015
396	2.85	0.15	0.15	1.5	0.3	0.14	0.015
397	2.85	0.15	0.15	1.5	0.3	0.14	0.015
398	2.85	0.15	0.15	1.5	0.3	0.14	0.015
399	2.85	0.15	0.15	1.5	0.3	0.14	0.015
400	2.85	0.15	0.15	1.5	0.3	0.14	0.015
401	2.85	0.15	0.15	1.5	0.3	0.14	0.015
402	2.85	0.15	0.15	1.5	0.3	0.14	0.015
403	2.85	0.15	0.15	1.5	0.3	0.14	0.015
404	2.85	0.15	0.15	1.5	0.3	0.14	0.015
405	2.85	0.15	0.15	1.5	0.3	0.14	0.015
406	2.85	0.15	0.15	1.5	0.3	0.14	0.015
407	2.85	0.15	0.15	1.5	0.3	0.14	0.015
408	2.85	0.15	0.15	1.5	0.3	0.14	0.015
409	2.85	0.15	0.15	1.5	0.3	0.14	0.015
410	2.85	0.15	0.15	1.5	0.3	0.14	0.015
411	2.85	0.15	0.15	1.5	0.3	0.14	0.015
412	2.85	0.15	0.15	1.5	0.3	0.14	0.015
413	2.85	0.15	0.15	1.5	0.3	0.14	0.015
414	2.85	0.15	0.15	1.5	0.3	0.14	0.015
415	2.85	0.15	0.15	1.5	0.3	0.14	0.015
416	2.85	0.15	0.15	1.5	0.3	0.14	0.015
417	2.85	0.15	0.15	1.5	0.3	0.14	0.015
418	2.85	0.15	0.15	1.5	0.3	0.14	0.015
419	2.85	0.15	0.15	1.5	0.3	0.14	0.015
420	2.85	0.15	0.15	1.5	0.3	0.14	0.015
421	2.85	0.15	0.15	1.5	0.3	0.14	0.015
422	2.85	0.15	0.15	1.5	0.3	0.14	0.015
423	2.85	0.15	0.15	1.5	0.3	0.14	0.015
424	2.85	0.15	0.15	1.5	0.3	0.14	0.015
425	2.85	0.15	0.15	1.5	0.3	0.14	0.015
426	2.85	0.15	0.15	1.5	0.3	0.14	0.015
427	2.85	0.15	0.15	1.5	0.3	0.14	0.015
428	2.85	0.15	0.15	1.5	0.3	0.14	0.015
429	2.85	0.15	0.15	1.5	0.3	0.14	0.015
430	2.85	0.15	0.15	1.5	0.3	0.14	0.015
431	2.85	0.15	0.15	1.5	0.3	0.14	0.015
432	2.85	0.15	0.15	1.5	0.3	0.14	0.015
433	2.85	0.15	0.15	1.5	0.3	0.14	0.015
434	2.85	0.15	0.15	1.5	0.3	0.14	0.015
435	2.85	0.15	0.15	1.5	0.3	0.14	0.015
436	2.85	0.15	0.15	1.5	0.3	0.14	0.015
437	2.85	0.15	0.15	1.5	0.3	0.14	0.015
438	2.85	0.15	0.15	1.5	0.3	0.14	0.015
439	2.85	0.15	0.15	1.5	0.3	0.14	0.015
440	2.85	0.15	0.15	1.5	0.3	0.14	0.015
441	2.85	0.15	0.15	1.5	0.3	0.14	0.015
442	2.85	0.15	0.15	1.5	0.3	0.14	0.015
443	2.85	0.15	0.15	1.5	0.3	0.14	0.015
444	2.85	0.15	0.15	1.5	0.3	0.14	0.015
445	2.85	0.15	0.15	1.5	0.3	0.14	0.015
446	2.85	0.15	0.15	1.5	0.3	0.14	0.015
447	2.85	0.15	0.15	1.5	0.3	0.14	0.015
448	2.85	0.15	0.15	1.5	0.3	0.14	0.015
449	2.85	0.15	0.15	1.5	0.3	0.14	0.015
450	2.85	0.15	0.15	1.5	0.3	0.14	0.015
451	2.85	0.15	0.15	1.5	0.3	0.14	0.015
452	2.85	0.15	0.15	1.5	0.3	0.14	0.015
453	2.85	0.15	0.15	1.5	0.3	0.14	0.015
454	2.85	0.15	0.15	1.5	0.3	0.14	0.015
455	2.85	0.15	0.15	1.5	0.3	0.14	0.015
456	2.85	0.15	0.15	1.5	0.3	0.14	0.015
457	2.85	0.15	0.15	1.5	0.3	0.14	0.015
458	2.85	0.15	0.15	1.5	0.3	0.14	0.015
459	2.85	0.15	0.15	1.5	0.3	0.14	0.015
460	2.85	0.15	0.15	1.5	0.3	0.14	0.015
461	2.85	0.15	0.15	1.5	0.3	0.14	0.015
462	2.85	0.15	0.15	1.5	0.3	0.14	0.015
463	2.85	0.15	0.15	1.5	0.3	0.14	0.015
464	2.85	0.15	0.15	1.5	0.3	0.14	0.015
465	2.85	0.15	0.15	1.5	0.3	0.14	0.015
466	2.85	0.15	0.15	1.5	0.3	0.14	0.015
467	2.85	0.15	0.15	1.5	0.3	0.14	0.015
468	2.85	0.15	0.15	1.5	0.3	0.14	0.015
469	2.85	0.15	0.15	1.5	0.3	0.14	0.015
470	2.85	0.15	0.15	1.5	0.3	0.14	0.015
471	2.85	0.15	0.15	1.5	0.3	0.14	0.015
472	2.85	0.15	0.15	1.5	0.3	0.14	0.015
473	2.85	0.15	0.15	1.5	0.3	0.14	0.015
474	2.85	0.15	0.15	1.5	0.3	0.14	0.015
475	2.85	0.15	0.15	1.5	0.3	0.14	0.015
476	2.85	0.15	0.15	1.5	0.3	0.14	0.015
477	2.85	0.15	0.15	1.5	0.3	0.14	0.015
478	2.85	0.15	0.15	1.5	0.3	0.14	0.015

479	2.85	0.15	0.15	1.5	0.3	0.14	0.015
480	2.85	0.15	0.15	1.5	0.3	0.14	0.015
481	2.85	0.15	0.15	1.5	0.3	0.14	0.015
482	2.85	0.15	0.15	1.5	0.3	0.14	0.015
483	2.85	0.15	0.15	1.5	0.3	0.14	0.015
484	2.85	0.15	0.15	1.5	0.3	0.14	0.015
485	2.85	0.15	0.15	1.5	0.3	0.14	0.015
486	2.85	0.15	0.15	1.5	0.3	0.14	0.015
487	2.85	0.15	0.15	1.5	0.3	0.14	0.015
488	2.85	0.15	0.15	1.5	0.3	0.14	0.015
489	2.85	0.15	0.15	1.5	0.3	0.14	0.015
490	2.85	0.15	0.15	1.5	0.3	0.14	0.015
491	2.85	0.15	0.15	1.5	0.3	0.14	0.015
492	2.85	0.15	0.15	1.5	0.3	0.14	0.015
493	2.85	0.15	0.15	1.5	0.3	0.14	0.015
494	2.85	0.15	0.15	1.5	0.3	0.14	0.015
495	2.85	0.15	0.15	1.5	0.3	0.14	0.015
496	2.85	0.15	0.15	1.5	0.3	0.14	0.015
497	2.85	0.15	0.15	1.5	0.3	0.14	0.015
498	2.85	0.15	0.15	1.5	0.3	0.14	0.015
499	2.85	0.15	0.15	1.5	0.3	0.14	0.015
500	2.85	0.15	0.15	1.5	0.3	0.14	0.015
501	2.85	0.15	0.15	1.5	0.3	0.14	0.015
502	2.85	0.15	0.15	1.5	0.3	0.14	0.015
503	2.85	0.15	0.15	1.5	0.3	0.14	0.015
504	2.85	0.15	0.15	1.5	0.3	0.14	0.015
505	2.85	0.15	0.15	1.5	0.3	0.14	0.015
506	2.85	0.15	0.15	1.5	0.3	0.14	0.015
507	2.85	0.15	0.15	1.5	0.3	0.14	0.015
508	2.85	0.15	0.15	1.5	0.3	0.14	0.015
509	2.85	0.15	0.15	1.5	0.3	0.14	0.015
510	2.85	0.15	0.15	1.5	0.3	0.14	0.015
511	2.85	0.15	0.15	1.5	0.3	0.14	0.015
512	2.85	0.15	0.15	1.5	0.3	0.14	0.015
513	2.85	0.15	0.15	1.5	0.3	0.14	0.015
514	2.85	0.15	0.15	1.5	0.3	0.14	0.015
515	2.85	0.15	0.15	1.5	0.3	0.14	0.015
516	2.85	0.15	0.15	1.5	0.3	0.14	0.015
517	2.85	0.15	0.15	1.5	0.3	0.14	0.015
518	2.85	0.15	0.15	1.5	0.3	0.14	0.015
519	2.85	0.15	0.15	1.5	0.3	0.14	0.015
520	2.85	0.15	0.15	1.5	0.3	0.14	0.015
521	2.85	0.15	0.15	1.5	0.3	0.14	0.015
522	2.85	0.15	0.15	1.5	0.3	0.14	0.015
523	2.85	0.15	0.15	1.5	0.3	0.14	0.015
524	2.85	0.15	0.15	1.5	0.3	0.14	0.015
525	2.85	0.15	0.15	1.5	0.3	0.14	0.015
526	2.85	0.15	0.15	1.5	0.3	0.14	0.015
527	2.85	0.15	0.15	1.5	0.3	0.14	0.015
528	2.85	0.15	0.15	1.5	0.3	0.14	0.015
529	2.85	0.15	0.15	1.5	0.3	0.14	0.015
530	2.85	0.15	0.15	1.5	0.3	0.14	0.015
531	2.85	0.15	0.15	1.5	0.3	0.14	0.015
532	2.85	0.15	0.15	1.5	0.3	0.14	0.015
533	2.85	0.15	0.15	1.5	0.3	0.14	0.015
534	2.85	0.15	0.15	1.5	0.3	0.14	0.015
535	2.85	0.15	0.15	1.5	0.3	0.14	0.015
536	2.85	0.15	0.15	1.5	0.3	0.14	0.015
537	2.85	0.15	0.15	1.5	0.3	0.14	0.015
538	2.85	0.15	0.15	1.5	0.3	0.14	0.015
539	2.85	0.15	0.15	1.5	0.3	0.14	0.015
540	2.85	0.15	0.15	1.5	0.3	0.14	0.015
541	2.85	0.15	0.15	1.5	0.3	0.14	0.015
542	2.85	0.15	0.15	1.5	0.3	0.14	0.015
543	2.85	0.15	0.15	1.5	0.3	0.14	0.015
544	2.85	0.15	0.15	1.5	0.3	0.14	0.015
545	2.85	0.15	0.15	1.5	0.3	0.14	0.015
546	2.85	0.15	0.15	1.5	0.3	0.14	0.015
547	2.85	0.15	0.15	1.5	0.3	0.14	0.015
548	2.85	0.15	0.15	1.5	0.3	0.14	0.015
549	2.85	0.15	0.15	1.5	0.3	0.14	0.015
550	2.85	0.15	0.15	1.5	0.3	0.14	0.015
551	2.85	0.15	0.15	1.5	0.3	0.14	0.015
552	2.85	0.15	0.15	1.5	0.3	0.14	0.015
553	2.85	0.15	0.15	1.5	0.3	0.14	0.015
554	2.85	0.15	0.15	1.5	0.3	0.14	0.015
555	2.85	0.15	0.15	1.5	0.3	0.14	0.015
556	2.85	0.15	0.15	1.5	0.3	0.14	0.015
557	2.85	0.15	0.15	1.5	0.3	0.14	0.015
558	2.85	0.15	0.15	1.5	0.3	0.14	0.015
559	2.85	0.15	0.15	1.5	0.3	0.14	0.015
560	2.85	0.15	0.15	1.5	0.3	0.14	0.015
561	2.85	0.15	0.15	1.5	0.3	0.14	0.015
562	2.85	0.15	0.15	1.5	0.3	0.14	0.015
563	2.85	0.15	0.15	1.5	0.3	0.14	0.015
564	2.85	0.15	0.15	1.5	0.3	0.14	0.015
565	2.85	0.15	0.15	1.5	0.3	0.14	0.015
566	2.85	0.15	0.15	1.5	0.3	0.14	0.015
567	2.85	0.15	0.15	1.5	0.3	0.14	0.015
568	2.85	0.15	0.15	1.5	0.3	0.14	0.015
569	2.85	0.15	0.15	1.5	0.3	0.14	0.015
570	2.85	0.15	0.15	1.5	0.3	0.14	0.015
571	2.85	0.15	0.15	1.5	0.3	0.14	0.015
572	2.85	0.15	0.15	1.5	0.3	0.14	0.015
573	2.85	0.15	0.15	1.5	0.3	0.14	0.015
574	2.85	0.15	0.15	1.5	0.3	0.14	0.015
575	2.85	0.15	0.15	1.5	0.3	0.14	0.015

576	2.85	0.15	0.15	1.5	0.3	0.14	0.015
577	2.85	0.15	0.15	1.5	0.3	0.14	0.015
578	2.85	0.15	0.15	1.5	0.3	0.14	0.015
579	2.85	0.15	0.15	1.5	0.3	0.14	0.015
580	2.85	0.15	0.15	1.5	0.3	0.14	0.015
581	2.85	0.15	0.15	1.5	0.3	0.14	0.015
582	2.85	0.15	0.15	1.5	0.3	0.14	0.015
583	2.85	0.15	0.15	1.5	0.3	0.14	0.015
584	2.85	0.15	0.15	1.5	0.3	0.14	0.015
585	2.85	0.15	0.15	1.5	0.3	0.14	0.015
586	2.85	0.15	0.15	1.5	0.3	0.14	0.015
587	2.85	0.15	0.15	1.5	0.3	0.14	0.015
588	2.85	0.15	0.15	1.5	0.3	0.14	0.015
589	2.85	0.15	0.15	1.5	0.3	0.14	0.015
590	2.85	0.15	0.15	1.5	0.3	0.14	0.015
591	2.85	0.15	0.15	1.5	0.3	0.14	0.015
592	2.85	0.15	0.15	1.5	0.3	0.14	0.015
593	2.85	0.15	0.15	1.5	0.3	0.14	0.015
594	2.85	0.15	0.15	1.5	0.3	0.14	0.015
595	2.85	0.15	0.15	1.5	0.3	0.14	0.015
596	2.85	0.15	0.15	1.5	0.3	0.14	0.015
597	2.85	0.15	0.15	1.5	0.3	0.14	0.015
598	2.85	0.15	0.15	1.5	0.3	0.14	0.015
599	2.85	0.15	0.15	1.5	0.3	0.14	0.015
600	2.85	0.15	0.15	1.5	0.3	0.14	0.015
601	2.85	0.15	0.15	1.5	0.3	0.14	0.015
602	2.85	0.15	0.15	1.5	0.3	0.14	0.015
603	2.85	0.15	0.15	1.5	0.3	0.14	0.015
604	2.85	0.15	0.15	1.5	0.3	0.14	0.015
605	2.85	0.15	0.15	1.5	0.3	0.14	0.015
606	2.85	0.15	0.15	1.5	0.3	0.14	0.015
607	2.85	0.15	0.15	1.5	0.3	0.14	0.015
608	2.85	0.15	0.15	1.5	0.3	0.14	0.015
609	2.85	0.15	0.15	1.5	0.3	0.14	0.015
610	2.85	0.15	0.15	1.5	0.3	0.14	0.015
611	2.85	0.15	0.15	1.5	0.3	0.14	0.015
612	2.85	0.15	0.15	1.5	0.3	0.14	0.015
613	2.85	0.15	0.15	1.5	0.3	0.14	0.015
614	2.85	0.15	0.15	1.5	0.3	0.14	0.015
615	2.85	0.15	0.15	1.5	0.3	0.14	0.015
616	2.85	0.15	0.15	1.5	0.3	0.14	0.015
617	2.85	0.15	0.15	1.5	0.3	0.14	0.015
618	2.85	0.15	0.15	1.5	0.3	0.14	0.015
619	2.85	0.15	0.15	1.5	0.3	0.14	0.015
620	2.85	0.15	0.15	1.5	0.3	0.14	0.015
621	2.85	0.15	0.15	1.5	0.3	0.14	0.015
622	2.85	0.15	0.15	1.5	0.3	0.14	0.015
623	2.85	0.15	0.15	1.5	0.3	0.14	0.015
624	2.85	0.15	0.15	1.5	0.3	0.14	0.015
625	2.85	0.15	0.15	1.5	0.3	0.14	0.015
626	2.85	0.15	0.15	1.5	0.3	0.14	0.015
627	2.85	0.15	0.15	1.5	0.3	0.14	0.015
628	2.85	0.15	0.15	1.5	0.3	0.14	0.015
629	2.85	0.15	0.15	1.5	0.3	0.14	0.015
630	2.85	0.15	0.15	1.5	0.3	0.14	0.015
631	2.85	0.15	0.15	1.5	0.3	0.14	0.015
632	2.85	0.15	0.15	1.5	0.3	0.14	0.015
633	2.85	0.15	0.15	1.5	0.3	0.14	0.015
634	2.85	0.15	0.15	1.5	0.3	0.14	0.015
635	2.85	0.15	0.15	1.5	0.3	0.14	0.015
636	2.85	0.15	0.15	1.5	0.3	0.14	0.015
637	2.85	0.15	0.15	1.5	0.3	0.14	0.015
638	2.85	0.15	0.15	1.5	0.3	0.14	0.015
639	2.85	0.15	0.15	1.5	0.3	0.14	0.015
640	2.85	0.15	0.15	1.5	0.3	0.14	0.015
641	2.85	0.15	0.15	1.5	0.3	0.14	0.015
642	2.85	0.15	0.15	1.5	0.3	0.14	0.015
643	2.85	0.15	0.15	1.5	0.3	0.14	0.015
644	2.85	0.15	0.15	1.5	0.3	0.14	0.015
645	2.85	0.15	0.15	1.5	0.3	0.14	0.015
646	2.85	0.15	0.15	1.5	0.3	0.14	0.015
647	2.85	0.15	0.15	1.5	0.3	0.14	0.015
648	2.85	0.15	0.15	1.5	0.3	0.14	0.015
649	2.85	0.15	0.15	1.5	0.3	0.14	0.015
650	2.85	0.15	0.15	1.5	0.3	0.14	0.015
651	2.85	0.15	0.15	1.5	0.3	0.14	0.015
652	2.85	0.15	0.15	1.5	0.3	0.14	0.015
653	2.85	0.15	0.15	1.5	0.3	0.14	0.015
654	2.85	0.15	0.15	1.5	0.3	0.14	0.015
655	2.85	0.15	0.15	1.5	0.3	0.14	0.015
656	2.85	0.15	0.15	1.5	0.3	0.14	0.015
657	2.85	0.15	0.15	1.5	0.3	0.14	0.015
658	2.85	0.15	0.15	1.5	0.3	0.14	0.015
659	2.85	0.15	0.15	1.5	0.3	0.14	0.015
660	2.85	0.15	0.15	1.5	0.3	0.14	0.015
661	2.85	0.15	0.15	1.5	0.3	0.14	0.015
662	2.85	0.15	0.15	1.5	0.3	0.14	0.015
663	2.85	0.15	0.15	1.5	0.3	0.14	0.015
664	2.85	0.15	0.15	1.5	0.3	0.14	0.015
665	2.85	0.15	0.15	1.5	0.3	0.14	0.015
666	2.85	0.15	0.15	1.5	0.3	0.14	0.015
667	2.85	0.15	0.15	1.5	0.3	0.14	0.015
668	2.85	0.15	0.15	1.5	0.3	0.14	0.015
669	2.85	0.15	0.15	1.5	0.3	0.14	0.015
670	2.85	0.15	0.15	1.5	0.3	0.14	0.015
671	2.85	0.15	0.15	1.5	0.3	0.14	0.015
672	2.85	0.15	0.15	1.5	0.3	0.14	0.015

EQUIPMENT EMISSION DATA

673	2.85	0.15	0.15	1.5	0.3	0.14	0.015
674	2.85	0.15	0.15	1.5	0.3	0.14	0.015
675	2.85	0.15	0.15	1.5	0.3	0.14	0.015
676	2.85	0.15	0.15	1.5	0.3	0.14	0.015
677	2.85	0.15	0.15	1.5	0.3	0.14	0.015
678	2.85	0.15	0.15	1.5	0.3	0.14	0.015
679	2.85	0.15	0.15	1.5	0.3	0.14	0.015
680	2.85	0.15	0.15	1.5	0.3	0.14	0.015
681	2.85	0.15	0.15	1.5	0.3	0.14	0.015
682	2.85	0.15	0.15	1.5	0.3	0.14	0.015
683	2.85	0.15	0.15	1.5	0.3	0.14	0.015
684	2.85	0.15	0.15	1.5	0.3	0.14	0.015
685	2.85	0.15	0.15	1.5	0.3	0.14	0.015
686	2.85	0.15	0.15	1.5	0.3	0.14	0.015
687	2.85	0.15	0.15	1.5	0.3	0.14	0.015
688	2.85	0.15	0.15	1.5	0.3	0.14	0.015
689	2.85	0.15	0.15	1.5	0.3	0.14	0.015
690	2.85	0.15	0.15	1.5	0.3	0.14	0.015
691	2.85	0.15	0.15	1.5	0.3	0.14	0.015
692	2.85	0.15	0.15	1.5	0.3	0.14	0.015
693	2.85	0.15	0.15	1.5	0.3	0.14	0.015
694	2.85	0.15	0.15	1.5	0.3	0.14	0.015
695	2.85	0.15	0.15	1.5	0.3	0.14	0.015
696	2.85	0.15	0.15	1.5	0.3	0.14	0.015
697	2.85	0.15	0.15	1.5	0.3	0.14	0.015
698	2.85	0.15	0.15	1.5	0.3	0.14	0.015
699	2.85	0.15	0.15	1.5	0.3	0.14	0.015
700	2.85	0.15	0.15	1.5	0.3	0.14	0.015

EQUIPMENT EMISSION DATA

Linked Emission Factors to Offroad 2007 and Offroad 2011
Offroad 2011 used for Nox, PM, PM2.5 and HC
Offroad 2007 used for CO, CO2, N2O and CH4

		Emission Factor g/bhp-hr				EMFAC lbs/hr				
Equipment	Brake Horsepower	Nox	PM	PM2.5	HC	Nox	PM	PM2.5	HC	Load Factor
Hyd. Crane, 12 Ton	130	2.24	0.17	0.15	0.22	0.64	0.05	0.04	0.06	0.29
Backhoe Loader, 48 HP	83	1.53	0.14	0.13	0.32	0.28	0.03	0.02	0.06	0.37
Dump Truck, 12 CY, 400 HP	400					-	-	-	-	0.38
Crawler Loader, 3 CY	499	1.23	0.05	0.04	0.08	1.36	0.05	0.05	0.09	0.36
Hyd. Crane 25 tons	130	2.24	0.17	0.15	0.22	0.64	0.05	0.04	0.06	0.29
Air Compressor, 250 cfm	78	1.76	0.16	0.15	0.34	0.30	0.03	0.03	0.06	0.42
Dozer, 200 HP	305	2.20	0.09	0.08	0.13	1.48	0.06	0.05	0.09	0.40
Sheepsft Roller Towed	232	2.20	0.09	0.08	0.13	1.12	0.04	0.04	0.07	0.40
Dozer, 300 HP	305	2.20	0.09	0.08	0.13	1.48	0.06	0.05	0.09	0.40
Hyd. Excavator, 1 CY	222	1.49	0.05	0.04	0.08	0.73	0.02	0.02	0.04	0.38
Hyd. Excavator, 3.5 CY	428	0.86	0.03	0.03	0.05	0.81	0.03	0.02	0.05	0.38
Hyd. Crane 55 tons	230	1.99	0.09	0.08	0.14	1.01	0.05	0.04	0.07	0.38
S.P. Crane, 4x4, 5 Ton	125	2.24	0.17	0.15	0.22	0.62	0.05	0.04	0.06	0.29
S.P. Crane, 4x4, 12 Ton	130	2.24	0.17	0.15	0.22	0.64	0.05	0.04	0.06	0.29
Asphalt Paver, 130 HP	200	2.17	0.11	0.10	0.16	0.95	0.05	0.04	0.07	0.42
Tandem Roller, 10 Ton	145	1.76	0.13	0.12	0.16	0.56	0.04	0.04	0.05	0.38
Roller, Pneum., Whl., 12 Ton	145	1.76	0.13	0.12	0.16	0.56	0.04	0.04	0.05	0.38
Grader, 30,000 lbs	275	1.92	0.06	0.06	0.11	1.16	0.04	0.03	0.07	0.41
Paving Machine and Equipment	450	0.83	0.03	0.03	0.04	0.82	0.03	0.03	0.04	0.36
Grader, 30,000 lbs	275	1.92	0.06	0.06	0.11	1.16	0.04	0.03	0.07	0.41
Paving Machine and Equipment	335	1.64	0.06	0.05	0.09	1.21	0.04	0.04	0.07	0.36
Paving Machine and Equipment	200	1.58	0.08	0.07	0.10	0.70	0.03	0.03	0.05	0.36
Paving Machine and Equipment	70	1.29	0.11	0.10	0.22	0.20	0.02	0.02	0.03	0.36
Concrete Saw	10	1.88	0.15	0.14	0.17	0.04	0.00	0.00	0.00	0.42
Scraper, Towed, 10 CY	450	2.35	0.10	0.09	0.15	2.33	0.09	0.09	0.15	0.48
Truck Tractor, 6x4, 380 HP	460					-	-	-	-	0.38
Compactor, Roller, Vibratory, 25 Ton	315	1.69	0.06	0.06	0.10	1.17	0.04	0.04	0.07	0.38
Truck Tractor, 6x4, 450 HP	460					-	-	-	-	0.38
Hyd. Hammer (1200 lbs) (connect to Excavat	222	1.49	0.05	0.04	0.08	0.73	0.02	0.02	0.04	0.38
FE Loader, W.M., 4 CY	499	1.23	0.05	0.04	0.08	1.36	0.05	0.05	0.09	0.36
Pavt. Rem. Bucket (connect to Excavator)	222	1.49	0.05	0.04	0.08	0.73	0.02	0.02	0.04	0.38
Dist. Tanker, 3000 Gallon	330					-	-	-	-	0.38
Pvmt. Profiler, 750 HP	750	1.01	0.04	0.04	0.06	1.67	0.07	0.07	0.09	0.30
Road Sweeper, S.P., 8' wide	170					-	-	-	-	0.38
FE Loader, W.M., 1.5 CY	220	1.65	0.06	0.05	0.10	0.80	0.03	0.02	0.05	0.36
Ripper, beam, and shank (connect to Excava	222	1.49	0.05	0.04	0.08	0.73	0.02	0.02	0.04	0.38
Stabilizers, 310 HP	430	0.85	0.03	0.03	0.04	0.81	0.03	0.02	0.04	0.30
1 Flatbed Truck, Gas, 3 Ton	360					-	-	-	-	0.38
Truck Tractor, 220 HP	220					-	-	-	-	0.38
Line Rem., 11 HP, walk behind	11	0.25	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.42
Paint Thermo. Striper, TM	85	0.25	0.01	0.01	0.01	0.05	0.00	0.00	0.00	0.42
Heating Kettle, 115 Gallon	85	0.25	0.01	0.01	0.01	0.05	0.00	0.00	0.00	0.42
Crane, Flatbed Mounted, 3 ton	250					-	-	-	-	0.29
Flatbed Truck - 10 Wheel	360					-	-	-	-	0.38
Crane RT 50 Ton	200	2.07	0.11	0.10	0.16	0.91	0.05	0.05	0.07	0.29
Crane - Track	287	1.99	0.09	0.08	0.14	1.26	0.06	0.05	0.09	0.29
Front End Loader	220	1.65	0.06	0.05	0.10	0.80	0.03	0.02	0.05	0.36
Motor Grader	140	3.14	0.26	0.24	0.33	0.97	0.08	0.07	0.10	0.41
Compactor	33	2.11	0.08	0.07	0.12	0.15	0.01	0.01	0.01	0.42
Light Plant	16.5	1.76	0.16	0.15	0.34	0.06	0.01	0.01	0.01	0.42
Welder	38.9	1.76	0.16	0.15	0.34	0.15	0.01	0.01	0.03	0.42
Fork Lift	80	1.99	0.17	0.15	0.37	0.35	0.03	0.03	0.07	0.40
Truckmixer, 10 CY	360					-	-	-	-	0.42
Concrete Pump	290	2.11	0.08	0.07	0.12	1.35	0.05	0.05	0.08	0.42
Generator	749	1.41	0.05	0.04	0.08	2.33	0.08	0.07	0.13	0.42
Vibrator	8	1.76	0.16	0.15	0.34	0.03	0.00	0.00	0.01	0.38

EQUIPMENT EMISSION DATA

Offroad 2011 Emission Rates

Equipment Type	HorsepowerBin	Nox EMFAC g/bhp-hr	PM EMFAC g/bhp-hr	PM2.5 EMFAC g/bhp-hr	HC EMFAC g/bhp-hr
Bore/Drill Rigs	50	2.11	0.15	0.14	0.27
Bore/Drill Rigs	120	1.46	0.09	0.08	0.09
Bore/Drill Rigs	175	1.74	0.08	0.07	0.11
Bore/Drill Rigs	250	1.51	0.05	0.04	0.08
Bore/Drill Rigs	500	1.15	0.04	0.03	0.06
Bore/Drill Rigs	750	0.99	0.03	0.03	0.05
Bore/Drill Rigs	1000	1.38	0.03	0.02	0.04
Bore/Drill Rigs	9999	0.57	0.01	0.01	0.02
Cranes	50	1.43	0.14	0.13	0.41
Cranes	120	2.24	0.17	0.15	0.22
Cranes	175	2.07	0.11	0.10	0.16
Cranes	250	1.99	0.09	0.08	0.14
Cranes	500	1.23	0.05	0.05	0.08
Cranes	750	0.94	0.03	0.03	0.05
Cranes	1000	3.14	0.16	0.14	0.23
Cranes	9999	0.07	0.00	0.00	0.00
Crawler Tractors	50	2.34	0.27	0.25	0.77
Crawler Tractors	120	2.35	0.20	0.18	0.23
Crawler Tractors	175	2.55	0.14	0.13	0.19
Crawler Tractors	250	2.20	0.09	0.08	0.13
Crawler Tractors	500	1.67	0.06	0.06	0.10
Crawler Tractors	750	1.60	0.06	0.05	0.09
Crawler Tractors	1000	2.64	0.08	0.07	0.14
Crawler Tractors	9999	0.40	0.01	0.01	0.02
Excavators	50	1.36	0.10	0.10	0.19
Excavators	120	1.34	0.10	0.09	0.11
Excavators	175	1.50	0.07	0.07	0.10
Excavators	250	1.49	0.05	0.04	0.08
Excavators	500	0.86	0.03	0.03	0.05
Excavators	750	1.04	0.03	0.03	0.06
Excavators	1000	2.10	0.07	0.06	0.11
Excavators	9999	0.22	0.01	0.01	0.01
Graders	50	2.10	0.28	0.26	0.82
Graders	120	3.14	0.26	0.24	0.33
Graders	175	3.03	0.17	0.16	0.24
Graders	250	1.92	0.06	0.06	0.11
Graders	500	0.90	0.03	0.03	0.06
Graders	1000	3.03	0.11	0.10	0.19
Graders	9999	0.53	0.02	0.01	0.03
Off-Highway Tractors	50	1.89	0.19	0.18	0.46
Off-Highway Tractors	120	1.76	0.15	0.13	0.16
Off-Highway Tractors	175	2.00	0.10	0.09	0.14
Off-Highway Tractors	250	2.11	0.08	0.07	0.12
Off-Highway Tractors	500	1.18	0.04	0.04	0.07
Off-Highway Tractors	750	1.35	0.05	0.04	0.07
Off-Highway Tractors	1000	5.35	0.27	0.25	0.37
Off-Highway Tractors	9999	0.74	0.03	0.03	0.05
Off-Highway Trucks	50	1.29	0.13	0.12	0.30
Off-Highway Trucks	120	1.65	0.13	0.12	0.16
Off-Highway Trucks	175	1.82	0.10	0.09	0.15
Off-Highway Trucks	250	1.86	0.08	0.08	0.14
Off-Highway Trucks	500	1.37	0.05	0.05	0.10
Off-Highway Trucks	750	2.05	0.09	0.08	0.15
Off-Highway Trucks	1000	2.21	0.07	0.06	0.12

Offroad 2007 Emission Rates

		grams/bhp-hr				
	MaxHP	CO Exhaust	CO2 Exhaust	SO2 Exhaust	N2O Exhaust	CH4 Exhaust
Bore/Drill Rigs	15	1.91	312.85	0.00	0.00	0.03
Bore/Drill Rigs	25	1.19	290.09	0.00	0.00	0.03
Bore/Drill Rigs	50	2.07	281.56	0.00	0.00	0.02
Bore/Drill Rigs	120	1.78	291.52	0.00	0.00	0.02
Bore/Drill Rigs	175	1.95	365.66	0.00	0.00	0.02
Bore/Drill Rigs	250	0.62	341.29	0.00	0.00	0.01
Bore/Drill Rigs	500	0.50	282.41	0.00	0.00	0.01
Bore/Drill Rigs	750	0.66	372.00	0.00	0.00	0.01
Bore/Drill Rigs	1000	0.76	421.06	0.00	0.00	0.02
Cement and Mortar Mixers	15	1.17	191.12	0.00	0.00	0.02
Cement and Mortar Mixers	25	1.47	318.53	0.00	0.00	0.04
Concrete/Industrial Saws	25	1.23	298.97	0.00	0.00	0.03
Concrete/Industrial Saws	50	2.65	274.05	0.00	0.00	0.08
Concrete/Industrial Saws	120	1.83	280.28	0.00	0.00	0.04
Concrete/Industrial Saws	175	2.26	415.23	0.00	0.00	0.04
Cranes	50	2.62	210.35	0.00	0.00	0.08
Cranes	120	1.37	189.56	0.00	0.00	0.03
Cranes	175	1.25	208.25	0.00	0.00	0.02
Cranes	250	0.53	203.50	0.00	0.00	0.02
Cranes	500	0.48	163.39	0.00	0.00	0.01
Cranes	750	0.54	183.28	0.00	0.00	0.01
Cranes	9999	0.15	44.03	0.00	0.00	0.00
Crawler Tractors	50	2.95	225.70	0.00	0.00	0.10
Crawler Tractors	120	1.84	248.76	0.00	0.00	0.04
Crawler Tractors	175	1.93	314.11	0.00	0.00	0.04
Crawler Tractors	250	0.91	301.42	0.00	0.00	0.03
Crawler Tractors	500	0.86	235.17	0.00	0.00	0.02
Crawler Tractors	750	1.03	281.04	0.00	0.00	0.02
Crawler Tractors	1000	1.23	298.51	0.00	0.00	0.03
Crushing/Proc. Equipment	50	4.54	399.30	0.01	0.00	0.14
Crushing/Proc. Equipment	120	2.18	314.27	0.00	0.00	0.05
Crushing/Proc. Equipment	175	2.49	433.53	0.00	0.00	0.05
Crushing/Proc. Equipment	250	0.98	443.67	0.00	0.00	0.03
Crushing/Proc. Equipment	500	0.77	338.97	0.00	0.00	0.02
Crushing/Proc. Equipment	750	0.80	356.12	0.00	0.00	0.02
Crushing/Proc. Equipment	9999	0.17	59.32	0.00	0.00	0.00
Dumpers/Tenders	25	0.58	138.33	0.00	0.00	0.02
Excavators	25	1.23	298.28	0.00	0.00	0.03
Excavators	50	2.58	226.96	0.00	0.00	0.07
Excavators	120	1.96	278.29	0.00	0.00	0.04
Excavators	175	1.73	290.87	0.00	0.00	0.03
Excavators	250	0.64	287.91	0.00	0.00	0.02
Excavators	500	0.48	212.04	0.00	0.00	0.01
Excavators	750	0.53	234.30	0.00	0.00	0.02
Graders	50	2.96	249.82	0.00	0.00	0.09
Graders	120	2.01	283.36	0.00	0.00	0.04
Graders	175	1.90	321.20	0.00	0.00	0.03
Graders	250	0.79	312.28	0.00	0.00	0.02
Graders	500	0.57	208.18	0.00	0.00	0.02
Graders	750	0.80	293.77	0.00	0.00	0.02
Off-Highway Tractors	120	2.72	354.32	0.00	0.00	0.07
Off-Highway Tractors	175	2.16	338.04	0.00	0.00	0.05
Off-Highway Tractors	250	0.85	236.63	0.00	0.00	0.03
Off-Highway Tractors	750	1.75	343.60	0.00	0.00	0.04
Off-Highway Tractors	1000	2.05	369.36	0.00	0.00	0.04

EQUIPMENT EMISSION DATA

Off-Highway Trucks	9999	0.40	0.01	0.01	0.02	Off-Highway Trucks	175	1.96	324.22	0.00	0.00	0.03
Equipment	50	1.76	0.16	0.15	0.34	Off-Highway Trucks	250	0.70	302.17	0.00	0.00	0.02
Equipment	120	1.88	0.15	0.14	0.17	Off-Highway Trucks	500	0.58	247.06	0.00	0.00	0.02
Equipment	175	2.36	0.12	0.11	0.17	Off-Highway Trucks	750	0.62	267.16	0.00	0.00	0.02
Equipment	250	2.11	0.08	0.07	0.12	Off-Highway Trucks	1000	0.76	283.37	0.00	0.00	0.02
Equipment	500	1.41	0.05	0.05	0.08	Other Construction Equipment	15	1.87	305.64	0.00	0.00	0.03
Equipment	750	1.41	0.05	0.04	0.08	Other Construction Equipment	25	0.99	239.81	0.00	0.00	0.03
Equipment	1000	1.53	0.04	0.04	0.06	Other Construction Equipment	50	2.41	253.92	0.00	0.00	0.06
Equipment	9999	0.25	0.01	0.01	0.01	Other Construction Equipment	120	1.99	305.64	0.00	0.00	0.03
Pavers	50	1.84	0.19	0.18	0.50	Other Construction Equipment	175	1.52	276.08	0.00	0.00	0.02
Pavers	120	1.72	0.13	0.12	0.16	Other Construction Equipment	500	0.47	230.64	0.00	0.00	0.01
Pavers	175	2.17	0.11	0.10	0.16	Pavers	25	1.45	338.56	0.00	0.00	0.04
Pavers	250	1.47	0.04	0.03	0.06	Pavers	50	3.26	253.92	0.00	0.00	0.11
Pavers	500	0.83	0.03	0.03	0.04	Pavers	120	1.91	261.56	0.00	0.00	0.05
Pavers	750	1.01	0.04	0.04	0.06	Pavers	175	2.02	332.51	0.00	0.00	0.04
Paving Equipment	50	1.29	0.11	0.10	0.22	Pavers	250	1.10	352.66	0.00	0.00	0.03
Paving Equipment	120	1.69	0.13	0.12	0.15	Pavers	500	0.84	211.60	0.00	0.00	0.02
Paving Equipment	175	1.58	0.08	0.07	0.10	Paving Equipment	25	0.94	229.12	0.00	0.00	0.03
Paving Equipment	250	1.64	0.06	0.05	0.09	Paving Equipment	50	2.77	217.06	0.00	0.00	0.10
Paving Equipment	500	1.12	0.04	0.04	0.06	Paving Equipment	120	1.50	206.00	0.00	0.00	0.04
Paving Equipment	750	1.13	0.03	0.02	0.05	Paving Equipment	175	1.58	261.85	0.00	0.00	0.03
Paving Equipment	1000	1.37	0.03	0.03	0.05	Paving Equipment	250	0.68	221.88	0.00	0.00	0.02
Rollers	50	1.45	0.13	0.12	0.29	Plate Compactors	15	0.80	130.45	0.00	0.00	0.01
Rollers	120	1.76	0.13	0.12	0.16	Rollers	15	1.17	191.12	0.00	0.00	0.02
Rollers	175	1.48	0.07	0.06	0.10	Rollers	25	1.00	242.09	0.00	0.00	0.03
Rollers	250	1.69	0.06	0.06	0.10	Rollers	50	2.64	235.72	0.00	0.00	0.08
Rollers	500	1.48	0.06	0.06	0.09	Rollers	120	1.54	222.97	0.00	0.00	0.03
Rollers	750	2.24	0.08	0.08	0.13	Rollers	175	1.61	280.31	0.00	0.00	0.03
Rough Terrain Forklifts	50	1.99	0.17	0.15	0.37	Rollers	250	0.71	277.76	0.00	0.00	0.02
Rough Terrain Forklifts	120	1.45	0.09	0.08	0.09	Rollers	500	0.57	198.77	0.00	0.00	0.01
Rough Terrain Forklifts	175	1.11	0.04	0.04	0.06	Rough Terrain Forklifts	50	3.43	307.16	0.00	0.00	0.10
Rough Terrain Forklifts	250	2.05	0.09	0.08	0.14	Rough Terrain Forklifts	120	1.64	236.06	0.00	0.00	0.03
Rough Terrain Forklifts	500	1.40	0.04	0.04	0.07	Rough Terrain Forklifts	175	1.88	323.73	0.00	0.00	0.03
Rough Terrain Forklifts	750	5.06	0.27	0.25	0.40	Rough Terrain Forklifts	250	0.69	309.89	0.00	0.00	0.02
Rubber Tired Dozers	50	2.19	0.29	0.27	0.81	Rough Terrain Forklifts	500	0.52	232.76	0.00	0.00	0.01
Rubber Tired Dozers	120	2.58	0.23	0.21	0.27	Rubber Tired Dozers	175	2.19	335.60	0.00	0.00	0.05
Rubber Tired Dozers	175	3.33	0.19	0.18	0.27	Rubber Tired Dozers	250	1.24	332.91	0.00	0.00	0.04
Rubber Tired Dozers	250	2.66	0.13	0.12	0.20	Rubber Tired Dozers	500	1.29	240.29	0.00	0.00	0.03
Rubber Tired Dozers	500	2.28	0.11	0.10	0.17	Rubber Tired Dozers	750	1.29	241.18	0.00	0.00	0.03
Rubber Tired Dozers	750	2.31	0.08	0.08	0.14	Rubber Tired Dozers	1000	1.56	268.48	0.00	0.00	0.03
Rubber Tired Loaders	50	1.86	0.21	0.19	0.53	Rubber Tired Loaders	25	1.26	307.16	0.00	0.00	0.03
Rubber Tired Loaders	120	1.88	0.16	0.15	0.19	Rubber Tired Loaders	50	3.30	282.59	0.00	0.00	0.10
Rubber Tired Loaders	175	1.96	0.11	0.10	0.16	Rubber Tired Loaders	120	1.57	222.69	0.00	0.00	0.03
Rubber Tired Loaders	250	1.65	0.06	0.05	0.10	Rubber Tired Loaders	175	1.63	275.56	0.00	0.00	0.03
Rubber Tired Loaders	500	1.23	0.05	0.04	0.08	Rubber Tired Loaders	250	0.67	270.30	0.00	0.00	0.02
Rubber Tired Loaders	750	1.39	0.05	0.05	0.10	Rubber Tired Loaders	500	0.58	215.01	0.00	0.00	0.02
Rubber Tired Loaders	1000	2.03	0.06	0.05	0.10	Rubber Tired Loaders	750	0.79	293.64	0.00	0.00	0.02
Rubber Tired Loaders	9999	0.35	0.01	0.01	0.02	Rubber Tired Loaders	1000	0.84	269.38	0.00	0.00	0.02
Scrapers	50	2.34	0.31	0.29	0.92	Scrapers	120	2.62	354.94	0.00	0.00	0.06
Scrapers	120	2.40	0.18	0.16	0.20	Scrapers	175	2.36	383.80	0.00	0.00	0.05
Scrapers	175	3.66	0.19	0.18	0.28	Scrapers	250	1.16	380.06	0.00	0.00	0.04
Scrapers	250	3.91	0.18	0.16	0.27	Scrapers	500	1.10	291.60	0.00	0.00	0.03
Scrapers	500	2.35	0.10	0.09	0.15	Scrapers	750	1.26	335.83	0.00	0.00	0.03
Scrapers	750	1.87	0.07	0.07	0.11	Signal Boards	15	1.14	186.57	0.00	0.00	0.02
Scrapers	1000	6.14	0.29	0.26	0.44	Signal Boards	50	3.14	328.32	0.00	0.00	0.09
Scrapers	9999	0.68	0.03	0.02	0.04	Signal Boards	120	1.97	303.18	0.00	0.00	0.04

EQUIPMENT EMISSION DATA

Skid Steer Loaders	50	1.46	0.09	0.09	0.18	Signal Boards	175	2.16	400.57	0.00	0.00	0.04
Skid Steer Loaders	120	0.87	0.05	0.05	0.05	Signal Boards	250	0.97	463.19	0.01	0.00	0.03
Skid Steer Loaders	175	1.34	0.06	0.06	0.08	Skid Steer Loaders	25	1.13	250.28	0.00	0.00	0.03
Skid Steer Loaders	250	1.04	0.04	0.03	0.06	Skid Steer Loaders	50	2.05	231.51	0.00	0.00	0.04
Skid Steer Loaders	500	0.63	0.02	0.02	0.04	Skid Steer Loaders	120	1.04	161.64	0.00	0.00	0.01
Skid Steer Loaders	750	0.63	0.03	0.02	0.03	Surfacing Equipment	50	1.27	127.98	0.00	0.00	0.04
Skid Steer Loaders	1000	3.05	0.11	0.10	0.19	Surfacing Equipment	120	1.59	241.03	0.00	0.00	0.03
Surfacing Equipment	50	1.17	0.09	0.09	0.20	Surfacing Equipment	175	1.23	222.32	0.00	0.00	0.02
Surfacing Equipment	120	1.23	0.09	0.08	0.10	Surfacing Equipment	250	0.61	244.70	0.00	0.00	0.02
Surfacing Equipment	175	1.49	0.07	0.07	0.10	Surfacing Equipment	500	0.58	200.68	0.00	0.00	0.01
Surfacing Equipment	250	1.37	0.04	0.04	0.07	Surfacing Equipment	750	0.61	209.89	0.00	0.00	0.01
Surfacing Equipment	500	0.85	0.03	0.03	0.04	Tractors/Loaders/Backhoes	25	1.19	287.82	0.00	0.00	0.03
Surfacing Equipment	750	0.81	0.03	0.02	0.04	Tractors/Loaders/Backhoes	50	2.90	275.30	0.00	0.00	0.07
Surfacing Equipment	1000	1.41	0.03	0.03	0.06	Tractors/Loaders/Backhoes	120	1.33	195.53	0.00	0.00	0.02
Surfacing Equipment	9999	0.13	0.00	0.00	0.00	Tractors/Loaders/Backhoes	175	1.52	262.79	0.00	0.00	0.02
s	50	1.53	0.14	0.13	0.32	Tractors/Loaders/Backhoes	250	0.67	311.59	0.00	0.00	0.02
s	120	1.43	0.11	0.10	0.12	Tractors/Loaders/Backhoes	500	0.68	312.85	0.00	0.00	0.02
s	175	1.51	0.08	0.07	0.11	Tractors/Loaders/Backhoes	750	0.68	312.85	0.00	0.00	0.02
s	250	1.50	0.05	0.04	0.08	Trenchers	15	1.56	255.96	0.00	0.00	0.03
s	500	1.07	0.04	0.03	0.06	Trenchers	25	2.46	597.25	0.01	0.00	0.07
s	750	1.20	0.04	0.04	0.07	Trenchers	50	3.70	298.63	0.00	0.00	0.13
s	1000	1.22	0.03	0.02	0.04	Trenchers	120	1.77	245.30	0.00	0.00	0.04
s	9999	0.40	0.01	0.01	0.02	Trenchers	175	2.24	372.98	0.00	0.00	0.05
Trenchers	50	2.19	0.20	0.18	0.42	Trenchers	250	1.29	404.42	0.00	0.00	0.04
Trenchers	120	2.51	0.20	0.18	0.24	Trenchers	500	1.18	282.41	0.00	0.00	0.02
Trenchers	175	3.27	0.17	0.16	0.24	Trenchers	750	1.48	354.94	0.00	0.00	0.03
Trenchers	250	2.86	0.11	0.10	0.18							
Trenchers	500	1.58	0.06	0.05	0.09							
Trenchers	750	0.76	0.03	0.02	0.04							
Trenchers	1000	5.67	0.26	0.24	0.40							
Sweepers/Scrubbers	50	1.87	0.20	0.18	0.48							
Sweepers/Scrubbers	120	2.08	0.18	0.17	0.21							
Sweepers/Scrubbers	175	3.93	0.22	0.20	0.31							
Sweepers/Scrubbers	250	2.50	0.10	0.09	0.16							
Sweepers/Scrubbers	500	1.66	0.07	0.07	0.10							
Sweepers/Scrubbers	1000	1.56	0.04	0.04	0.05							

ACTIVITES EMISSIONS

ACT	TITLE	Duration (days)	Number of Crews	Type of Crew
1000	**MOBILIZATION**			
Act. 1081	Field Office, Plants & Temp Facilities	60		
	FIELD OFFICE AND FACILITIES		1	Estimated Crews
	CLEARING AND GRUBBING		1/2	B-11A Crews (work half of the duration)
2000	**PHASE 1 TAXIWAY C OBJECT FREE AREA @ C17**			
Act. 2001	**Setup Barricades and Job Site Conditions**	**2**		
Act. 2011				
	Asphalt Pavement and Topsoil Removal	5	7	B-38 Crews
	SETUP BARRICADES		2	"2-Carp" Crews
	SEEDIN		6	"2-Carp" Crews
Act. 2021	**Subgrade Prep**	**4**		
	SUBGRADE FILL		2	B-10m Crews
	SUBGRADE COMPACTION		2	B-10D Crews
	ELECTRICAL DEMOLITION/DUCT/CABLES		11	"2-Elec" Crews
Act. 2032	**Paving Econocrete**	**3**	**3**	**B-74 Crews**
Act. 2041	**PCC Paving (Side Form Paving)**	**2**		
	PLAIN PCC PAVEMENT, 19" THICK, EDGE FORM		3	B-26 Crews
	REINFORCING PCC PAVEMENT		1.5	"2-Rodmen" Crews
	ELECTRICAL LIGHTS IN PAVEMENT		3	"2-Elec" Crews
Act. 2051	**Aggregate Base (Shoulders PMB & AGG)**	**2**		
	CRUSSHED AGGREGATE BASE COURSE		1	B-36C Crews
	PROCESSED MATERIAL BASE		2	B-25 Crews
Act. 2061	**Asphalt Surface (Shoulders)**	**2**		
	ASPHALT (GREENBOOK)		7	B-25C Crews
	INFIELD PAINTING (GREEN) and ROAD MARKING		3	B-79 Crews
Act. 2071	**Finish Light Fixture Installations**	**1**	**11**	**"2-Elec" Crews**
3000	**PHASE 2 TAXW CONSTR OUTSIDE RWY TRSA &**			
3001	**Ph 2A Taxiway Work West of Existing Runway**			
Act. 3011	**Set Up Barricades**	**1**	**2**	**"2-Carp" Crews**
Act. 3021	**Asphalt Pavement and Topsoil Removal**	**5**	**7**	**B-38 Crews**
Act. 3031	**Exiting PCC Pavement Removal**	**18**	**6**	**B-38 Crews**
Act. 3041	**Demo Existing Storm Drain**	**2**		
	REMOVAL OF STORM DRAIN PIPE, 8"-18", AND CATCH		2	B-6 Crews
	REMOVAL OF STORM DRAIN PIPE, 21"-30"		2	B-13B Crews
Act. 3051	**Grading for Taxiway and Shoulders**	**11**	**14**	**B-33B Crews**
Act. 3061	**Storm Drain**	**7**		
	CONSTRUCT 12" to 24" RCP STORM DRAIN		1	B-21 Crews
	CONSTRUCT 30" RCP STORM DRAIN		1/7	B-13 Crews (work over 1 days out of 7 days)
	INSTALL 12" D.I.P.		1/7	B-21A Crews (work over 1 days out of 7 days)
	TRENCH EXCAVATION		4/7	B-12A Crews
	UTILITY BEDDING		4/7	B-6 Crews(work over 4 days out of 7 days)
Act. 3071	**Subgrade Prep**	**4**		
	SUBGRADE FILL		2	B-10m Crews
	SUBGRADE COMPACTION		2	B-10D Crews
	ELECTRICAL DEMOLITION/DUCT/CABLES		11	"2-Elec" Crews
Act. 3083	**Paving Econocrete**	**6**	**3**	**B-74 Crews**
Act. 3091	**PCC Paving (Side Form)**	**8**		
	PLAIN PCC PAVEMENT, 19" THICK, EDGE FORM		3	B-26 Crews
	REINFORCING PCC PAVEMENT		1.5	"2-Rodmen" Crews
	ELECTRICAL LIGHTS IN PAVEMENT		3	"2-Elec" Crews
Act. 3101	**Aggregate Base (Shoulders PMB & AGG)**	**4**		
	CRUSSHED AGGREGATE BASE COURSE		1	B-36C Crews
	PROCESSED MATERIAL BASE		2	B-25 Crews
Act. 3111	**Asphalt Surface (Shoulders & Pad)**	**3**		
	ASPHALT (GREENBOOK)		8	B-25C Crews
	INFIELD PAINTING (GREEN) and ROAD MARKING		3	B-79 Crews
Act. 3121	**Finish Light Fixture Installations**	**3**	**11**	**"2-Elec" Crews**
3141	**Phase 2B - Pave Temp Txwy U Outside 220'**			
Act. 3151	**Set Up Barricades**	**1**	**2**	**"2-Carp" Crews**
Act. 3161	**Asphalt Pavement and Topsoil Removal**	**3**	**7**	**B-38 Crews**
Act. 3171	**Subgrade Prep and Soil Stabilization**	**2**		
	SUBGRADE FILL		2	B-10m Crews
	SUBGRADE COMPACTION		2	B-10D Crews
	SUBGRADE FABRIC STABILIZATION		2	B-6 Crews
	ELECTRICAL DEMOLITION/DUCT/CABLES		11	"2-Elec" Crews
Act. 3181	**Pave Asphalt Base Cse (Full Strength Pvmt**	**3**		
	ASPHALT (GREENBOOK)		7	B-25C Crews
	INFIELD PAINTING (GREEN) and ROAD MARKING		3	B-79 Crews
3221	**Phase 2C**			
Act. 3231	**Asphalt Pavement & Topsoil Removal**	**1**	**7**	**B-38 Crews**
Act. 3241	**Subgrade Prep and Soil Stabilization**	**1**		
	SUBGRADE FILL		2	B-10m Crews
	SUBGRADE COMPACTION		2	B-10D Crews
	SUBGRADE FABRIC STABILIZATION		2	B-6 Crews
	ELECTRICAL DEMOLITION/DUCT/CABLES		11	"2-Elec" Crews
Act. 3251	**Pave Asphalt Base Cse (Full Strength Pvmt**	**3**		
	ASPHALT (GREENBOOK)		7	B-25C Crews
	INFIELD PAINTING (GREEN) and ROAD MARKING		3	B-79 Crews
Act. 3291	**Temp Taxiway Pvment Marking, Lighting &**			
Act. 3301	**Relocate Runway 7L Threshold**			
Act. 3311	**Paint Obliteration**			
Act. 3321	**Temporary Marking, Lighting & Signage**	**2**		
	RUNWAY AND TAXIWAY PAINTING		4	B-79 Crews
	ELECTRICAL LIGHTS and OTHER ITEMS		8	"2-Elec" Crews

ACT	TypeofCrew	Number of Crews	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
1000										
1081			**0**	**3**	**0**	**0**	**0**	**0**	**874**	**0**
	Estimated	1								
	B-11A	0.5	0	3	0	0	0	0	874	0
2000										
2001										
2011			**5**	**71**	**15**	**0**	**0**	**0**	**23444**	**2**
	B-38	7	5	70	15	0	0	0	23124	2
	2 Carp	2	0	0	0	0	0	0	80	0
	2 Carp	6	0	1	0	0	0	0	240	0
2021			**2**	**35**	**4**	**0**	**0**	**0**	**10228**	**1**
	B-10m	2	1	13	1	0	0	0	3477	0
	B-10D	2	1	20	2	0	0	0	6316	1
	2 Elec	11	0	2	0	0	0	0	436	0
2032	**B-74**	**3**	**2**	**39**	**6**	**0**	**0**	**0**	**14561**	**1**
2041			**1**	**20**	**3**	**0**	**0**	**0**	**5869**	**0**
	B-26	3	1	19	3	0	0	0	5690	0
	2 Rodmen	1.5	0	0	0	0	0	0	59	0
	2 Elec	3	0	1	0	0	0	0	119	0
2051			**1**	**23**	**7**	**0**	**0**	**0**	**5327**	**1**
	B-36C	1	1	11	1	0	0	0	3385	0
	B-25	2	0	12	5	0	0	0	1942	0
2051asp			0.0							
2061			**1**	**36**	**16**	**0**	**0**	**0**	**6155**	**1**
	B-25C	7	1	27	11	0	0	0	4444	0
	B-79	3	0	9	5	0	0	0	1710	0
2061asp			0.0							
2071	**2 Elec**	**11**	**0**	**2**	**0**	**0**	**0**	**0**	**436**	**0**
3000										
3001										
3011	**2 Carp**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**0**
3021	**B-38**	**7**	**5**	**70**	**15**	**0**	**0**	**0**	**23124**	**2**
3031	**B-38**	**6**	**4**	**60**	**13**	**0**	**0**	**0**	**19821**	**2**
3041			**0**	**10**	**2**	**0**	**0**	**0**	**2091**	**0**
	B-6	2	0	5	2	0	0	0	574	0
	B-13B	2	0	5	1	0	0	0	1516	0
3051	**B-33B**	**14**	**10**	**194**	**21**	**1**	**1**	**1**	**51630**	**5**
3051dust							**26**	**4**		
3061			**0**	**5**	**1**	**0**	**0**	**0**	**1080**	**0**
	B-21	1	0	1	0	0	0	0	226	0
	B-13	0.142857143	0	0	0	0	0	0	66	0
	B-21A	0.142857143	0	0	0	0	0	0	61	0
	B-12A	0.571428571	0	1	0	0	0	0	563	0
	B-6	0.571428571	0	2	0	0	0	0	164	0
3071			**2**	**35**	**4**	**0**	**0**	**0**	**10228**	**1**
	B-10m	2	1	13	1	0	0	0	3477	0
	B-10D	2	1	20	2	0	0	0	6316	1
	2 Elec	11	0	2	0	0	0	0	436	0
3083	**B-74**	**3**	**2**	**39**	**6**	**0**	**0**	**0**	**14561**	**1**
3091			**1**	**20**	**3**	**0**	**0**	**0**	**5869**	**0**
	B-26	3	1	19	3	0	0	0	5690	0
	2 Rodmen	1.5	0	0	0	0	0	0	59	0
	2 Elec	3	0	1	0	0	0	0	119	0
3101			**1**	**23**	**7**	**0**	**0**	**0**	**5327**	**1**
	B-36C	1	1	11	1	0	0	0	3385	0
	B-25	2	0	12	5	0	0	0	1942	0
3101asp			0.0							
3111			**1**	**40**	**17**	**0**	**0**	**0**	**6789**	**1**
	B-25C	8	1	31	13	0	0	0	5079	1
	B-79	3	0	9	5	0	0	0	1710	0
3111asp			0.0							
3121	**2 Elec**	**11**	**0**	**2**	**0**	**0**	**0**	**0**	**436**	**0**
3141										
3151	**2 Carp**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**80**	**0**
3161	**B-38**	**7**	**5**	**70**	**15**	**0**	**0**	**0**	**23124**	**2**
3171			**2**	**40**	**5**	**0**	**0**	**0**	**10803**	**1**
	B-10m	2	1	13	1	0	0	0	3477	0
	B-10D	2	1	20	2	0	0	0	6316	1
	B-6	2	0	5	2	0	0	0	574	0
	2 Elec	11	0	2	0	0	0	0	436	0
3181			**1**	**36**	**16**	**0**	**0**	**0**	**6155**	**1**
	B-25C	7	1	27	11	0	0	0	4444	0
	B-79	3	0	9	5	0	0	0	1710	0
3181asp			0.0							
3221										
3231	**B-38**	**7**	**5**	**70**	**15**	**0**	**0**	**0**	**23124**	**2**
3241			**2**	**40**	**5**	**0**	**0**	**0**	**10803**	**1**
	B-10m	2	1	13	1	0	0	0	3477	0
	B-10D	2	1	20	2	0	0	0	6316	1
	B-6	2	0	5	2	0	0	0	574	0
	2 Elec	11	0	2	0	0	0	0	436	0
3251			**1**	**36**	**16**	**0**	**0**	**0**	**6155**	**1**
	B-25C	7	1	27	11	0	0	0	4444	0
	B-79	3	0	9	5	0	0	0	1710	0

2 Carp
2 Clab

2 Elec
2 Rodmen
B-1B
B-6
B-8
B-9
B-10D
B-10M
B-11A
B-12A
B-12D
B-13
B-13B
B-21
B-21A
B-25
B-25C
B-26
B-26A
B-33B
B-34C
B-36C
B-38
B-45
B-71
B-74
B-78B
B-79
B-80B
B-89
Building (Estimated)
Electrical (Estimated)
Foundation (Estimated)
Field Check (Estimated)
Setup (Estimated)

ACTIVITES EMISSIONS

4000	**PHASE 3 RWY 7L EXTENSION & NAVAIDS INSIDE TRSA**			
Act. 4001	**Asphalt Pavement and Topsoil Removal**	**7**	**7**	**B-38 Crews**
Act. 4011	**Existing PCC Pavement Removal**	**14**	**6**	**B-38 Crews**
Act. 4021	**Demo Existing Storm Drain**	**4**		
	REMOVAL OF STORM DRAIN PIPE, 8"-18", AND CATCH		2	B-6 Crews
	REMOVAL OF STORM DRAIN PIPE, 21"-30"		2	B-13B Crews
Act. 4031	**Grading**	**17**	**14**	**B-33B Crews**
Act. 4041	**Storm Drain**	**12**		
	CONSTRUCT 12" to 24" RCP STORM DRAIN		1	B-21 Crews
	CONSTRUCT 30" RCP STORM DRAIN		1/4	B-13 Crews (work over 3 days out of 12 days)
	INSTALL 12" D.I.P.		1/6	B-21A Crews (work over 2 days out of 12 days)
	TRENCH EXCAVATION		1/2	B-12A Crews (work over 6 days out of 12 days)
	UTILITY BEDDING		1/2	B-6 Crews (work over 6 days out of 12 days)
Act. 4051	**Storm Retention System**	**12**	**3**	**B-13 Crews**
Act. 4061	**Subgrade Prep**	**6**		
	SUBGRADE FILL		2	B-10m Crews
	SUBGRADE COMPACTION		2	B-10D Crews
	ELECTRICAL DEMOLITION/DUCT/CABLES		11	"2-Elec" Crews
Act. 4073	**Paving Econocrete**	**13**	**3**	**B-74 Crews**
Act. 4081	**PCC Paving (Slip Form Paving)**	**12**		
	PLAIN PCC PAVEMENT, 19" THICK, SLIP FORM		1	B-26A Crews
	ELECTRICAL LIGHTS IN PAVEMENT		3	"2-Elec" Crews
Act. 4091	**Aggregate Base (Shoulders & PAD, PMB &**	**7**		
	CRUSSHED AGGREGATE BASE COURSE		1	B-36C Crews
	PROCESSED MATERIAL BASE		2	B-25 Crews
Act. 4101	**4" Asphalt Surface (Shoulders & Pad)**	**5**		
	ASPHALT (GREENBOOK)		7	B-25C Crews
	INFIELD PAINTING (GREEN) and ROAD MARKING		3	B-79 Crews
Act. 4111	**Finish Light Fixture Insallations**	**2**	**11**	**"2-Elec" Crews**
Act. 4121	**PCC Sawcut**	**1**	**1**	**B-71 Crews**
5000	**PHASE 4 REMOVE TEMP & FINAL PERM MRKG (OFF PK)**			
Act. 5001	**Remove Temp and Install Perm Markings**	**2**		
	REMOVAL OF PAVEMENT MARKINGS		4	B-78B Crews
	RUNWAY AND TAXIWAY PAINTING		8	B-79 Crews
Act. 5011	**Flight Check (Maint Ck) 07L MALSR**	**4**	**1**	**Flight Check (Estimated)**
6001	**Relocation of Runway 25R Localizer Antenna**			
Act. 6011	**Comp Civil Engr Sub-base Work on Runway 07L**	**1**	**2**	**"2-Elec" Crews**
Act. 6021	**Remove Existing Rwy 25R Localizer Antenna**	**2**	**2**	**"2-Elec" Crews**
Act. 6031	**Infrastructure Loc Equip Shelter to Loc**	**5**	**3**	**"2-Elec" Crews**
Act. 6051	**Joint & Contractor Acceptance Testing**	**1**	**3**	**"2-Elec" Crews**
Act. 6061	**Energize Localizer**	**1**	**1**	**"2-Elec" Crews**
Act. 6071	**Localizer Flight Check**	**1**	**1**	**"2-Elec" Crews**
Act. 6081	**Rwy 25R Loc 500 Hour Burn In**	**24**	**1/5**	**"2-Elec" Crews (1 crew part time work)**
Act. 6101	**Comp Civil Engr Sub-base Work on Runway 07L**	**1**	**2**	**"2-Elec" Crews**
Act. 6111	**Install New Inpavement Sta 0 Threshold**	**3**	**2**	**"2-Elec" Crews**
Act. 6121	**Install Infrastructure for Sta 2 - 10 w/ lights**	**10**	**3**	**"2-Elec" Crews**
Act. 6131	**Order Extensions & Finalize MALSR Threshold**	**17**	**2**	**"2-Elec" Crews**
Act. 6141	**Finalize Cable and Light Installation**	**3**	**3**	**"2-Elec" Crews**

1000	**MOBILIZATION**				
1081	**Field Office, Plants & Temp Facilities**	**60**			
	Field Office and Facilities		1		Setup (Estimated)
	Clearing and Grubbing			1/2	B-11A (work half of duration)
	NEW AIRFREIGHT BUILDING CONSTRUCTION				
20080	**Earthwork**	**36**			
	Excavation		1		B12-D
	Hauling		3		B-34C
20090	**Foundation**	**60**	**1**		**Foundation (Estimated)**
20096	**Building Construction**	**180**	**1**		**Building (Estimated)**
20100	**EAST END - PHASE 1 (TAXIWAY C)**				
20110	**Remove Chain Link Fence and Guard Rails**	**1**			
	Remove Chain Link Fence and Guard Rails		3		B-6
	Relocation of K-Rail Barriers		1		B-80B
20120	**Setup Barricades and Job Site Conditions**	**1**	**1**		**B-80B**
20130	**Demo Airfreight Building 8 and Foundation**				
20132	**Demo Airfreight Building 8**	**28**	**5**		**B-8**
20142	**Demo Building Foundation**	**12**	**10**		**B-9**
20144	**Demo Electrical**	**3**	**3**		**Electrical (Estimated)**
20146	**Existing Asphalt Pavement Removal**	**11**			
	Asphalt Pavement Removal		6		B-38
	Asphalt Pavement Sawcut			1/2	B-89 (work half of duration)
20150	**Existing PCC Pavement Removal**	**15**			
	PCC Pavement Removal		10		B-38
	PCC Pavement Sawcut			1/2	B-89 (work half of duration)
20160	**Remove Existing Slab/Foundation under 3" AC on**	**o**	**13**	**12**	**B-9**
20172	**Demo Existing Storm Drain**	**7**			
	Removal of Storm Drain Pipe		2		B-13B
	Removal of Catch Basin			1/7	B-9 (work over 1 day out of 7 days)
20174	**Demo Existing Water Line**	**5**	**2**		**B-21B**
20176	**Demo Existing Sewer Line**	**3**			
	Removal of Concrete Sewer Pipe		1		B-6
	Removal of Manhole			1/3	B-9 (work over 1 day out of 3 days)
20178	**Demo Existing Fuel Line**	**2**	**1**		**B-1B**
20190	**Grading for New Service Road Construction Area**	**3**	**4**		**B-33B**
20200	**Service Road AC Paving**				
20210	**6" Lime Treated Subgrade**	**1**			
	Backfill		1		B-10M
	Lime Soil Stabilization and Compaction		2		B-74
20220	**12" PMB**	**1**	**2**		**B-25**
20230	**4" AC and Prime Coat**	**1**			
	AC Paving		3		B-25
	Prime Coat		1		B-45

3251asp			0.0							
3291										
3301										
3311										
3321			**0**	**13**	**6**	**0**	**0**	**0**	**2598**	**0**
	B-79	4	0	12	6	0	0	0	2281	0
	2 Elec	8	0	1	0	0	0	0	317	0
4000										
4001	**B-38**	**7**	**5**	**70**	**15**	**0**	**0**	**0**	**23124**	**2**
4011	**B-38**	**6**	**4**	**60**	**13**	**0**	**0**	**0**	**19821**	**2**
4021			**0**	**10**	**2**	**0**	**0**	**0**	**2091**	**0**
	B-6	2	0	5	2	0	0	0	574	0
	B-13B	2	0	5	1	0	0	0	1516	0
4031	**B-33B**	**14**	**10**	**194**	**21**	**1**	**1**	**1**	**51630**	**5**
4031dust							**26**	**4**		
4041			**0**	**5**	**1**	**0**	**0**	**0**	**1049**	**0**
	B-21	1	0	1	0	0	0	0	226	0
	B-13	0.25	0	1	0	0	0	0	116	0
	B-21A	0.166666667	0	0	0	0	0	0	71	0
	B-12A	0.5	0	1	0	0	0	0	492	0
	B-6	0.5	0	1	0	0	0	0	144	0
4051	**B-13**	**3**	**0**	**9**	**1**	**0**	**0**	**0**	**1393**	**0**
4061			**2**	**35**	**4**	**0**	**0**	**0**	**10228**	**1**
	B-10m	2	1	13	1	0	0	0	3477	0
	B-10D	2	1	20	2	0	0	0	6316	1
	2 Elec	11	0	2	0	0	0	0	436	0
4073	**B-74**	**3**	**2**	**39**	**6**	**0**	**0**	**0**	**14561**	**1**
4081			**2**	**18**	**3**	**0**	**0**	**0**	**4036**	**0**
	B-26A	1	2	17	3	0	0	0	3917	0
	2 Elec	3	0	1	0	0	0	0	119	0
4091			**1**	**23**	**7**	**0**	**0**	**0**	**5327**	**1**
	B-36C	1	1	11	1	0	0	0	3385	0
	B-25	2	0	12	5	0	0	0	1942	0
4091asp			0.0							
4101			**1**	**36**	**16**	**0**	**0**	**0**	**6155**	**1**
	B-25C	7	1	27	11	0	0	0	4444	0
	B-79	3	0	9	5	0	0	0	1710	0
4101asp			0.0							
4111	**2 Elec**	**11**	**0**	**2**	**0**	**0**	**0**	**0**	**436**	**0**
4121	**B-71**	**1**	**0**	**8**	**1**	**0**	**0**	**0**	**2192**	**0**
5000										
5001			**1**	**25**	**13**	**0**	**0**	**0**	**4901**	**0**
	B-78B	4	0	1	0	0	0	0	340	0
	B-79	8	1	24	12	0	0	0	4561	0
5011	**Field Check (Estimated)**	**1**	**0**	**1**	**0**	**0**	**0**	**0**	**122**	**0**
6001										
6011	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
6021	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
6031	**2 Elec**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**119**	**0**
6051	**2 Elec**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**119**	**0**
6061	**2 Elec**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**
6071	**2 Elec**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**
6081	**2 Elec**	**0.2**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**
6101	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
6111	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
6121	**2 Elec**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**119**	**0**
6131	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
6141	**2 Elec**	**3**	**0**	**1**	**0**	**0**	**0**	**0**	**119**	**0**
1000										
1081			**0**	**5**	**1**	**0**	**0**	**0**	**1310**	**0**
	Setup (Estimated)	1	0	2	0	0	0	0	436	0
	B-11A	0.5	0	3	0	0	0	0	874	0
20080			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	B-12D		0	0	0	0	0	0	0	0
	B-34C		0	0	0	0	0	0	0	0
20090	**Foundation (Estimated)**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20096	**Building (Estimated)**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20096paint			**0**							
20100										
20110			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	B-6		0	0	0	0	0	0	0	0
	B-80B		0	0	0	0	0	0	0	0
20120	**B-80B**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20130										
20132	**B-8**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20132demo	**B-8**						**3**			
20142	**B-9**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20144	**Electrical (Estimated)**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20146			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	B-38		0	0	0	0	0	0	0	0
	B-89		0	0	0	0	0	0	0	0
20150			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	B-38		0	0	0	0	0	0	0	0
	B-89		0	0	0	0	0	0	0	0
20160	**B-9**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20172			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	B-13B		0	0	0	0	0	0	0	0
	B-9		0	0	0	0	0	0	0	0
20174	**B-21B**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
20176			**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

East End Phase 1 Crews
1
3
1
1
3
1
1
5
5
10
3
6
0.5
10
0.5
12
2
0.142857143
2

ACTIVITES EMISSIONS

20240	Grading for Taxiway and Shoulders	4	7	B-33B		B-6		0	0	0	0	0	0	0	0	1
20250	Grading for Rest of Airfreight Building Area	5	7	B-33B		B-9		0	0	0	0	0	0	0	0	0.333333333
20260	Construct Storm Drain	4			20178	B-1B		0	0	0	0	0	0	0	0	1
	Construct 18"-24" RCP Storm Drain		3	B-21	20190	B-33B		0	0	0	0	0	0	0	0	4
Con	*tructElliptical Storm Drains, Catch Basins and*		4	B-13	20190dust							7	1			
	Trench Excavation		2	B-12A	20200											
	Utility Bedding		1	B-6	20210			0	0	0	0	0	0	0	0	
20270	Construct Storm Drainage Filtration System (out of	e 12	1	B-13		B-10M		0	0	0	0	0	0	0	0	1
20274	Electrical Installation Conduits/Fixtures	5	12	Electrical (Estimated)		B-74		0	0	0	0	0	0	0	0	2
20280	PCC Paving				20220	B-25		0	0	0	0	0	0	0	0	2
20290	6" Lime Treated Subgrade	2			20220asp			0.0								
	Backfill		1	B-10M	20230			0	0	0	0	0	0	0	0	
	Lime Soil Stabilization and Compaction		3	B-74		B-25		0	0	0	0	0	0	0	0	3
20300	6" Asphalt Treated Base	2	2	B-25		B-45		0	0	0	0	0	0	0	0	1
20310	23" PCC	2	3	B-26A	20230asp			0.0								
20340	Shoulder AC Paving				20240	B-33B		0	0	0	0	0	0	0	0	7
20350	Geodrid	1	1	B-6	20240dust							13	2			
20360	19.5" PMB	2	2	B-25	20250	B-33B		0	0	0	0	0	0	0	0	7
20370	6" Asphalt Treated Base	1	2	B-25	20250dust							13	2			
20380	3" AC	1	2	B-25	20260			0	0	0	0	0	0	0	0	
20390	Erosion Control AC Paving					B-21		0	0	0	0	0	0	0	0	3
20400	6" Lime Treated Subgrade	3			*Con*	B-13		0	0	0	0	0	0	0	0	4
	Backfill		2	B-10M		B-12A		0	0	0	0	0	0	0	0	2
	Lime Soil Stabilization and Compaction		4	B-74		B-6		0	0	0	0	0	0	0	0	1
20410	6" PMB	2	3	B-25	20270	B-13		0	0	0	0	0	0	0	0	1
20420	3" AC	2	2	B-25	20274	Electrical (Estimated)		0	0	0	0	0	0	0	0	12
20426	PCC Curing (3-weeks)	24	1	2 Clab	20280											
20430	Finish Electrical Installation/Wiring	10	9	Electrical (Estimated)	20290			0	0	0	0	0	0	0	0	
20460	Finish Pavement Markings	2	3	B-79		B-10M		0	0	0	0	0	0	0	0	1
22100	EAST END - PHASE 2 (TAXILANE C1)					B-74		0	0	0	0	0	0	0	0	3
22105	Setup Barricades and Job Site Conditions	1	1	B-80B	20300	B-25		0	0	0	0	0	0	0	0	2
22108	Demo Electrical	1	1	Electrical (Estimated)	20300asp			0.0								
22110	Existing Asphalt Pavement Removal	3			20310	B-26A		0	0	0	0	0	0	0	0	3
	Asphalt Pavement Removal		6	B-38	20340											
	Asphalt Pavement Sawcut		1/2	B-89 (work half of duration)	20350	B-6		0	0	0	0	0	0	0	0	1
22120	Existing PCC Pavement Removal	4			20360	B-25		0	0	0	0	0	0	0	0	2
	PCC Pavement Removal		5	B-38	20360asp			0.0								
	PCC Pavement Sawcut		3	B-89	20370	B-25		0	0	0	0	0	0	0	0	2
22140	Demo Existing Storm Drain	2	1	B-13B	20370asp			0.0								
22160	Grading	4	4	B-33B	20380	B-25		0	0	0	0	0	0	0	0	2
22170	Construct Storm Drain	1			20380asp			0.0								
	Construct 18"-24" RCP Storm Drain		1/2	B-21 (work half of duration)	20390											
Cons	*tructElliptical Storm Drains, Catch Basins and*		1	B-13	20400			0	0	0	0	0	0	0	0	
	Trench Excavation		1/2	B-12A (work half of duration)		B-10M		0	0	0	0	0	0	0	0	2
	Utility Bedding		1/2	B-6 (work half of duration)		B-74		0	0	0	0	0	0	0	0	4
22172	Electrical Installation Conduits/Fixtures	2	4	Electrical (Estimated)	20410	B-25		0	0	0	0	0	0	0	0	3
22180	PCC Paving				20410asp			0.0								
22190	6" Lime Treated Subgrade	1			20420	B-25		0	0	0	0	0	0	0	0	2
	Backfill		1	B-10M	20420asp			0.0								
	Lime Soil Stabilization and Compaction		2	B-74	20426	2 Clab		0	0	0	0	0	0	0	0	1
22200	6" Asphalt Treated Base	1	1	B-25	20430	Electrical (Estimated)		0	0	0	0	0	0	0	0	9
22210	23" PCC	4			20460	B-79		0	0	0	0	0	0	0	0	3
	PCC Pavement		1	B-26A	22100											
	Steel Reinforcement		1	2 Rodmen	22105	B-80B	1	0	2	0	0	0	0	753	0	
22240	Shoulder AC Paving				22108	Electrical (Estimated)	1	0	2	0	0	0	0	340	0	
22250	Geodrid	1	1/2	B-6 (work half of duration)	22110			4	60	13	0	0	0	19894	2	
22260	19.5" PMB	1	1	B-25		B-38	6	4	60	13	0	0	0	19821	2	
22270	6" Asphalt Treated Base	1	1/2	B-25 (work half of duration)		B-89	0.5	0	0	0	0	0	0	74	0	
22280	3" AC	1	1/2	B-25 (work half of duration)	22120			5	51	12	0	0	0	16960	1	
22290	Erosion Control AC Paving					B-38	5	3	50	11	0	0	0	16517	1	
22300	6" Lime Treated Subgrade	1				B-89	3	2	1	1	0	0	0	443	0	
	Backfill		1	B-10M	22140	B-13B	1	0	2	0	0	0	0	758	0	
	Lime Soil Stabilization and Compaction		2	B-74	22160	B-33B	4	3	55	6	0	0	0	14751	2	
22310	6" PMB	1	1	B-25	22160dust							7	1			
22320	3" AC	1	1	B-25	22170			0	6	1	0	0	0	1213	0	
22330	PCC Curing (3-weeks)	24	1	2 Clab		B-21	0.5	0	1	0	0	0	0	113	0	
22340	Finish Electrical Installation/Wiring	6	2	Electrical (Estimated)	*Cons*	B-13	1	0	3	0	0	0	0	464	0	
22350	Finish Pavement Markings	1	2	B-79		B-12A	0.5	0	1	0	0	0	0	492	0	

ACTIVITES EMISSIONS

24100	**EAST END - PHASE 3 (TAXILANE B1)**			
24105	**Setup Barricades and Job Site Conditions**	**1**	**1**	**B-80B**
24108	**Demo Electrical**	**3**	**2**	**Electrical (Estimated)**
24110	**Existing Asphalt Pavement Removal**	**5**		
	Asphalt Pavement Removal		6	B-38
	Asphalt Pavement Sawcut		1/5	B-89 (work over 1 day out of 5 days)
24160	**Grading**	**5**	**4**	**B-33B**
24170	**Full Strength AC Paving**			
24172	**18" Lime Treated Subgrade**	**2**		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		2	B-74
24174	**22" PMB**	**2**	**2**	**B-25**
24176	**12" Crushed Aggregate Base**	**1**	**1**	**B-36C**
24178	**5" AC and Prime Coat**	**1**		
	AC Paving		1	B-25
	Prime Coat		1	B-45
24180	**Service Road AC Paving**			
24182	**6" Lime Treated Subgrade**	**1**		
	Backfill		1/2	B-10M (work half of duration)
	Lime Soil Stabilization and Compaction		1	B-74
24184	**12" PMB**	**1**	**1**	**B-25**
24186	**4" AC and Prime Coat**	**1**		
	AC Paving		2	B-25
	Prime Coat		1	B-45
24187	**Electrical Installation Conduits/Fixtures**	**3**	**10**	**Electrical (Estimated)**
24188	**PCC Paving**			
24190	**6" Lime Treated Subgrade**	**1**		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		3	B-74
24200	**6" Asphalt Treated Base**	**1**	**2**	**B-25**
24210	**23" PCC**	**2**	**2**	**B-26A**
24240	**Shoulder AC Paving**			
24250	**Geodrid**	**1**	**1/2**	**B-6 (work half of duration)**
24260	**19.5" PMB**	**1**	**1**	**B-25**
24270	**6" Asphalt Treated Base**	**1**	**1/2**	**B-25 (work half of duration)**
24280	**3" AC**	**1**	**1/2**	**B-25 (work half of duration)**
24290	**Erosion Control AC Paving**			
24300	**6" Lime Treated Subgrade**	**1**		
	Backfill		1/2	B-10M (work half of duration)
	Lime Soil Stabilization and Compaction		2	B-74
24310	**6" PMB**	**1**	**1**	**B-25**
24320	**3" AC**	**1**	**1/2**	**B-25 (work half of duration)**
24330	**PCC Curing (3-weeks)**	**24**	**1**	**2 Clab**
24340	**Finish Electrical Installation/Wiring**	**8**	**6**	**Electrical (Estimated)**
24350	**Finish Pavement Markings**	**2**	**1**	**B-79**
26100	**EAST END - PHASE 4 (TAXIWAY B)**			
26105	**Setup Barricades and Job Site Conditions**	**1**	**1**	**B-80B**
26108	**Demo Electrical**	**2**	**3**	**Electrical (Estimated)**
26110	**Existing Asphalt Pavement Removal**	**3**	**6**	**B-38**
26120	**Existing PCC Pavement Removal**	**6**	**5**	**B-38**
26160	**Grading**	**4**	**4**	**B-33B**
26162	**Electrical Installation Conduits/Fixtures**	**4**	**12**	**Electrical (Estimated)**
26180	**PCC Paving**			
26190	**6" Lime Treated Subgrade**	**1**		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		3	B-74
26200	**6" Asphalt Treated Base**	**1**	**2**	**B-25**
26210	**23" PCC**	**2**	**2**	**B-26A**
26240	**Shoulder AC Paving**			
26250	**Geodrid**	**1**	**1/2**	**B-6 (work half of duration)**
26260	**19.5" PMB**	**1**	**2**	**B-25**
26270	**6" Asphalt Treated Base**	**1**	**1**	**B-25**
26280	**3" AC**	**1**	**1/2**	**B-25 (work half of duration)**
26290	**Erosion Control AC Paving**			
26300	**6" Lime Treated Subgrade**	**1**		
	Backfill		1/2	B-10M (work half of duration)
	Lime Soil Stabilization and Compaction		1/2	B-74 (work half of duration)
26310	**6" PMB**	**1**	**1/2**	**B-25 (work half of duration)**
26320	**3" AC**	**1**	**1/2**	**B-25 (work half of duration)**
26330	**PCC Curing (3-weeks)**	**24**	**1**	**2 Clab**
26340	**Finish Electrical Installation/Wiring**	**10**	**8**	**Electrical (Estimated)**
26350	**Finish Pavement Markings**	**1**	**1**	**B-79**
28100	**EAST END - PHASE 5 (TAXIWAY B AND TAXIWAY F)**			
28105	**Setup Barricades and Job Site Conditions**	**1**	**1**	**B-80B**
28108	**Demo Electrical**	**4**	**6**	**Electrical (Estimated)**
28110	**Existing Asphalt Pavement Removal**	**6**		
	Asphalt Pavement Removal		12	B-38
	Asphalt Pavement Sawcut		1/3	B-89 (work over 2 days out of 6 days)
28120	**Existing PCC Pavement Removal**	**15**	**15**	**B-38**
28140	**Demo Existing Storm Drain**	**3**		
	Removal of Storm Drain Pipe		3	B-13B
	Removal of Catch Basin		1/3	B-9 (work over 1 day out of 3 days)
28160	**Grading**	**7**	**10**	**B-33B**
28170	**Construct Storm Drain**	**3**		
	Construct 18"-24" RCP Storm Drain		1	B-21
Cons	*truct Elliptical Storm Drains, Catch Basins and*		3	B-13
	Trench Excavation		1	B-12A
	Utility Bedding		1/2	B-6 (work half of duration)
28172	**Electrical Installation Conduits/Fixtures**	**10**	**17**	**Electrical (Estimated)**
28180	**PCC Paving**			
28190	**6" Lime Treated Subgrade**	**2**		
	Backfill		2	B-10M
	Lime Soil Stabilization and Compaction		7	B-74

	B-6	0.5	0	1	0	0	0	0	144	0
22172	**Electrical (Estimated)**	**4**	**0**	**7**	**1**	**0**	**0**	**0**	**1359**	**0**
22180										
22190			**2**	**32**	**4**	**0**	**0**	**0**	**11446**	**1**
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	2	2	26	4	0	0	0	9707	1
22200	**B-25**	**1**	**0**	**6**	**3**	**0**	**0**	**0**	**971**	**0**
22200asp			0.0							
22210			**2**	**17**	**3**	**0**	**0**	**0**	**3957**	**0**
	B-26A	1	2	17	3	0	0	0	3917	0
	2 Rodmen	1	0	0	0	0	0	0	40	0
22240										
22250	**B-6**	**0.5**	**0**	**1**	**0**	**0**	**0**	**0**	**144**	**0**
22260	**B-25**	**1**	**0**	**6**	**3**	**0**	**0**	**0**	**971**	**0**
22260asp			0.0							
22270	**B-25**	**0.5**	**0**	**3**	**1**	**0**	**0**	**0**	**485**	**0**
22270asp			0.0							
22280	**B-25**	**0.5**	**0**	**3**	**1**	**0**	**0**	**0**	**485**	**0**
22280asp			0.0							
22290										
22300			**2**	**32**	**4**	**0**	**0**	**0**	**11446**	**1**
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	2	2	26	4	0	0	0	9707	1
22310	**B-25**	**1**	**0**	**6**	**3**	**0**	**0**	**0**	**971**	**0**
22310asp			0.0							
22320	**B-25**	**1**	**0**	**6**	**3**	**0**	**0**	**0**	**971**	**0**
22320asp			0.0							
22330	**2 Clab**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**
22340	**Electrical (Estimated)**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**679**	**0**
22350	**B-79**	**2**	**0**	**6**	**3**	**0**	**0**	**0**	**1140**	**0**
24100										
24105	**B-80B**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**753**	**0**
24108	**Electrical (Estimated)**	**2**	**0**	**4**	**0**	**0**	**0**	**0**	**679**	**0**
24110			**4**	**60**	**13**	**0**	**0**	**0**	**19850**	**2**
	B-38	6	4	60	13	0	0	0	19821	2
	B-89	0.2	0	0	0	0	0	0	30	0
24160	**B-33B**	**4**	**3**	**55**	**6**	**0**	**0**	**0**	**14751**	**2**
24160dust							**7**	**1**		
24170										
24172			**2**	**32**	**4**	**0**	**0**	**0**	**11446**	**1**
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	2	2	26	4	0	0	0	9707	1
24174	**B-25**	**2**	**0**	**12**	**5**	**0**	**0**	**0**	**1942**	**0**
24174asp			0.0							
24176	**B-36C**	**1**	**1**	**11**	**1**	**0**	**0**	**0**	**3385**	**0**
24178			**1**	**6**	**3**	**0**	**0**	**0**	**1323**	**0**
	B-25	1	0	6	3	0	0	0	971	0
	B-45	1	1	0	1	0	0	0	352	0
24178asp			0.0							
24180										
24182			**1**	**16**	**2**	**0**	**0**	**0**	**5723**	**0**
	B-10M	0.5	0	3	0	0	0	0	869	0
	B-74	1	1	13	2	0	0	0	4854	0
24184	**B-25**	**1**	**0**	**6**	**3**	**0**	**0**	**0**	**971**	**0**
24184asp			0.0							
24186			**1**	**12**	**6**	**0**	**0**	**0**	**2293**	**0**
	B-25	2	0	12	5	0	0	0	1942	0
	B-45	1	1	0	1	0	0	0	352	0
24186asp			0.0							
24187	**Electrical (Estimated)**	**10**	**1**	**18**	**2**	**0**	**0**	**0**	**3397**	**0**
24188										
24190			**3**	**45**	**6**	**0**	**0**	**0**	**16300**	**1**
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	3	2	39	6	0	0	0	14561	1
24200	**B-25**	**2**	**0**	**12**	**5**	**0**	**0**	**0**	**1942**	**0**
24200asp			0.0							
24210	**B-26A**	**2**	**4**	**34**	**5**	**0**	**0**	**0**	**7835**	**1**
24240										
24250	**B-6**	**0.5**	**0**	**1**	**0**	**0**	**0**	**0**	**144**	**0**
24260	**B-25**	**1**	**0**	**6**	**3**	**0**	**0**	**0**	**971**	**0**
24260asp			0.0							
24270	**B-25**	**0.5**	**0**	**3**	**1**	**0**	**0**	**0**	**485**	**0**
24270asp			0.0							
24280	**B-25**	**0.5**	**0**	**3**	**1**	**0**	**0**	**0**	**485**	**0**
24280asp			0.0							
24290										
24300			**2**	**29**	**4**	**0**	**0**	**0**	**10577**	**1**
	B-10M	0.5	0	3	0	0	0	0	869	0
	B-74	2	2	26	4	0	0	0	9707	1
24310	**B-25**	**1**	**0**	**6**	**3**	**0**	**0**	**0**	**971**	**0**
24310asp			0.0							
24320	**B-25**	**0.5**	**0**	**3**	**1**	**0**	**0**	**0**	**485**	**0**
24320asp			0.0							
24330	**2 Clab**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**
24340	**Electrical (Estimated)**	**6**	**0**	**11**	**1**	**0**	**0**	**0**	**2038**	**0**
24350	**B-79**	**1**	**0**	**3**	**2**	**0**	**0**	**0**	**570**	**0**
26100										
26105	**B-80B**	**1**	**0**	**2**	**0**	**0**	**0**	**0**	**753**	**0**
26108	**Electrical (Estimated)**	**3**	**0**	**5**	**1**	**0**	**0**	**0**	**1019**	**0**
26110	**B-38**	**6**	**4**	**60**	**13**	**0**	**0**	**0**	**19821**	**2**
26120	**B-38**	**5**	**3**	**50**	**11**	**0**	**0**	**0**	**16517**	**1**
26160	**B-33B**	**4**	**3**	**55**	**6**	**0**	**0**	**0**	**14751**	**2**
26160dust							**7**	**1**		

ACTIVITES EMISSIONS

28200	6" Asphalt Treated Base	2	3	B-25
28210	23" PCC	4		
	PCC Pavement		4	B-26A
	Steel Reinforcement		1/2	2 Rodmen
28240	Shoulder AC Paving			
28250	Geodrid	1	2	B-6
28260	19.5" PMB	3	4	B-25
28270	6" Asphalt Treated Base	2	3	B-25
28280	3" AC	2	2	B-25
28290	Erosion Control AC Paving			
28300	6" Lime Treated Subgrade	2		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		3	B-74
28310	6" PMB	1	3	B-25
28320	3" AC	1	2	B-25
28330	PCC Curing (3-weeks)	24	1	2 Clab
28340	Finish Electrical Installation/Wiring	15	18	Electrical (Estimated)
28350	Finish Pavement Markings	3	3	B-79
30100	EAST END - PHASE 6 (RUNWAY 25R AND TAXIWAY F)			
30105	Setup Barricades and Job Site Conditions	1	1	B-80B
30108	Demo Electrical	2	3	Electrical (Estimated)
30110	Existing Asphalt Pavement Removal	3		
	Asphalt Pavement Removal		4	B-38
	Asphalt Pavement Sawcut		1/3	B-89 (work over 1 day out of 3 days)
30120	Existing PCC Pavement Removal	7	8	B-38
30160	Grading	3	5	B-33B
30162	Electrical Installation Conduits/Fixtures	4	11	Electrical (Estimated)
30180	PCC Paving			
30190	6" Lime Treated Subgrade	2		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		2	B-74
30200	6" Asphalt Treated Base	1	2	B-25
30210	23" PCC	2		
	PCC Pavement		2	B-26A
	Steel Reinforcement		1	2 Rodmen
30240	Shoulder AC Paving			
30250	Geodrid	1	1/2	B-6 (work half of duration)
30260	19.5" PMB	1	1/2	B-25 (work half of duration)
30270	6" Asphalt Treated Base	1	1/2	B-25 (work half of duration)
30280	3" AC	1	1/2	B-25 (work half of duration)
30330	PCC Curing (3-weeks)	18	1	2 Clab
30340	Finish Electrical Installation/Wiring	10	7	Electrical (Estimated)
30350	Finish Pavement Markings	2	1	B-79
32100	EAST END - PHASE 7 (RUNWAY 25R AND TAXIWAY G)			
32105	Setup Barricades and Job Site Conditions	1	1	B-80B
32120	Existing PCC Pavement Removal	6		
	PCC Pavement Removal		8	B-38
	PCC Pavement Sawcut		3	B-89
32150	Demo Electrical	2	1	Electrical (Estimated)
32160	Grading	2	3	B-33B
32162	Electrical Installation Conduits/Fixtures	2	8	Electrical (Estimated)
32180	PCC Paving			
32190	3.5" Asphalt Treated Base	1	1	B-25
32210	17.5" PCC	2	1	B-26A
32330	PCC Curing (3-weeks)	18	1	2 Clab
32340	Finish Electrical Installation/Wiring	6	4	Electrical (Estimated)
32344	PCC Sealing & Grooving	2	3	B-71
32350	Finish Pavement Markings	1	1	B-79
	EAST END - PHASE 8 (RUNWAY 25R)			
34100	Phase 8-A (Runway 25R, west of Sepulveda Bridge)			
34105	Setup Barricades and Job Site Conditions	1	1	B-80B
34120	Existing PCC Pavement Removal	14		
	PCC Pavement Removal		16	B-38
	PCC Pavement Sawcut		4	B-89
34150	Demo Electrical	4	2	Electrical (Estimated)
34160	Grading	2	4	B-33B
34162	Electrical Installation Conduits/Fixtures	5	11	Electrical (Estimated)
34180	PCC Paving			
34190	3.5" Asphalt Treated Base	1	4	B-25
34210	17.5" PCC	2	2	B-26A
34330	PCC Curing (3-weeks)	24	1	2 Clab
34340	Finish Electrical Installation/Wiring	10	9	Electrical (Estimated)
34344	PCC Sealing & Grooving	5	5	B-71
34350	Finish Pavement Markings	2	3	B-79
36100	Phase 8-B (Runway 25R, between Taxiway G to Taxiway F)			
36120	Existing PCC Pavement Removal	14		
	PCC Pavement Removal		16	B-38
	PCC Pavement Sawcut		4	B-89

26162	Electrical (Estimated)	12	1	21	3	0	0	0	4077	0
26180										
26190			3	45	6	0	0	0	16300	1
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	3	2	39	6	0	0	0	14561	1
26200	B-25	2	0	12	5	0	0	0	1942	0
26200asp			0.0							
26210	B-26A	2	4	34	5	0	0	0	7835	1
26240										
26250	B-6	0.5	0	1	0	0	0	0	144	0
26260	B-25	2	0	12	5	0	0	0	1942	0
26260asp			0.0							
26270	B-25	1	0	6	3	0	0	0	971	0
26270asp			0.0							
26280	B-25	0.5	0	3	1	0	0	0	485	0
26280asp			0.0							
26290										
26300			1	10	1	0	0	0	3296	0
	B-10M	0.5	0	3	0	0	0	0	869	0
	B-74	0.5	0	6	1	0	0	0	2427	0
26310	B-25	0.5	0	3	1	0	0	0	485	0
26310asp			0.0							
26320	B-25	0.5	0	3	1	0	0	0	485	0
26320asp			0.0							
26330	2 Clab	1	0	0	0	0	0	0	40	0
26340	Electrical (Estimated)	8	0	14	2	0	0	0	2718	0
26350	B-79	1	0	3	2	0	0	0	570	0
28100										
28105	B-80B	1	0	2	0	0	0	0	753	0
28108	Electrical (Estimated)	6	0	11	1	0	0	0	2038	0
28110			8	120	25	0	1	1	39691	3
	B-38	12	8	120	25	0	1	1	39641	3
	B-89	0.333333333	0	0	0	0	0	0	49	0
28120	B-38	15	10	150	32	1	1	1	49552	4
28140			1	7	1	0	0	0	2365	0
	B-13B	3	1	7	1	0	0	0	2275	0
	B-9	0.333333333	0	1	0	0	0	0	91	0
28160	B-33B	10	7	138	15	0	1	1	36878	4
28160dust							18	3		
28170			1	14	2	0	0	0	2747	0
	B-21	1	0	1	0	0	0	0	226	0
Cons	B-13	3	0	9	1	0	0	0	1393	0
	B-12A	1	0	2	0	0	0	0	984	0
	B-6	0.5	0	1	0	0	0	0	144	0
28172	Electrical (Estimated)	17	1	30	4	0	0	0	5775	0
28180										
28190			6	104	15	0	1	1	37453	3
	B-10M	2	1	13	1	0	0	0	3477	0
	B-74	7	6	91	14	0	1	1	33976	2
28200	B-25	3	1	18	8	0	0	0	2913	0
28200asp			0.0							
28210			7	68	10	0	1	1	15689	2
	B-26A	4	7	68	10	0	1	1	15670	2
	2 Rodmen	0.5	0	0	0	0	0	0	20	0
28240										
28250	B-6	2	0	5	2	0	0	0	574	0
28260	B-25	4	1	24	10	0	0	0	3883	0
28260asp			0.0							
28270	B-25	3	1	18	8	0	0	0	2913	0
28270asp			0.0							
28280	B-25	2	0	12	5	0	0	0	1942	0
28280asp			0.0							
28290										
28300			3	45	6	0	0	0	16300	1
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	3	2	39	6	0	0	0	14561	1
28310	B-25	3	1	18	8	0	0	0	2913	0
28310asp			0.0							
28320	B-25	2	0	12	5	0	0	0	1942	0
28320asp			0.0							
28330	2 Clab	1	0	0	0	0	0	0	40	0
28340	Electrical (Estimated)	18	1	32	4	0	0	0	6115	0
28350	B-79	3	0	9	5	0	0	0	1710	0
30100										
30105	B-80B	1	0	2	0	0	0	0	753	0
30108	Electrical (Estimated)	3	0	5	1	0	0	0	1019	0
30110			3	40	9	0	0	0	13263	1
	B-38	4	3	40	8	0	0	0	13214	1

ACTIVITES EMISSIONS

36150	Demo Electrical	3	3	Electrical (Estimated)
36160	Grading	4	4	B-33B
36162	Electrical Installation Conduits/Fixtures	6	12	Electrical (Estimated)
36180	17.5" PCC Paving			
36190	3.5" Asphalt Treated Base	1	2	B-25
36210	17.5" PCC	2	1	B-26A
37180	23" PCC Paving			
37190	6" Lime Treated Subgrade	2		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		3	B-74
37200	6" Asphalt Treated Base	1	2	B-25
37210	23" PCC	4	2	B-26A
37240	Shoulder AC Paving			
37250	Geodrid	1	1/2	B-6 (work half of duration)
37260	19.5" PMB	1		B-25
37270	6" Asphalt Treated Base	1	1/2	B-25 (work half of duration)
37280	3" AC	1	1/2	B-25 (work half of duration)
37330	PCC Curing (3-weeks)	24	1	2 Clab
37340	Finish Electrical Installation/Wiring	10	11	Electrical (Estimated)
37346	PCC Sealing & Grooving	6	4	B-71
37350	Finish Pavement Markings	2	2	B-79
38100	Phase 8-C (Runway 25R, east of Taxiway F)			
38108	Demo Electrical	3	4	Electrical (Estimated)
38110	Existing Asphalt Pavement Removal	4		
	Asphalt Pavement Removal		10	B-38
	Asphalt Pavement Sawcut		1/2	B-89
38120	Existing PCC Pavement Removal	15		
	PCC Pavement Removal		16	B-38
	PCC Pavement Sawcut		1/4	B-89 (work over 4 days out of 15 days)
38140	Demo Existing Storm Drain	2	3	B-13B
38160	Grading	6	8	B-33B
38170	Construct Storm Drain	4		
Cons	*truct Elliptical Storm Drains, Catch Basins and*		4	B-13
	Trench Excavation		1/2	B-12A (work half of duration)
	Utility Bedding		1/2	B-6 (work half of duration)
38172	Electrical Installation Conduits/Fixtures	6	13	Electrical (Estimated)
38180	PCC Paving			
38190	6" Lime Treated Subgrade	3		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		4	B-74
38200	6" Asphalt Treated Base	2	3	B-25
38210	23" PCC	4		
	PCC Pavement		3	B-26A
	Steel Reinforcement		1/2	2 Rodmen
38240	Shoulder AC Paving			
38250	Geodrid	1	1	B-6
38260	19.5" PMB	2	2	B-25
38270	6" Asphalt Treated Base	1	2	B-25
38280	3" AC	1	2	B-25
38290	Erosion Control AC Paving			
38300	6" Lime Treated Subgrade	2		
	Backfill		1	B-10M
	Lime Soil Stabilization and Compaction		4	B-74
38310	6" PMB	1	3	B-25
38320	3" AC	1	3	B-25
38330	PCC Curing (3-weeks)	24	1	2 Clab
38340	Finish Electrical Installation/Wiring	14	9	Electrical (Estimated)
38345	PCC Sealing & Grooving	5	5	B-71
38350	Finish Pavement Markings	2	3	B-79

	B-89	0.333333333	0	0	0	0	0	0	49	0
30120	B-38	8	5	80	17	0	1	0	26428	2
30160	B-33B	5	4	69	8	0	0	0	18439	2
30160dust							9	1		
30162	Electrical (Estimated)	11	1	20	3	0	0	0	3737	0
30180										
30190			2	32	4	0	0	0	11446	1
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	2	2	26	4	0	0	0	9707	1
30200	B-25	2	0	12	5	0	0	0	1942	0
30200asp			0.0							
30210			4	34	5	0	0	0	7874	1
	B-26A	2	4	34	5	0	0	0	7835	1
	2 Rodmen	1	0	0	0	0	0	0	40	0
30240										
30250	B-6	0.5	0	1	0	0	0	0	144	0
30260	B-25	0.5	0	3	1	0	0	0	485	0
30260asp			0.0							
30270	B-25	0.5	0	3	1	0	0	0	485	0
30270asp			0.0							
30280	B-25	0.5	0	3	1	0	0	0	485	0
30280asp			0.0							
30330	2 Clab	1	0	0	0	0	0	0	40	0
30340	Electrical (Estimated)	7	0	12	2	0	0	0	2378	0
30350	B-79	1	0	3	2	0	0	0	570	0
32100										
32105	B-80B	1	0	2	0	0	0	0	753	0
32120			7	81	18	0	1	1	26871	2
	B-38	8	5	80	17	0	1	0	26428	2
	B-89	3	2	1	1	0	0	0	443	0
32150	Electrical (Estimated)	1	0	2	0	0	0	0	340	0
32160	B-33B	3	2	41	5	0	0	0	11064	1
32160dust							5	1		
32162	Electrical (Estimated)	8	0	14	2	0	0	0	2718	0
32180										
32190	B-25	1	0	6	3	0	0	0	971	0
32190asp			0.0							
32210	B-26A	1	2	17	3	0	0	0	3917	0
32330	2 Clab	1	0	0	0	0	0	0	40	0
32340	Electrical (Estimated)	4	0	7	1	0	0	0	1359	0
32344	B-71	3	1	23	3	0	0	0	6577	1
32350	B-79	1	0	3	2	0	0	0	570	0
34100										
34105	B-80B	1	0	2	0	0	0	0	753	0
34120			13	161	35	1	1	1	53446	4
	B-38	16	11	160	34	1	1	1	52855	4
	B-89	4	2	1	1	0	0	0	591	0
34150	Electrical (Estimated)	2	0	4	0	0	0	0	679	0
34160	B-33B	4	3	55	6	0	0	0	14751	2
34160dust							7	1		
34162	Electrical (Estimated)	11	1	20	3	0	0	0	3737	0
34180										
34190	B-25	4	1	24	10	0	0	0	3883	0
34190asp			0.0							
34210	B-26A	2	4	34	5	0	0	0	7835	1
34330	2 Clab	1	0	0	0	0	0	0	40	0
34340	Electrical (Estimated)	9	1	16	2	0	0	0	3057	0
34344	B-71	5	2	38	5	0	0	0	10961	1
34350	B-79	3	0	9	5	0	0	0	1710	0
36100										
36120			13	161	35	1	1	1	53446	4
	B-38	16	11	160	34	1	1	1	52855	4
	B-89	4	2	1	1	0	0	0	591	0

ACTIVITES EMISSIONS

36150	**Electrical (Estimated)**	**3**	**0**	**5**	**1**	**0**	**0**	**0**	**1019**	**0**
36160	**B-33B**	**4**	**3**	**55**	**6**	**0**	**0**	**0**	**14751**	**2**
36160dust							**7**	**1**		
36162	**Electrical (Estimated)**	**12**	**1**	**21**	**3**	**0**	**0**	**0**	**4077**	**0**
36180										
36190	**B-25**	**2**	**0**	**12**	**5**	**0**	**0**	**0**	**1942**	**0**
36190asp			0.0							
36210	**B-26A**	**1**	**2**	**17**	**3**	**0**	**0**	**0**	**3917**	**0**
37180										
37190			**3**	**45**	**6**	**0**	**0**	**0**	**16300**	**1**
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	3	2	39	6	0	0	0	14561	1
37200	**B-25**	**2**	**0**	**12**	**5**	**0**	**0**	**0**	**1942**	**0**
37200asp			0.0							
37210	**B-26A**	**2**	**4**	**34**	**5**	**0**	**0**	**0**	**7835**	**1**
37240										
37250	**B-6**	**0.5**	**0**	**1**	**0**	**0**	**0**	**0**	**144**	**0**
37260	**B-25**		**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
37260asp			0.0							
37270	**B-25**	**0.5**	**0**	**3**	**1**	**0**	**0**	**0**	**485**	**0**
37270asp			0.0							
37280	**B-25**	**0.5**	**0**	**3**	**1**	**0**	**0**	**0**	**485**	**0**
37280asp			0.0							
37330	**2 Clab**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**
37340	**Electrical (Estimated)**	**11**	**1**	**20**	**3**	**0**	**0**	**0**	**3737**	**0**
37346	**B-71**	**4**	**2**	**31**	**4**	**0**	**0**	**0**	**8769**	**1**
37350	**B-79**	**2**	**0**	**6**	**3**	**0**	**0**	**0**	**1140**	**0**
38100										
38108	**Electrical (Estimated)**	**4**	**0**	**7**	**1**	**0**	**0**	**0**	**1359**	**0**
38110			**7**	**100**	**21**	**0**	**1**	**1**	**33108**	**3**
	B-38	10	7	100	21	0	1	1	33034	3
	B-89	0.5	0	0	0	0	0	0	74	0
38120			**11**	**160**	**34**	**1**	**1**	**1**	**52892**	**4**
	B-38	16	11	160	34	1	1	1	52855	4
	B-89	0.25	0	0	0	0	0	0	37	0
38140	**B-13B**	**3**	**1**	**7**	**1**	**0**	**0**	**0**	**2275**	**0**
38160	**B-33B**	**8**	**6**	**111**	**12**	**0**	**1**	**1**	**29503**	**3**
38160dust							**15**	**2**		
38170			**0**	**14**	**1**	**0**	**0**	**0**	**2493**	**0**
Cons	B-13	4	0	12	1	0	0	0	1857	0
	B-12A	0.5	0	1	0	0	0	0	492	0
	B-6	0.5	0	1	0	0	0	0	144	0
38172	**Electrical (Estimated)**	**13**	**1**	**23**	**3**	**0**	**0**	**0**	**4416**	**0**
38180										
38190			**4**	**58**	**8**	**0**	**0**	**0**	**21153**	**2**
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	4	3	52	8	0	0	0	19415	1
38200	**B-25**	**3**	**1**	**18**	**8**	**0**	**0**	**0**	**2913**	**0**
38200asp			0.0							
38210			**6**	**51**	**8**	**0**	**0**	**0**	**11772**	**1**
	B-26A	3	6	51	8	0	0	0	11752	1
	2 Rodmen	0.5	0	0	0	0	0	0	20	0
38240										
38250	**B-6**	**1**	**0**	**3**	**1**	**0**	**0**	**0**	**287**	**0**
38260	**B-25**	**2**	**0**	**12**	**5**	**0**	**0**	**0**	**1942**	**0**
38260asp			0.0							
38270	**B-25**	**2**	**0**	**12**	**5**	**0**	**0**	**0**	**1942**	**0**
38270asp			0.0							
38280	**B-25**	**2**	**0**	**12**	**5**	**0**	**0**	**0**	**1942**	**0**
38280asp			0.0							
38290										
38300			**4**	**58**	**8**	**0**	**0**	**0**	**21153**	**2**
	B-10M	1	0	6	1	0	0	0	1738	0
	B-74	4	3	52	8	0	0	0	19415	1
38310	**B-25**	**3**	**1**	**18**	**8**	**0**	**0**	**0**	**2913**	**0**
38310asp			0.0							
38320	**B-25**	**3**	**1**	**18**	**8**	**0**	**0**	**0**	**2913**	**0**
38320asp			0.0							
38330	**2 Clab**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**40**	**0**
38340	**Electrical (Estimated)**	**9**	**1**	**16**	**2**	**0**	**0**	**0**	**3057**	**0**
38345	**B-71**	**5**	**2**	**38**	**5**	**0**	**0**	**0**	**10961**	**1**
38350	**B-79**	**3**	**0**	**9**	**5**	**0**	**0**	**0**	**1710**	**0**

Sub A/A1	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
Sub B/B1	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
Sub C	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
Sub D	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
Sub E	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**
Sub F/F1	**2 Elec**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**79**	**0**

W_GRADE			15	290	32	1	50	9	77371	8
BLASTPAD			3	46	21	0	0	0	7090	1
GRD_GDG			5	100	11	0	17	3	26721	3
GRD_PVG			2	40	18	0	0	0	6148	1
EAPN_PVR			11	167	36	1	1	1	55891	5
EAPN_GDG			6	106	12	0	18	3	28451	3
EAPN_PVG			5	84	39	0	0	0	13093	2

485	7965	1605	23	219	68	2290197	198

CONSTRUCTION EMISSIONS SUMMARY

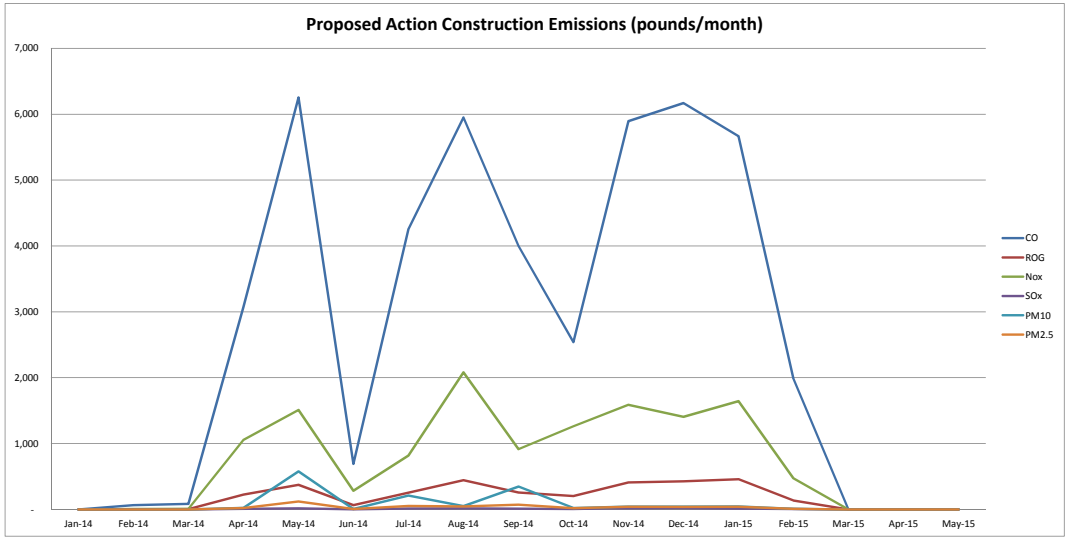
Total Emissions (lbs/day)		WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE
Maximum		1/1/2014	1/2/2014	1/3/2014	1/4/2014		1/6/2014	1/7/2014	1/8/2014	1/9/2014	1/10/2014	1/11/2014		1/13/2014	1/14/2014	1/15/2014	1/16/2014	1/17/2014	1/18/2014		1/20/2014	1/21/2014
CO	529	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROG	39	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nox	190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SOx	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM10	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM2.5	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO2	186,151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CH4	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CO2e (tons/year)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Max Total Emissions (lbs/month)	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	Jul-14	Aug-14	Sep-14	Oct-14	Nov-14	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15
CO	-	65	85	3,075	6,254	692	4,256	5,950	4,000	2,540	5,894	6,170	5,667	1,988	-	-	-
ROG	-	3	4	225	373	64	255	445	256	204	410	427	458	136	-	-	-
Nox	-	6	8	1,055	1,510	284	819	2,081	914	1,262	1,588	1,406	1,644	472	-	-	-
SOx	-	0	0	9	17	1	13	16	12	6	18	20	16	4	-	-	-
PM10	-	0	0	24	577	7	211	49	348	21	44	44	46	10	-	-	-
PM2.5	-	0	0	21	121	6	52	44	73	19	39	39	41	9	-	-	-
CO2	-	17,482	22,727	1,072,625	1,998,738	236,939	1,279,743	2,028,112	1,223,714	825,963	1,963,930	2,021,387	1,845,911	462,449	-	-	-
CH4	-	2	3	76	171	15	114	138	107	54	155	162	136	37	-	-	-
CO2e (tons/year)	-	8	10	487	908	108	582	921	556	375	892	918	839	210	-	-	-
Nox	0	6	8	1055	1510	284	819	2081	914	1262	1588	1406	1644	472	0	0	0

Total Emissions (tons/year)		
New Proposed Action	2014	2015
CO	19.49	3.83
ROG	1.33	0.30
Nox	5.47	1.06
SOx	0.06	0.01
PM10	0.66	0.03
PM2.5	0.21	0.03
CO2	6345.68	1154.18
CH4	0.50	0.09
CO2e (tons/year)	6356.14	1156.01
	1.15	-1.96
	-0.04	

Total Emissions (tons/year)		
New Proposed Action	2014	2015
CO	14.60	10.88
ROG	1.17	0.88
Nox	7.74	4.92
SOx	0.04	0.03
PM10	0.78	0.17
PM2.5	0.32	0.15
CO2	4398.50	3285.02
CH4	0.34	0.25
CO2e (tons/year)	4405.61	3290.32

	NOx
Base Ops	3447.51
Ops	3452
Construction	5.47
	3457.46677
	9.96



CONSTRUCTION EMISSIONS SUMMARY

SCENARIOS

BASELINE

Total Emissions (tons/year)

Pollutant	2014	2015
CO	13.60	10.21
ROG	0.93	0.75
Nox	4.32	3.01
SOx	0.04	0.03
PM10	0.62	0.08
PM2.5	0.17	0.07
CO2	4430.62	3317.49
CH4	0.34	0.25
CO2e (tons/year)	4437.81	3322.80

On-Road Truck Assumptions

All demolished pavement and net excavated/graded material is **hauled off-site**

Off-site hauling trucks are **20 CY trucks** traveling 17.8 miles roundtrip at 35 mph

SCENARIOS 1,2, 5, and 6 include estimated crushing emissions (crusher operation + fugitive dust

SCENARIO 1

Total Emissions (tons/year)

Pollutant	2014	2015
CO	13.68	10.30
ROG	0.94	0.76
Nox	4.25	2.97
SOx	0.04	0.03
PM10	0.79	0.25
PM2.5	0.17	0.07

On-Road Truck Assumptions

Demolished pavement is hauled to crusher and is **crushed**

On-site hauling trucks are **20 CY trucks** traveling 2 miles roundtrip at 20 mph

Net excavated/graded material is **hauled off-site**

Off-site hauling trucks are **20 CY trucks** traveling 17.8 miles roundtrip at 35 mph

SCENARIO 2

Total Emissions (tons/year)

Pollutant	2014	2015
CO	13.68	10.30
ROG	0.94	0.76
Nox	4.25	2.96
SOx	0.04	0.03
PM10	0.79	0.25
PM2.5	0.17	0.07

On-Road Truck Assumptions

Demolished pavement is hauled to crusher and is **crushed**

On-site hauling trucks are **26 CY trucks** traveling 2 miles roundtrip at 20 mph

Net excavated/graded material is **hauled off-site**

Off-site hauling trucks are **20 CY trucks** traveling 17.8 miles roundtrip at 35 mph

Pavement crushing

SCENARIOS 1,2, 5, and 6 include estimated crushing emissions (crusher operation + fugitive dust

Estimated Crushing Emissions

	2014	2015
CO	0.11	0.11
ROG	0.02	0.02
NOx	0.04	0.04
SOx	0.00	0.00
PM10	0.17	0.17
PM2.5	0.00	0.00
CO2	50.49	50.64
CH4	0.00	0.00

***Includes crusher operation + fugitive dust*

SCENARIO 3

Total Emissions (tons/year)

Pollutant	2014	2015
CO	13.36	10.13
ROG	0.88	0.73
Nox	3.51	2.74
SOx	0.04	0.03
PM10	0.61	0.07
PM2.5	0.16	0.07

On-Road Truck Assumptions

Demolished pavement is **hauled off-site**

Off-site hauling trucks are **20 CY trucks** traveling 17.8 miles roundtrip at 35 mph

Net excavated/graded material is **hauled to stockpile area**

On-site hauling trucks are **20 CY trucks** traveling 2 miles roundtrip at 20 mph

SCENARIO 4

Total Emissions (tons/year)

Pollutant	2014	2015
CO	13.35	10.12
ROG	0.87	0.73
Nox	3.46	2.72
SOx	0.04	0.03
PM10	0.61	0.07
PM2.5	0.16	0.07

On-Road Truck Assumptions

Demolished pavement is **hauled off-site**

Off-site hauling trucks are **20 CY trucks** traveling 17.8 miles roundtrip at 35 mph

Net excavated/graded material is **hauled to stockpile area**

On-site hauling trucks are **26 CY trucks** traveling 2 miles roundtrip at 20 mph

Soil On-Site

SCENARIO 5

Total Emissions (tons/year)

Pollutant	2014	2015
CO	13.44	10.22
ROG	0.89	0.74
Nox	3.44	2.70
SOx	0.04	0.03
PM10	0.78	0.24
PM2.5	0.16	0.07

On-Road Truck Assumptions

Demolished pavement is hauled to crusher and is **crushed**

On-site hauling trucks are **20 CY trucks** traveling 2 miles roundtrip at 20 mph

Net excavated/graded material is **hauled to stockpile area**

On-site hauling trucks are **20 CY trucks** traveling 2 miles roundtrip at 20 mph

SCENARIO 6

Total Emissions (tons/year)

Pollutant	2014	2015
CO	13.43	10.21
ROG	0.88	0.74
Nox	3.39	2.67
SOx	0.04	0.03
PM10	0.78	0.24
PM2.5	0.16	0.07

On-Road Truck Assumptions

Demolished pavement is hauled to crusher and is **crushed**

On-site hauling trucks are **26 CY trucks** traveling 2 miles roundtrip at 20 mph

Net excavated/graded material is **hauled to stockpile area**

On-site hauling trucks are **26 CY trucks** traveling 2 miles roundtrip at 20 mph

Optimized

CONSTRUCTION EMISSIONS SUMMARY

WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI
1/22/2014	1/23/2014	1/24/2014	1/25/2014		1/27/2014	1/28/2014	1/29/2014	1/30/2014	1/31/2014	2/1/2014		2/3/2014	2/4/2014	2/5/2014	2/6/2014	2/7/2014	2/8/2014		2/10/2014	2/11/2014	2/12/2014	2/13/2014	2/14/2014	2/15/2014		2/17/2014	2/18/2014	2/19/2014	2/20/2014	2/21/2014
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	0	3	3	3	3	3	3	0	3	3	3	3	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	874	874	874	0	874	874	874	874	874	874	0	874	874	874	874	874
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4

CONSTRUCTION EMISSIONS SUMMARY

SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE
2/22/2014		2/24/2014	2/25/2014	2/26/2014	2/27/2014	2/28/2014	3/1/2014		3/3/2014	3/4/2014	3/5/2014	3/6/2014	3/7/2014	3/8/2014		3/10/2014	3/11/2014	3/12/2014	3/13/2014	3/14/2014	3/15/2014		3/17/2014	3/18/2014	3/19/2014	3/20/2014	3/21/2014	3/22/2014		3/24/2014	3/25/2014
3	0	3	3	3	3	3	3	0	3	3	3	3	3	3	0	3	3	3	3	3	3	0	3	3	3	3	3	3	0	3	3
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
874	0	874	874	874	874	874	874	0	874	874	874	874	874	874	0	874	874	874	874	874	874	0	874	874	874	874	874	874	0	874	874
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.0	0.4	0.4

CONSTRUCTION EMISSIONS SUMMARY

WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED
3/26/2014	3/27/2014	3/28/2014	3/29/2014		3/31/2014	4/1/2014	4/2/2014	4/3/2014	4/4/2014	4/5/2014		4/7/2014	4/8/2014	4/9/2014	4/10/2014	4/11/2014	4/12/2014		4/14/2014	4/15/2014	4/16/2014	4/17/2014	4/18/2014	4/19/2014		4/21/2014	4/22/2014	4/23/2014
3	3	3	3	0	3	4	144	216	216	186	0	186	173	145	145	179	149	0	139	139	139	97	99	76	0	62	98	98
0	0	0	0	0	0	0	9	15	15	12	0	12	12	11	11	13	10	0	9	9	9	7	7	5	0	4	10	10
0	0	0	0	0	0	0	30	53	53	43	0	43	54	72	72	69	60	0	37	37	37	31	37	25	0	19	79	79
0	0	0	0	0	0	0	0	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	1	2	2	1	0	1	1	1	1	2	1	0	1	1	1	1	1	1	0	1	1	1
0	0	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	0	0	0	1	1
874	874	874	874	0	874	1113	47485	73939	73939	61618	0	61618	54624	54722	54722	70734	58413	0	42440	42440	42440	27296	29929	25414	0	22817	54541	54541
0	0	0	0	0	0	0	4	6	6	5	0	5	4	3	3	5	4	0	3	3	3	2	2	2	0	2	2	2
0.4	0.4	0.4	0.4	0.0	0.4	0.5	21.6	33.6	33.6	28.0	0.0	28.0	24.8	24.9	24.9	32.1	26.5	0.0	19.3	19.3	19.3	12.4	13.6	11.5	0.0	10.4	24.8	24.8

CONSTRUCTION EMISSIONS SUMMARY

THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU
4/24/2014	4/25/2014	4/26/2014		4/28/2014	4/29/2014	4/30/2014	5/1/2014	5/2/2014	5/3/2014		5/5/2014	5/6/2014	5/7/2014	5/8/2014	5/9/2014	5/10/2014		5/12/2014	5/13/2014	5/14/2014	5/15/2014	5/16/2014	5/17/2014		5/19/2014	5/20/2014	5/21/2014	5/22/2014
84	84	97	0	97	12	10	503	503	503	0	503	503	503	503	503	503	0	508	508	5	41	41	41	0	46	5	59	59
9	9	9	0	9	1	0	30	30	30	0	30	30	30	30	30	30	0	30	30	0	2	2	2	0	2	0	4	4
25	25	34	0	34	3	2	121	121	121	0	121	121	121	121	121	121	0	122	122	1	7	7	7	0	8	1	16	16
0	0	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0
1	1	1	0	1	0	0	52	52	52	0	52	52	52	52	52	52	0	52	52	0	0	0	0	0	0	0	0	0
1	1	1	0	1	0	0	11	11	11	0	11	11	11	11	11	11	0	11	11	0	0	0	0	0	0	0	0	0
27862	27862	28674	0	28674	2597	2170	159382	159382	159382	0	159382	159382	159382	159382	159382	159382	0	160462	160462	1159	12490	12490	12490	0	13469	1058	20925	20925
2	2	2	0	2	0	0	14	14	14	0	14	14	14	14	14	14	0	14	14	0	1	1	1	0	1	0	2	2
12.7	12.7	13.0	0.0	13.0	1.2	1.0	72.4	72.4	72.4	0.0	72.4	72.4	72.4	72.4	72.4	72.4	0.0	72.9	72.9	0.5	5.7	5.7	5.7	0.0	6.1	0.5	9.5	9.5

CONSTRUCTION EMISSIONS SUMMARY

FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU
5/23/2014	5/24/2014		5/26/2014	5/27/2014	5/28/2014	5/29/2014	5/30/2014	5/31/2014		6/2/2014	6/3/2014	6/4/2014	6/5/2014	6/6/2014	6/7/2014		6/9/2014	6/10/2014	6/11/2014	6/12/2014	6/13/2014	6/14/2014		6/16/2014	6/17/2014	6/18/2014	6/19/2014
59	59	0	50	50	50	50	50	50	0	58	58	58	21	21	21	0	21	44	14	37	37	37	0	48	45	40	46
4	4	0	3	3	3	3	3	3	0	4	4	4	1	1	1	0	1	3	1	4	4	4	0	5	5	6	5
16	16	0	14	14	14	14	14	14	0	23	23	23	3	3	3	0	3	6	14	17	17	17	0	22	28	21	18
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
20925	20925	0	17754	17754	17754	17754	17754	17754	0	22031	22031	22031	4072	3993	3993	0	3993	15727	5855	13106	13106	13106	0	14970	17950	14942	16270
2	2	0	1	1	1	1	1	1	0	2	2	2	0	0	0	0	0	1	0	1	1	1	0	1	1	1	1
9.5	9.5	0.0	8.1	8.1	8.1	8.1	8.1	8.1	0.0	10.0	10.0	10.0	1.8	1.8	1.8	0.0	1.8	7.1	2.7	6.0	6.0	6.0	0.0	6.8	8.2	6.8	7.4

CONSTRUCTION EMISSIONS SUMMARY

FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT	
6/20/2014	6/21/2014		6/23/2014	6/24/2014	6/25/2014	6/26/2014	6/27/2014	6/28/2014		6/30/2014	7/1/2014	7/2/2014	7/3/2014	7/4/2014	7/5/2014		7/7/2014	7/8/2014	7/9/2014	7/10/2014	7/11/2014	7/12/2014		7/14/2014	7/15/2014	7/16/2014	7/17/2014	7/18/2014	7/19/2014	
39	39	0	4	1	1	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	1	0	1	101	101	101	101	101	0
5	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	0
18	18	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	11	11	11	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	17	17	17	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	0
13572	13572	0	1915	117	117	117	117	117	0	117	117	117	117	117	197	0	117	117	117	117	117	117	0	117	26838	26838	26838	26838	26838	0
1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	0
6.2	6.2	0.0	0.9	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	12.2	12.2	12.2	12.2	12.2	0.0

CONSTRUCTION EMISSIONS SUMMARY

MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU
7/21/2014	7/22/2014	7/23/2014	7/24/2014	7/25/2014	7/26/2014		7/28/2014	7/29/2014	7/30/2014	7/31/2014	8/1/2014	8/2/2014		8/4/2014	8/5/2014	8/6/2014	8/7/2014	8/8/2014	8/9/2014		8/11/2014	8/12/2014	8/13/2014	8/14/2014	8/15/2014	8/16/2014		8/18/2014	8/19/2014	8/20/2014	8/21/2014
388	386	386	369	369	502	0	289	329	335	396	474	529	0	355	420	357	86	93	132	0	164	167	212	135	131	159	0	153	196	116	99
24	24	24	23	23	30	0	17	20	20	24	33	36	0	26	30	25	4	4	10	0	12	11	14	11	11	15	0	18	20	9	8
73	72	72	70	70	94	0	59	78	78	96	183	190	0	151	160	139	32	21	31	0	48	41	47	51	52	73	0	71	77	47	53
1	1	1	1	1	2	0	1	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	19	19	19	19	20	0	2	2	2	3	4	4	0	3	4	3	0	0	1	0	1	1	1	1	1	2	0	2	2	1	1
5	5	5	5	5	5	0	2	2	2	2	4	4	0	3	3	3	0	0	1	0	1	1	1	1	1	1	0	1	2	1	1
119649	118902	118902	114763	114763	154041	0	90048	96196	97692	119110	170440	186151	0	140084	163781	143494	21144	21205	31994	0	41594	38071	54371	36199	36753	52043	0	51247	66569	43351	32375
10	10	10	10	10	14	0	8	9	9	10	12	13	0	9	10	9	1	2	2	0	3	3	4	3	2	3	0	3	4	2	2
54.4	54.0	54.0	52.2	52.2	70.0	0.0	40.9	43.7	44.4	54.1	77.4	84.6	0.0	63.6	74.4	65.2	9.6	9.6	14.5	0.0	18.9	17.3	24.7	16.4	16.7	23.6	0.0	23.3	30.2	19.7	14.7

CONSTRUCTION EMISSIONS SUMMARY

FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT	
8/22/2014	8/23/2014		8/25/2014	8/26/2014	8/27/2014	8/28/2014	8/29/2014	8/30/2014		9/1/2014	9/2/2014	9/3/2014	9/4/2014	9/5/2014	9/6/2014		9/8/2014	9/9/2014	9/10/2014	9/11/2014	9/12/2014	9/13/2014		9/15/2014	9/16/2014	9/17/2014	9/18/2014	9/19/2014	9/20/2014	
82	94	0	329	289	352	309	270	246	0	200	174	187	191	188	188	0	167	137	138	131	131	147	0	120	120	120	120	120	120	0
7	10	0	27	21	27	22	18	17	0	13	12	13	14	14	14	0	13	8	11	8	8	9	0	7	7	7	7	7	7	0
46	54	0	106	71	113	82	68	76	0	44	42	42	45	43	43	0	36	28	32	25	25	30	0	23	23	23	23	23	23	0
0	0	0	1	1	1	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	0	3	2	3	2	2	2	0	1	1	1	1	1	1	0	19	19	19	19	19	19	0	19	19	19	19	19	19	0
1	1	0	3	2	3	2	2	2	0	1	1	1	1	1	1	0	4	4	4	4	4	4	0	3	3	3	3	3	3	0
29637	33109	0	120059	97876	128495	108854	92605	86611	0	68733	58375	61605	62432	62024	62024	0	51773	38852	40813	37881	37881	41060	0	35066	35066	35066	35066	35066	35066	0
1	2	0	9	8	9	8	7	7	0	6	5	5	5	5	5	0	4	4	4	3	3	4	0	3	3	3	3	3	3	0
13.5	15.0	0.0	54.5	44.5	58.4	49.5	42.1	39.3	0.0	31.2	26.5	28.0	28.4	28.2	28.2	0.0	23.5	17.7	18.5	17.2	17.2	18.7	0.0	15.9	15.9	15.9	15.9	15.9	15.9	0.0

CONSTRUCTION EMISSIONS SUMMARY

MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED
9/22/2014	9/23/2014	9/24/2014	9/25/2014	9/26/2014	9/27/2014		9/29/2014	9/30/2014	10/1/2014	10/2/2014	10/3/2014	10/4/2014		10/6/2014	10/7/2014	10/8/2014	10/9/2014	10/10/2014	10/11/2014		10/13/2014	10/14/2014	10/15/2014	10/16/2014	10/17/2014	10/18/2014		10/20/2014	10/21/2014	10/22/2014
123	158	156	151	191	191	0	166	166	166	166	166	177	0	177	177	104	105	105	105	0	117	33	15	44	44	60	0	101	101	101
7	10	9	9	12	12	0	11	11	11	11	11	14	0	14	14	6	6	6	6	0	7	2	1	6	6	6	0	10	10	10
25	36	35	35	43	43	0	61	61	61	61	61	129	0	129	129	43	43	43	43	0	45	5	16	37	37	41	0	57	57	56
0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	19	19	19	19	19	0	1	1	1	1	1	2	0	2	2	0	0	0	0	0	1	0	0	1	1	1	0	1	1	1
3	4	4	4	4	4	0	1	1	1	1	1	2	0	2	2	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1
35636	49903	49149	48130	61295	61295	0	42228	42228	42228	42228	42228	68939	0	68939	68939	17658	17698	17698	17698	0	25407	11485	6993	22323	22323	25330	0	44760	44760	44088
3	4	4	4	5	5	0	4	4	4	4	4	4	0	4	4	2	2	2	2	0	3	1	0	1	1	1	0	2	2	2
16.2	22.7	22.3	21.9	27.9	27.9	0.0	19.2	19.2	19.2	19.2	19.2	31.3	0.0	31.3	31.3	8.0	8.0	8.0	8.0	0.0	11.5	5.2	3.2	10.1	10.1	11.5	0.0	20.3	20.3	20.0

CONSTRUCTION EMISSIONS SUMMARY

THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT	
10/23/2014	10/24/2014	10/25/2014		10/27/2014	10/28/2014	10/29/2014	10/30/2014	10/31/2014	11/1/2014		11/3/2014	11/4/2014	11/5/2014	11/6/2014	11/7/2014	11/8/2014		11/10/2014	11/11/2014	11/12/2014	11/13/2014	11/14/2014	11/15/2014		11/17/2014	11/18/2014	11/19/2014	11/20/2014	11/21/2014	11/22/2014	
101	95	52	0	13	16	16	92	92	92	0	93	93	93	93	83	83	0	83	83	83	83	101	306	0	308	267	429	427	427	427	0
15	9	3	0	6	1	1	6	6	6	0	6	6	6	6	6	6	0	5	5	11	5	7	25	0	19	17	30	30	30	30	0
56	45	8	0	2	3	3	26	26	26	0	26	26	26	26	24	24	0	21	21	21	21	33	93	0	93	74	111	111	111	111	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	1	0
1	1	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	0	1	1	1	1	1	2	0	2	2	3	3	3	3	0
1	1	0	0	0	0	0	1	1	1	0	1	1	1	1	1	1	0	0	0	0	0	1	2	0	2	2	3	3	3	3	0
44088	39262	16979	0	2418	2988	2988	32759	32759	32759	0	32838	32838	32838	32838	29535	29535	0	25887	25887	25887	25887	28308	97096	0	97532	89785	144293	143857	143857	143857	0
2	2	1	0	0	0	0	2	2	2	0	2	2	2	2	2	2	0	2	2	2	2	2	8	0	8	7	11	11	11	11	0
20.0	17.8	7.7	0.0	1.1	1.4	1.4	14.9	14.9	14.9	0.0	14.9	14.9	14.9	14.9	13.4	13.4	0.0	11.8	11.8	11.8	11.8	12.9	44.1	0.0	44.3	40.8	65.6	65.4	65.4	65.4	0.0

CONSTRUCTION EMISSIONS SUMMARY

MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED
11/24/2014	11/25/2014	11/26/2014	11/27/2014	11/28/2014	11/29/2014		12/1/2014	12/2/2014	12/3/2014	12/4/2014	12/5/2014	12/6/2014		12/8/2014	12/9/2014	12/10/2014	12/11/2014	12/12/2014	12/13/2014		12/15/2014	12/16/2014	12/17/2014	12/18/2014	12/19/2014	12/20/2014		12/22/2014	12/23/2014	12/24/2014
377	377	377	377	367	367	0	367	367	367	176	20	20	0	20	71	78	78	78	78	0	137	137	137	159	219	219	0	378	378	378
26	26	26	26	25	25	0	25	25	25	13	1	1	0	1	4	4	4	4	4	0	8	8	8	10	14	14	0	28	28	28
99	99	99	99	97	97	0	97	97	97	39	2	2	0	2	11	11	11	11	11	0	28	28	28	35	47	47	0	91	91	91
1	1	1	1	1	1	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1	1
3	3	3	3	3	3	0	3	3	3	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	3	3	3
3	3	3	3	3	3	0	3	3	3	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	0	3	3	3
125466	125466	125466	125466	123376	123376	0	123376	123376	123376	57029	3540	3540	0	3540	18613	19972	19972	19972	19972	0	40768	40768	40768	50515	70299	70299	0	127686	127686	127686
10	10	10	10	10	10	0	10	10	10	5	0	0	0	0	2	2	2	2	2	0	3	3	3	4	6	6	0	10	10	10
57.0	57.0	57.0	57.0	56.1	56.1	0.0	56.1	56.1	56.1	25.9	1.6	1.6	0.0	1.6	8.5	9.1	9.1	9.1	9.1	0.0	18.5	18.5	18.5	23.0	31.9	31.9	0.0	58.0	58.0	58.0

CONSTRUCTION EMISSIONS SUMMARY

THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED
12/25/2014	12/26/2014	12/27/2014		12/29/2014	12/30/2014	12/31/2014	1/1/2015	1/2/2015	1/3/2015		1/5/2015	1/6/2015	1/7/2015	1/8/2015	1/9/2015	1/10/2015		1/12/2015	1/13/2015	1/14/2015	1/15/2015	1/16/2015	1/17/2015		1/19/2015	1/20/2015	1/21/2015
381	381	381	0	381	381	407	409	376	460	0	490	332	174	318	279	166	0	218	216	247	78	78	78	0	144	158	170
28	28	28	0	28	28	29	29	27	35	0	39	28	21	29	21	11	0	14	15	19	7	7	7	0	11	12	15
89	89	89	0	89	89	83	84	85	120	0	131	94	57	75	69	32	0	38	59	72	40	40	40	0	50	62	63
1	1	1	0	1	1	1	1	1	2	0	2	1	1	1	1	0	0	1	1	1	0	0	0	0	0	0	0
3	3	3	0	3	3	3	3	3	3	0	4	3	2	2	2	1	0	1	2	2	1	1	1	0	1	1	2
3	3	3	0	3	3	3	3	2	3	0	3	2	1	2	2	1	0	1	2	2	1	1	1	0	1	1	1
130059	130059	130059	0	130059	130059	138340	139093	125965	159617	0	170581	118104	64275	103567	89006	46255	0	60327	67999	79477	28177	28177	28217	0	51562	54980	61803
10	10	10	0	10	10	11	11	10	12	0	13	9	4	8	7	4	0	6	6	6	1	1	1	0	3	3	4
59.1	59.1	59.1	0.0	59.1	59.1	62.9	63.2	57.2	72.5	0.0	77.5	53.7	29.2	47.1	40.4	21.0	0.0	27.4	30.9	36.1	12.8	12.8	12.8	0.0	23.4	25.0	28.1

CONSTRUCTION EMISSIONS SUMMARY

THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON
1/22/2015	1/23/2015	1/24/2015		1/26/2015	1/27/2015	1/28/2015	1/29/2015	1/30/2015	1/31/2015		2/2/2015	2/3/2015	2/4/2015	2/5/2015	2/6/2015	2/7/2015		2/9/2015	2/10/2015	2/11/2015	2/12/2015	2/13/2015	2/14/2015		2/16/2015	2/17/2015	2/18/2015	2/19/2015	2/20/2015	2/21/2015		2/23/2015
145	120	132	0	199	158	158	140	140	85	0	101	101	162	127	143	143	0	143	100	177	175	175	198	0	242	0	0	0	0	0	0	0
13	9	10	0	17	15	15	14	14	8	0	8	8	18	13	13	13	0	13	4	8	8	8	9	0	11	0	0	0	0	0	0	0
71	48	53	0	48	51	51	43	43	25	0	27	27	61	47	49	49	0	49	13	24	24	24	27	0	52	0	0	0	0	0	0	0
0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	0	2	1	1	1	1	1	0	1	1	1	0	1	1	0	1	0	1	1	1	1	0	1	0	0	0	0	0	0	0
1	1	1	0	2	1	1	1	1	1	0	1	1	1	0	0	0	0	0	0	1	1	1	1	0	1	0	0	0	0	0	0	0
47020	33868	35809	0	60710	43379	43379	40467	40467	23629	0	26687	26687	36566	24430	27488	27448	0	27448	22806	44728	44292	44292	50869	0	58709	0	0	0	0	0	0	0
3	2	2	0	4	3	3	3	3	2	0	2	2	3	2	3	3	0	3	2	3	3	3	4	0	4	0	0	0	0	0	0	0
21.4	15.4	16.3	0.0	27.6	19.7	19.7	18.4	18.4	10.7	0.0	12.1	12.1	16.6	11.1	12.5	12.5	0.0	12.5	10.4	20.3	20.1	20.1	23.1	0.0	26.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CONSTRUCTION EMISSIONS SUMMARY

TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI
2/24/2015	2/25/2015	2/26/2015	2/27/2015	2/28/2015		3/2/2015	3/3/2015	3/4/2015	3/5/2015	3/6/2015	3/7/2015		3/9/2015	3/10/2015	3/11/2015	3/12/2015	3/13/2015	3/14/2015		3/16/2015	3/17/2015	3/18/2015	3/19/2015	3/20/2015	3/21/2015		3/23/2015	3/24/2015	3/25/2015	3/26/2015	3/27/2015
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CONSTRUCTION EMISSIONS SUMMARY

SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE
3/28/2015		3/30/2015	3/31/2015	4/1/2015	4/2/2015	4/3/2015	4/4/2015		4/6/2015	4/7/2015	4/8/2015	4/9/2015	4/10/2015	4/11/2015		4/13/2015	4/14/2015	4/15/2015	4/16/2015	4/17/2015	4/18/2015		4/20/2015	4/21/2015	4/22/2015	4/23/2015	4/24/2015	4/25/2015		4/27/2015	4/28/2015
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

CONSTRUCTION EMISSIONS SUMMARY

WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT		MON	TUE	WED	THU	FRI	SAT
4/29/2015	4/30/2015	5/1/2015	5/2/2015		5/4/2015	5/5/2015	5/6/2015	5/7/2015	5/8/2015	5/9/2015		5/11/2015	5/12/2015	5/13/2015	5/14/2015	5/15/2015	5/16/2015		5/18/2015	5/19/2015	5/20/2015	5/21/2015	5/22/2015	5/23/2015		5/25/2015	5/26/2015	5/27/2015	5/28/2015	5/29/2015	5/30/2015
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Runway 7L-25R Safety Area Improvements and Pavement Rehabilitation
Quantity Summary by Phase
6/24/2013

			20	<-- Haul truck capacity (cy)			20	<-- Haul truck capacity (cy)			10	<-- Mixer capacity (cy)				20	<-- Haul truck capacity (cy)	20	<-- Haul truck capacity (cy)				20	<-- Haul truck capacity (cy)
			4				8				13					19		22					28	
Phase		Pavement Demo (CY)	Hauling Trips	Common Ex (cy)	Material to Remain (cy)	Net Excavation Export (cy)	Hauling Trips	PCCP (sy)	PCCP (in)	PCCP (cy)	Hauling Trips	4" ACP (sf)	5" ACP (sf)	ACP (tons)	Total ACP (cy)	Hauling Trips	Base Prep, Agg + PMB (cy)	Hauling Trips	Lime Treated (sy)	ATB (CF)	ATB (CY)	Hauling Trips	ATB (tons)
1A	x	1,870	94	124,474	29,000	95,474	4,774	7,583	19	4,002	400	130,022	91,467	6,109	3,017	151	13,032		-	34,124	1,264	63	2,559
1B	x	1,762	88	5,904		5,904	295	4,449	19	2,348	235	55,700	1,940	1,453	718	36	2,995		-	20,021	742	37	1,502
1C*			-			-	-				-					-						-		
2A	x	911	46	2,946		2,946	147	2,554	19	1,348	135	22,515	1,624	614	303	15	1,368		-	11,492	426	21	862
3A*			-	-		-	-			-	-	-	-	-	-	-	-		-	-	-	-	-	-
3B	x	180	9	690		690	35	949	19	501	50	-	-	-	-	-	211		-	4,272	158	8	320
3C	x	5,027	251	6,004		6,004	300	12,496	19	6,595	659	33,407	24,136	1,439	785	39	9,128		-	56,231	2,083	104	4,217
4A	x	372	19	1,304		1,304	65	734	4	82	8	3,718	10,030	406	201	10	803		-	3,303	122	6	248
5A	x	984	49	175		175	9	-	-	-	-	31,293	-	782	386	19	773		-	-	-	-	-
5B	x	5,315	266	9,073		9,073	454	10,083	23	6,442	644	83,341	-	2,084	1,029	51	4,902		16,107	45,374	1,681	84	3,403
6A*			-			-	-				-				-	-						-	
6B	x	1,110	56	4,178		4,178	209	398	23	254	25	6,189	31,002	1,124	555	28	3,577		3,843	1,793	66	3	134
6C	x	1,022	51	4,320		4,320	216	-	-	-	-	-	36,828	1,151	568	28	3,865		4,092	-	-	-	-
6D		4,664	233	23,388		23,388	1,169	-	-	-	-	17,384	185,987	6,247	3,085	154	19,946		20,665	-	-	-	-
7B		1,418	71	3,426		3,426	171	1,381	23	882	88	4,075	21,873	785	388	19	2,396		1,596	6,215	230	12	466
7C		6,656	333	80,391		80,391	4,020	50,298	23	32,135	3,214	535,364	29,867	13,561	7,070	354	16,353		75,860	226,343	8,383	419	16,976
8A West		3,975	199	107,635	29,000	78,635	3,932	20,215	19	10,669	1,067	227,497	-	5,687	2,809	140	16,253		-	90,967	3,369	168	6,823
8A KEEL		10,345	517	4,224		4,224	211	17,743	19	17,618	1,762	-	-	-	-	-	2,314			66,537	2,464	123	4,990
8B		1,938	97	8,783		8,783	439	5,839	19	4,416	442	129,228	-	3,231	1,595	80			-	26,277	973	49	1,971
8A/C		6,900	345	-		-	-	10,350	19	5,463	546			-	-	-	-		-	38,813	1,438	72	2,911
8A/D		6,049	302	-		-	-	9,074	19	4,789	479			-	-	-	-		-	34,028	1,260	63	2,552
		60,498	3,025	386,915	58,000	328,915	16,446	154,147	286	97,544	9,754	1,279,733	434,754	44,672		1,125	97,916	-	122,163	665,788	24,659	1,233	49,934

* - Quantities for these subphases are included in the larger overall phase area

miles per roundtrip --> 17.8 Average speed --> 35 mph

	Pavement Demo					Emissions (lbs/day)						
	Phase	Total Trips	Total VMT	Days	Daily VMT	CO	ROG	NOx	SOx	PM10	PM2.5	CO2
		3,025										
4	1A	94	1,664	23	72	0.179	0.044	0.630	0.000	0.009	0.008	283.865
4	4A	19	331									
4	8B	97	1,724									
4	1B	88	1,568									
4	2A	46	810									
		249	4,434	5	887	2.199	0.540	7.718	0.000	0.108	0.099	3478.635
4	3B	9	160									
4	3C	251	4,474									
		260	4,634	10	463	1.149	0.282	4.033	0.000	0.056	0.052	1817.817
	8A											
4	8A West	199	3,538	21	168	0.418	0.103	1.466	0.000	0.020	0.019	660.803
4	8A KEEL	517	9,207	34	271	0.671	0.165	2.357	0.000	0.033	0.030	1062.305
4	5A	49	876									
4	5B	266	4,730									
		315	5,606	15	374	0.927	0.227	3.253	0.000	0.045	0.042	1466.070
4	6B	56	988									
4	6C	51	910									
		107	1,898	4	475	1.177	0.289	4.130	0.000	0.058	0.053	1861.485
4	6D	233	4,151	12	346	0.858	0.211	3.011	0.000	0.042	0.039	1357.038
4	7B	71	1,262									
4	7C	333	5,924									
		404	7,186	15	479	1.188	0.292	4.170	0.000	0.058	0.053	1879.318
4	8A/C	345	6,141									
4	8A/D	302	5,384									
		647	11,525	6	1,921	4.762	1.169	16.717	0.000	0.233	0.214	7534.937

miles per roundtrip --> 17.8 Average speed --> 35 mph

	Excavation Material Removal					Emissions (lbs/day)						
	Phase	Total Trips	Total VMT	Days	Daily VMT	CO	ROG	NOx	SOx	PM10	PM2.5	CO2
		16,446										
8	1A	4,774	84,972	11	7,725	19.152	4.702	67.230	0.000	0.937	0.862	30302.195
8	4A	65	1,161									
8	8B	439	7,817									
8	1B	295	5,255									
8	2A	147	2,622									
		947	16,854	4	4,213	10.447	2.565	36.671	0.000	0.511	0.470	16528.551
8	3B	35	614									
8	3C	300	5,344									
		335	5,958	3	1,986	4.924	1.209	17.285	0.000	0.241	0.222	7790.773
	8A											
8	8A West	3,932	69,986	16	4,374	10.845	2.662	38.069	0.000	0.530	0.488	17158.591
8	8A KEEL	211	3,759	11	342	0.847	0.208	2.974	0.000	0.041	0.038	1340.540
8	5A	9	156									
8	5B	454	8,075									
		462	8,230	7	1,176	2.915	0.716	10.233	0.000	0.143	0.131	4612.213
8	6B	209	3,719									
8	6C	216	3,845									
		425	7,563	4	1,891	4.688	1.151	16.457	0.000	0.229	0.211	7417.414
8	6D	1,169	20,816	18	1,156	2.867	0.704	10.065	0.000	0.140	0.129	4536.391
8	7B	171	3,049									
8	7C	4,020	71,548									
		4,191	74,597	8	9,325	23.119	5.675	81.155	0.000	1.130	1.040	36578.444
8	8A/C	-	-									
8	8A/D	-	-									
		-	-	2	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000

miles per roundtrip --> 17.8 Average speed --> 35 mph

		Cocrete Delivery				Emissions (lbs/day)						
	Phase	Total Trips	Total VMT	Days	Daily VMT	CO	ROG	NOx	SOx	PM10	PM2.5	CO2
		9,754										
13	**1A**	400	7,124	9	792	1.963	0.482	6.889	0.000	0.096	0.088	3105.056
13	**4A**	8	145									
13	**8B**	442	7,860									
13	**1B**	235	4,180									
13	**2A**	135	2,399									
		819	14,584	2	7,292	18.080	4.438	63.466	0.000	0.884	0.813	28605.561
13	**3B**	50	892									
13	**3C**	659	11,739									
		710	12,631	9	1,403	3.480	0.854	12.214	0.000	0.170	0.157	5505.324
	8A											
13	8A West	1,067	18,991	15	1,266	3.139	0.771	11.019	0.000	0.153	0.141	4966.434
13	8A KEEL	1,762	31,360	30	1,045	2.592	0.636	9.098	0.000	0.127	0.117	4100.579
13	**5A**	-	-									
13	**5B**	644	11,467									
		644	11,467	9	1,274	3.159	0.775	11.089	0.000	0.154	0.142	4997.938
13	**6B**	25	453									
13	**6C**	-	-									
		25	453	10	45	0.112	0.028	0.394	0.000	0.005	0.005	177.699
13	**6D**	-	-	0	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
13	**7B**	88	1,571									
13	**7C**	3,214	57,201									
		3,302	58,771	16	3,673	9.107	2.236	31.969	0.000	0.445	0.410	14409.124
13	**8A/C**	546	9,723									
13	**8A/D**	479	8,525									
		1,025	18,248	8	2,281	5.655	1.388	19.852	0.000	0.277	0.254	8947.738

miles per roundtrip --> 17.8 Average speed --> 35 mph

		Asphalt Delivery				Emissions (lbs/day)						
	Phase	Total Trips	Total VMT	Days	Daily VMT	CO	ROG	NOx	SOx	PM10	PM2.5	CO2
		1,125										
19	**1A**	151	2,685	11	244	0.605	0.149	2.124	0.000	0.030	0.027	957.477
19	**4A**	10	179									
19	**8B**	80	1,420									
19	**1B**	36	639									
19	**2A**	15	270									
		141	2,507	4	627	1.554	0.381	5.455	0.000	0.076	0.070	2458.474
19	**3B**	-	-									
19	**3C**	39	699									
		39	699	2	349	0.866	0.213	3.040	0.000	0.042	0.039	1370.151
	8A											
19	8A West	140	2,500	5	500	1.240	0.304	4.351	0.000	0.061	0.056	1961.120
19	8A KEEL	-	-	3	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
19	**5A**	19	344									
19	**5B**	51	916									
		71	1,260	3	420	1.041	0.256	3.654	0.000	0.051	0.047	1646.989
19	**6B**	28	494									
19	**6C**	28	506									
		56	1,000	2	500	1.239	0.304	4.350	0.000	0.061	0.056	1960.639
19	**6D**	154	2,745	13	211	0.524	0.129	1.838	0.000	0.026	0.024	828.448
19	**7B**	19	345									
19	**7C**	354	6,293									
		373	6,638	6	1,106	2.743	0.673	9.628	0.000	0.134	0.123	4339.764
19	**8A/C**	-	-									
19	**8A/D**	-	-									
		-	-	0	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000

miles per roundtrip --> 17.8 Average speed --> 35 mph

		Base Material Delivery				Emissions (lbs/day)						
	Phase	Total Trips	Total VMT	Days	Daily VMT	CO	ROG	NOx	SOx	PM10	PM2.5	CO2
		-										
22	1A	-	-	4	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	4A	-	-									
22	8B	-	-									
22	1B	-	-									
22	2A	-	-									
		-	-	3	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	3B	-	-									
22	3C	-	-									
		-	-	3	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	8A											
22	8A West	-	-	7	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	8A KEEL	-	-	3	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	5A	-	-									
22	5B	-	-									
		-	-	4	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	6B	-	-									
22	6C	-	-									
		-	-	2	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	6D	-	-	0	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	7B	-	-									
22	7C	-	-									
		-	-	7	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
22	8A/C	-	-									
22	8A/D	-	-									
		-	-	0	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000

miles per roundtrip --> 17.8 Average speed --> 35 mph

		Asphalt Treated Base Delivery				Emissions (lbs/day)						
	Phase	Total Trips	Total VMT	Days	Daily VMT	CO	ROG	NOx	SOx	PM10	PM2.5	CO2
		1,233										
28	1A	63	1,125	4	281	0.697	0.171	2.447	0.000	0.034	0.031	1103.112
28	4A	6	109									
28	8B	49	866									
28	1B	37	660									
28	2A	21	379									
		113	2,014	3	671	1.664	0.409	5.842	0.000	0.081	0.075	2633.215
28	3B	8	141									
28	3C	104	1,854									
		112	1,994	2	997	2.472	0.607	8.679	0.000	0.121	0.111	3911.677
	8A											
28	8A West	168	2,999	6	500	1.239	0.304	4.350	0.000	0.061	0.056	1960.434
28	8A KEEL	123	2,193	7	313	0.777	0.191	2.727	0.000	0.038	0.035	1229.095
28	5A	-	-									
28	5B	84	1,496									
		84	1,496	4	374	0.927	0.228	3.254	0.000	0.045	0.042	1466.786
28	6B	3	59									
28	6C	-	-									
		3	59	3	20	0.049	0.012	0.171	0.000	0.002	0.002	77.261
28	6D	-	-	0	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000
28	7B	12	205									
28	7C	419	7,461									
		431	7,666	6	1,278	3.168	0.778	11.120	0.000	0.155	0.143	5011.869
28	8A/C	72	1,279									
28	8A/D	63	1,122									
		135	2,401	1	2,401	5.953	1.461	20.897	0.000	0.291	0.268	9418.671

Asphalt Paving Emissions

Emission Factor (lbs/acre) ---> 2.62

Phase	Asphalt Area (sf)	Area (acres)	ROG (lbs)
1A	221,489	5.08	13.32
1B	57,640	1.32	3.47
1C*	-	0.00	0.00
2A	24,139	0.55	1.45
3A*	-	0.00	0.00
3B	-	0.00	0.00
3C	57,543	1.32	3.46
4A	13,748	0.32	0.83
5A	31,293	0.72	1.88
5B	83,341	1.91	5.01
6A*	-	0.00	0.00
6B	37,191	0.85	2.24
6C	36,828	0.85	2.22
6D	203,371	4.67	12.23
7B	25,948	0.60	1.56
7C	565,231	12.98	34.00
8A West	227,497	5.22	13.68
8A KEEL	-	0.00	0.00
8B	129,228	2.97	7.77
8A/C	-	0.00	0.00
8A/D	-	0.00	0.00

Phase	Asphalt Area (sf)	Area (acres)	ROG (lbs)	Paving Days	ROG (lbs per day)
Phase 1A	221,489	5.08	13.32	11	1.21
Phase 4A	13,748	0.32	0.83		
Phase 8B	129,228	2.97	7.77		
Phase 1B	57,640	1.32	3.47		
Phase 2A	24,139	0.55	1.45		
	224,755	5.16	13.52	4	3.38
Phase 3B	-	0.00	0.00		
Phase 3C	57,543	1.32	3.46		
	57,543	1.32	3.46	2	1.73
Phase 8A					
8A West	227,497	5.22	13.68		
8A KEEL	-	0.00	0.00		
	227,497	5.22	13.68	2	6.84
Phase 5A	31,293	0.72	1.88		
Phase 5B	83,341	1.91	5.01		
	114,634	2.63	6.89	3	2.30
Phase 6B	37,191	0.85	2.24		
Phase 6C	36,828	0.85	2.22		
	74,019	1.70	4.45	2	2.23
Phase 7B	25,948	0.60	1.56		
Phase 7C	565,231	12.98	34.00		
	591,179	13.57	35.56	6	5.93

PAVEMENT CRUSHING EMISSIONS

Pavement Crushing Emissions
Based on methodologies included in AP-42 and data from HNTB for the LAX SAIP EIR

Data

Runway material to be crushed:

Portland concrete cement:	245,000	tons	77.29%
Asphalt:	72,000	tons	22.71%
	317,000	tons	100.00%

Source: Tony Fermelia (HNTB)

Assumptions:

Average throughput for crusher:

Crushing of concrete:	175	tons/hour
Crushing of asphalt:	300	tons/hour

Source: Tony Fermelia (HNTB), based on conversations with crushing contractors

Pro-rated throughput: 203 tons/hour

Crusher operating hours: 1610 hours/year *Source: HNTB*

Emission Factors (lb/ton):

Source	Total PM-10
Tertiary Crushing (controlled)	0.00054
Fines Crushing (controlled)	0.0012
Screening (controlled)	0.00074
Fines Screening (controlled)	0.0022
Conveyer Transfer Point (controlled)	0.000046
Total	0.004726 lb/ton

Source: AP-42 Table 11.19.2-2 Emission Factors For Crushed Stone Processing Operations

Calculations

Total Rock Crishing Fugitive Dust Emissions (PM-10 tons/year) 0.77

*Pro-rated throughput * PM-10 Emission Factor * 1/2000 * Operating hours = Tons of PM-10 emissions*

PAVEMENT CRUSHING EMISSIONS

LAX South RSA Crushing Assumptions

Pavement to be crushed (cy):	60,498	
Conversion to cubic feet (cf):	1,633,457	
Mix of pavement types:		
Asphalt 50%		
Concrete 50%		
Asphalt to be crushed (cf):	816,729	
Concrete to be crushed (cf):	816,729	
Asphalt density (lbs/cf):	145	<-- assumption from National Asphalt Association
Weight of asphalt (lbs):	118,425,660	
Weight of asphalt (tons):	59,213	
Concrete density (lbs/cf):	145	<-- assumption from Portland Cement Associatior
Weight of asphalt (lbs):	118,425,660	
Weight of asphalt (tons):	59,213	
Total weight (tons):		
Asphalt	59,213	
Concrete	59,213	
	118,426	
Crusher throughput (tons/hr):	238	
Crusher operating hours:	601	
Emission factor (lb/ton):	0.004726	

		2014	2015
Total fugitive dust (PM10):	0.34	0.17	0.17

PAVEMENT CRUSHING EMISSIONS

Crusher Operating Emissions

Assumed horsepower: 450

Emission factors (grams/hp-hr)		Emissions (tons/year)	2014	2015
CO	0.77	0.23	0.11	0.11
ROG	0.14	0.04	0.02	0.02
NOx	0.30	0.09	0.04	0.04
SOx	0.00	0.00	0.00	0.00
PM10	0.015	0.00	0.00	0.00
PM2.5	0.01335	0.00	0.00	0.00
CO2	338.97	101.13	50.49	50.64
CH4	0.02	0.01	0.00	0.00

grams to tons: *1.10231E-06*

CY 2015 phases		Pavement demo in 2015 (cy)	
7C	16.3%	1,085	
8A	100.0%	14,320	
8B	100.0%	1,938	
8C	100.0%	6,900	
8D	100.0%	6,049	
	Total 2015 -->	30,292	50.07%
	Total 2014 -->	30,292	49.93%
	Total Project -->	60,498	

NEW PROJECTS EMISSIONS

Methodology/Notes

This sheet calculates emissions assocated with projects/activities additional to Refinement #2 that comprise the Proposed Action.
The area (s.f.) for each additional project/activity was compared to the area of a similar Refinement #2 project/activity for which construction activity estimates were provided, to derive a scaling factor. The scaling factor was applied to the applicable number of crews.

The emissions estimates include fugitive dust (PM10 and PM2.5) for grading activities and VOC emissions associated with asphalt curing for asphalt paving activities.

Monthly truck trips and employee vehicle trips were provided for Refinement #2. The Refinement #2 alternative has been modified to eliminate several projects/activities, including the Taxiway C extension, a new GSE facility, and service roads near the Runway 25R end. Emissions for these activities have been eliminated from Refinement #2. However, because the employee and truck trips were provided in aggregage (not project/activity specific), emissions associated with these vehicle trips were not reduced to reflect the eliminated projects/activities. Instead, it was assumed that these vehicle trips would cover any applicable trips associated with the new project/activities addressed on this sheet. Employee trip emissions specific to each new Proposed Action project are calculated below. Emissions for truck trips associated with hauling excess material offsite were estimated for the additional grading west of Runway 7L. All other truck trips associated with each project are assumed to be covered by the aggregate truck trips remaining in the analysis after removal of specific projects, as mentioned previously.

		Emissions for Additional Projects (lbs/day)							
ID	**Activity**	**ROG**	**CO**	**NOx**	**SOx**	**PM10**	**PM2.5**	**CO2**	**CH4**
W_GRADE	Grading west of Runway 7L	14.964	289.537	32.064	0.824	49.978	8.752	77370.713	8.290
BLASTPAD	Runway 7L blast pad (asphalt)	2.764	45.683	20.885	0.081	0.154	0.137	7090.298	0.970
GRD_GDG	Green access road grading	5.168	99.995	11.074	0.285	17.260	3.023	26720.802	2.863
GRD_PVG	Green access road (asphalt)	2.397	39.614	18.111	0.070	0.134	0.119	6148.290	0.841
EAPN_PVR	East side asphalt apron - pavement removal	11.332	166.633	35.986	0.608	1.214	1.080	55890.639	4.731
EAPN_GDG	East side asphalt apron - grading	5.503	106.471	11.791	0.303	18.378	3.218	28451.499	3.048
EAPN_PVG	East side asphalt apron - paving	5.104	84.359	38.567	0.150	0.284	0.253	13093.024	1.791

NEW PROJECTS EMISSIONS

Grading west of Runway 7L								
Area (s.f.)	553,045							
Reference activity								
Phase 2 Taxiway Work West of Existing Runway End - Act# 3051								
Area (s.f.)	292,500							
Scale Factor	1.89							
Duration (days)	11							
Number of crews	14							
Scaled crews	26							
On-Site Equipment Emissions								
Reference activity emissions (lbs/day)	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
Emissions per crew (B-33B)	0.565	10.938	1.211	0.031	0.061	0.054	2922.900	0.313
Total emissions (lbs/day)	**14.964**	**289.537**	**32.064**	**0.824**	**1.603**	**1.427**	**77370.713**	**8.290**
Fugitive dust (controlled)								
Reference project emissions (lbs/day)								
PM10					25.585			
PM2.5						3.874		
Scaled project emissions (lbs/day)								
PM10					**48.375**			
PM2.5						**7.325**		
	ROG	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Total on-site emissions (lbs/day)	**14.964**	**289.537**	**32.064**	**0.824**	**49.978**	**8.752**	**77,370.713**	**8.290**

Runway 7L blast pad (asphalt)								
Area (s.f.)	110,132							
Reference activity								
Rwy 7L Extension asphalt shoulders - Act# 4101								
Area (s.f.)	45,000							
Scale Factor	2.45							
Duration (days)	5							
Number of crews	7							
Scaled crews	17							
On-Site Equipment Emissions								
Reference activity emissions (lbs/day)	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
Emissions per crew (B-25C)	0.084	2.667	1.219	0.005	0.009	0.008	413.871	0.057
Total emissions (lbs/day)	**1.439**	**45.683**	**20.885**	**0.081**	**0.154**	**0.137**	**7,090.298**	**0.970**
Asphalt VOC emissions								
CalEEMod emission factor (lbs/acre)	2.62							
Acres	2.5							
VOC emissions (divided by days - lbs/day)	**1.325**							
	ROG	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Total on-site emissions (lbs/day)	**2.764**	**45.683**	**20.885**	**0.081**	**0.154**	**0.137**	**7,090.298**	**0.970**

NEW PROJECTS EMISSIONS

Green access road grading								
Area (s.f.)	191,000							
Reference activity								
Phase 2 Taxiway Work West of Existing Runway End - Act# 3051								
Area (s.f.)	292,500							
Scale Factor	0.65							
Duration (days)	11							
Number of crews	14							
Scaled crews	9							
On-Site Equipment Emissions								
Reference activity emissions (lbs/day)	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
Emissions per crew (B-33B)	0.565	10.938	1.211	0.031	0.061	0.054	2922.900	0.313
Total emissions (lbs/day)	5.168	99.995	11.074	0.285	0.554	0.493	26720.802	2.863
Fugitive dust (controlled)								
Reference project emissions (lbs/day)								
PM10					25.585			
PM2.5						3.874		
Scaled project emissions (lbs/day)								
PM10					**16.707**			
PM2.5						**2.530**		
	ROG	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Total on-site emissions (lbs/day)	**5.168**	**99.995**	**11.074**	**0.285**	**17.260**	**3.023**	**26,720.802**	**2.863**

Green access road (asphalt)								
Area (s.f.)	95,500							
Reference activity								
Rwy 7L Extension asphalt shoulders - Act# 4101								
Area (s.f.)	45,000							
Scale Factor	2.12							
Duration (days)	5							
Number of crews	7							
Scaled crews	15							
On-Site Equipment Emissions								
Reference activity emissions (lbs/day)	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
Emissions per crew (B-25C)	0.084	2.667	1.219	0.005	0.009	0.008	413.871	0.057
Total emissions (lbs/day)	**1.248**	**39.614**	**18.111**	**0.070**	**0.134**	**0.119**	**6,148.290**	**0.841**
Asphalt VOC emissions								
CalEEMod emission factor (lbs/acre)	2.62							
Acres	2.2							
VOC emissions (divided by days - lbs/day)	**1.149**							
	ROG	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Total on-site emissions (lbs/day)	**2.397**	**39.614**	**18.111**	**0.070**	**0.134**	**0.119**	**6,148.290**	**0.841**

NEW PROJECTS EMISSIONS

East side asphalt apron - pavement removal									
Area (s.f.)	203,371								
Reference activity									
East End - Phase 4 (Taxiway B) - Act# 26160									
Area (s.f.)	46,656								
Scale Factor	4.36								
Duration (days)	6								
Number of crews	5								
Scaled crews	22								
On-Site Equipment Emissions									
Reference activity emissions (lbs/day)	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4	
Emissions per crew (B-38)	0.520	7.646	1.651	0.028	0.056	0.050	2,564.411		0.217
Total emissions (lbs/day)	**11.332**	**166.633**	**35.986**	**0.608**	**1.214**	**1.080**	**55,890.639**		**4.731**
	ROG	CO	NOx	SOx	PM10	PM2.5	CO2	CH4	
Total on-site emissions (lbs/day)	**11.332**	**166.633**	**35.986**	**0.608**	**1.214**	**1.080**	**55,890.639**		**4.731**

East side asphalt apron - grading									
Area (s.f.)	203,371								
Reference activity									
Phase 2 Taxiway Work West of Existing Runway End - Act# 3051									
Area (s.f.)	292,500								
Scale Factor	0.70								
Duration (days)	11								
Number of crews	14								
Scaled crews	10								
On-Site Equipment Emissions									
Reference activity emissions (lbs/day)	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4	
Emissions per crew (B-33B)	0.565	10.938	1.211	0.031	0.061	0.054	2922.900		0.313
Total emissions (lbs/day)	**5.503**	**106.471**	**11.791**	**0.303**	**0.589**	**0.525**	**28451.499**		**3.048**
Fugitive dust (controlled)									
Reference project emissions (lbs/day)									
PM10					25.585				
PM2.5						3.874			
Scaled project emissions (lbs/day)									
PM10					**17.789**				
PM2.5						**2.694**			
	ROG	CO	NOx	SOx	PM10	PM2.5	CO2	CH4	
Total on-site emissions (lbs/day)	**5.503**	**106.471**	**11.791**	**0.303**	**18.378**	**3.218**	**28,451.499**		**3.048**

NEW PROJECTS EMISSIONS

East side asphalt apron - paving								
Area (s.f.)	203,371							
Reference activity								
Rwy 7L Extension asphalt shoulders - Act# 4101								
Area (s.f.)	45,000							
Scale Factor	4.52							
Duration (days)	5							
Number of crews	7							
Scaled crews	32							
On-Site Equipment Emissions								
Reference activity emissions (lbs/day)	ROG	CO	Nox	SOx	PM10	PM2.5	CO2	CH4
Emissions per crew (B-25C)	0.084	2.667	1.219	0.005	0.009	0.008	413.871	0.057
Total emissions (lbs/day)	**2.657**	**84.359**	**38.567**	**0.150**	**0.284**	**0.253**	**13,093.024**	**1.791**
Asphalt VOC emissions								
CalEEMod emission factor (lbs/acre)	2.62							
Acres	4.7							
VOC emissions (divided by days - lbs/day)	**2.446**							
	ROG	CO	NOx	SOx	PM10	PM2.5	CO2	CH4
Total on-site emissions (lbs/day)	**5.104**	**84.359**	**38.567**	**0.150**	**0.284**	**0.253**	**13,093.024**	**1.791**

FUGITIVE DUST EMISSIONS

Grading Emissions

Dust Emission Factors

Emission Rate (tons/acre/month) TSP	1.2	
Emission Rate (lbs/acre/day) TSP	109.0909091	
Aerodynamic Particle Size Multiplier for TSP to PM10	0.35	AP42 - Chapter 13.2.4
Aerodynamic Particle Size Multiplier for TSP to PM2.5	0.053	
Emission Rate (lbs/acre/day) PM10	38.2	
Emission Rate (lbs/acre/day) PM2.5	5.8	
Dust Control Efficiency	61%	

Emissions by Activity

Description	**Activity Code**	**Crews**	**Area (ft2)**	**Percent Disturbed per day**	**Area Disturbed (acres)**	**Controlled Emissions (lbs/day) PM10**	**PM2.5**
Phase 2 Taxiway Work West of Existing Runway End	3051	14	292,500	0.25	1.7	25.6	3.9
Phase 3 7L extension & NavAids Inside TRSA	4031	14	292,500	0.25	1.7	25.6	3.9
Grading for New Service Road Construction Area - Phase 1 (Taxiway C)	20190	4	83,571	0.25	0.5	7.3	1.1
Grading for Taxiway and Shoulders - Phase 1 Taxiway C	20240	7	146,250	0.25	0.9	12.8	1.9
Grading for Rest of Airfreight Building Area - Phase 1 Taxiway C	20250	7	146,250	0.25	0.9	12.8	1.9
Grading - East End Phase 2 (Taxilane C1)	22160	4	83,571	0.25	0.5	7.3	1.1
Grading - East End - Phase 3 (Taxiway B1)	24160	4	83,571	0.25	0.5	7.3	1.1
Grading - East End - Phase 4 (Taxiway B)	26160	4	83,571	0.25	0.5	7.3	1.1
Grading - East End - Phase 5 (Taxiway B and Taxiway F)	28160	10	208,929	0.25	1.2	18.3	2.8
Grading - East End - Phase 6 (Runway 25R and Taxiway F)	30160	5	104,464	0.25	0.6	9.1	1.4
Grading - East End - Phase 7 (Runway 25R and Taxiway G)	32160	3	62,679	0.25	0.4	5.5	0.8
Grading - East End - Phase 8-A (Runway 25R, west of Sepulveda Bridge)	34160	4	83,571	0.25	0.5	7.3	1.1
Phase 8-B (Runway 25R, between Taxiway G to Taxiway F)	36160	4	83,571	0.25	0.5	7.3	1.1
Phase 8 - C (Runway 25R, east of Taxiway F)	38160	8	167,143	0.25	1.0	14.6	2.2
						168.1	

Activity Codes based on use of scraper in crew B-33B

Area disturbed for all construction activities that involves grading is based on ratio of area of disturbance and equipment for Activity Code 3051 where 750' x 650' disturbed divided by 14 scrapers.

Thoughts on Demo

PAINT EMISSIONS

Paint Emissions

Emission Factor (lb/ft2)	0.002316	Assumes nonflat paints
Floor Area (ft2)	60,000	
Surface Area to be painted (ft2)	90,000	
Painting Duration (days)	20	
Emissions (lbs/day)	10.4	

Calculation from Appendix A of the CalEEMod User's Guide, Feb 2011.

BUILDING WRECKING

Building Wrecking

Width (ft)	550
Length (ft)	130
Floor Area (ft2)	71,500
CalEEMod Emissions	**2.82**

EMFAC 2011 VEHICLE EMISSIONS

EMFAC2011 Emission Rates
Region Type: County
Region: Los Angeles
Calendar Year: 2014
Season: Annual
Vehicle Classification: EMFAC2011 Categories

ON-ROAD TRUCKS

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX(Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
Los Angeles	2014	Annual	T7 tractor construction	DSL	2007	20	393.64	0.67	0.77	2.06	10.91	2195.26	2162.33	0.08	0.07
Los Angeles	2014	Annual	T7 tractor construction	DSL	2008	20	418.40	0.63	0.72	1.94	10.18	2195.26	2162.33	0.07	0.07
Los Angeles	2014	Annual	T7 tractor construction	DSL	2009	20	293.97	0.58	0.66	1.79	8.99	2195.26	2162.33	0.07	0.06
Los Angeles	2014	Annual	T7 tractor construction	DSL	2010	20	251.73	0.35	0.40	1.07	3.46	2121.91	2090.08	0.06	0.06
Los Angeles	2014	Annual	T7 tractor construction	DSL	2011	20	273.40	0.32	0.36	0.97	2.84	2121.91	2090.08	0.05	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2012	20	259.19	0.29	0.32	0.87	2.14	2121.91	2090.08	0.05	0.04
Los Angeles	2014	Annual	T7 tractor construction	DSL	2013	20	329.79	0.24	0.27	0.72	1.68	2117.03	2085.27	0.04	0.03
Los Angeles	2014	Annual	T7 tractor construction	DSL	2014	20	415.67	0.22	0.25	0.67	1.43	2117.03	2085.27	0.03	0.03
Los Angeles	2014	Annual	T7 tractor construction	DSL	2015	20	90.86	0.20	0.23	0.61	1.18	2117.03	2085.27	0.03	0.03
						20 mph		0.42	0.47	1.28	5.37	2,150.17	2,117.91	0.06	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2007	30	1095.62	0.51	0.58	1.87	8.82	1922.57	1893.73	0.07	0.07
Los Angeles	2014	Annual	T7 tractor construction	DSL	2008	30	1164.54	0.48	0.55	1.75	8.23	1922.57	1893.73	0.07	0.06
Los Angeles	2014	Annual	T7 tractor construction	DSL	2009	30	818.22	0.44	0.51	1.62	7.26	1922.57	1893.73	0.06	0.06
Los Angeles	2014	Annual	T7 tractor construction	DSL	2010	30	700.64	0.27	0.30	0.97	2.80	1858.33	1830.46	0.06	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2011	30	760.96	0.24	0.27	0.88	2.29	1858.33	1830.46	0.05	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2012	30	721.41	0.22	0.25	0.79	1.73	1858.33	1830.46	0.04	0.04
Los Angeles	2014	Annual	T7 tractor construction	DSL	2013	30	917.90	0.18	0.20	0.65	1.35	1854.06	1826.24	0.04	0.03
Los Angeles	2014	Annual	T7 tractor construction	DSL	2014	30	1156.96	0.17	0.19	0.60	1.15	1854.06	1826.24	0.03	0.03
Los Angeles	2014	Annual	T7 tractor construction	DSL	2015	30	252.90	0.15	0.17	0.55	0.95	1854.06	1826.24	0.03	0.03
						30 mph		0.32	0.36	1.15	4.34	1,883.08	1,854.83	0.05	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2007	35	885.82	0.45	0.51	1.82	8.02	1818.29	1791.02	0.08	0.07
Los Angeles	2014	Annual	T7 tractor construction	DSL	2008	35	941.54	0.42	0.48	1.71	7.48	1818.29	1791.02	0.07	0.07
Los Angeles	2014	Annual	T7 tractor construction	DSL	2009	35	661.54	0.39	0.44	1.58	6.61	1818.29	1791.02	0.07	0.06
Los Angeles	2014	Annual	T7 tractor construction	DSL	2010	35	566.48	0.23	0.26	0.94	2.54	1757.54	1731.17	0.06	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2011	35	615.24	0.21	0.24	0.85	2.09	1757.54	1731.17	0.05	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2012	35	583.26	0.19	0.22	0.77	1.58	1757.54	1731.17	0.05	0.04
Los Angeles	2014	Annual	T7 tractor construction	DSL	2013	35	742.13	0.16	0.18	0.64	1.23	1753.49	1727.19	0.04	0.03
Los Angeles	2014	Annual	T7 tractor construction	DSL	2014	35	935.41	0.14	0.16	0.59	1.05	1753.49	1727.19	0.03	0.03
Los Angeles	2014	Annual	T7 tractor construction	DSL	2015	35	204.47	0.13	0.15	0.54	0.87	1753.49	1727.19	0.03	0.03
						35 mph		0.28	0.31	1.13	3.95	1,780.94	1,754.23	0.06	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2007	40	809.18	0.39	0.45	1.81	7.40	1735.39	1709.36	0.08	0.08
Los Angeles	2014	Annual	T7 tractor construction	DSL	2008	40	860.08	0.37	0.42	1.70	6.90	1735.39	1709.36	0.08	0.07
Los Angeles	2014	Annual	T7 tractor construction	DSL	2009	40	604.31	0.34	0.39	1.57	6.09	1735.39	1709.36	0.07	0.07
Los Angeles	2014	Annual	T7 tractor construction	DSL	2010	40	517.47	0.20	0.23	0.94	2.35	1677.41	1652.24	0.06	0.06
Los Angeles	2014	Annual	T7 tractor construction	DSL	2011	40	562.01	0.18	0.21	0.85	1.92	1677.41	1652.24	0.06	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2012	40	532.80	0.17	0.19	0.77	1.45	1677.41	1652.24	0.05	0.05
Los Angeles	2014	Annual	T7 tractor construction	DSL	2013	40	677.93	0.14	0.16	0.63	1.14	1673.54	1648.44	0.04	0.04
Los Angeles	2014	Annual	T7 tractor construction	DSL	2014	40	854.48	0.13	0.14	0.58	0.97	1673.54	1648.44	0.03	0.03
Los Angeles	2014	Annual	T7 tractor construction	DSL	2015	40	186.78	0.12	0.13	0.53	0.80	1673.54	1648.44	0.03	0.03
						40 mph		0.24	0.28	1.12	3.64	1,699.74	1,674.24	0.06	0.05

EMFAC 2011 VEHICLE EMISSIONS

EMFAC2011 Emission Rates
Region Type: County
Region: Los Angeles
Calendar Year: 2014
Season: Annual
Vehicle Classification: EMFAC2011 Categories

EMPLOYEE VEHICLES

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX(Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
Los Angeles	2014	Annual	LDA	GAS	Aggregated	35 mph	14,588,306.02	0.04	0.05	1.41	0.12	319.91	285.49	0.00	0.00
Los Angeles	2014	Annual	LDA	GAS	Aggregated	40 mph	11,038,966.54	0.04	0.05	1.34	0.12	297.82	265.54	0.00	0.00

EMFAC2011 Emission Rates
Region Type: County
Region: Los Angeles
Calendar Year: 2014
Season: Annual
Vehicle Classification: EMFAC2011 Categories

0N-SITE LIGHT DUTY TRUCKS

Region	CalYr	Season	Veh_Class	Fuel	MdlYr	Speed (miles/hr)	VMT (miles/day)	ROG_RUNEX (gms/mile)	TOG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX(Pavley I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)
Los Angeles	2014	Annual	LHD2	GAS	Aggregated	20 mph	50,633.73	0.26	0.31	3.67	0.51	1,006.07	990.98	0.00	0.00
Los Angeles	2014	Annual	LHD2	GAS	Aggregated	25 mph	95,079.98	0.19	0.23	2.80	0.53	768.01	756.49	0.00	0.00
Los Angeles	2014	Annual	LHD2	GAS	Aggregated	30 mph	108,995.37	0.14	0.17	2.26	0.56	619.43	610.14	0.00	0.00
Los Angeles	2014	Annual	LHD2	GAS	Aggregated	35 mph	82,012.25	0.11	0.14	1.93	0.59	527.85	519.93	0.00	0.00

EMFAC 2011

2013 Estimated Annual Emission Rates

(EMFAC 2011 Vehicle Categories)
Los Angeles COUNTY
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Options

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VEH	FUEL	MDLYR	SPEED (Miles/hr)	POP (Vehicles)	VMT (Miles/day)	TRIPS (Trips/day)	ROG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX(PAVLEY I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)	SOX_RUNEX (gms/mile)
LDA	GAS	AllMYr	5	0	303,629.99	0	0.252	3.263	0.228	1,099.71	1,012.90	0.013	0.012	0
LDA	DSL	AllMYr	5	0	993.995	0	0.182	1.142	0.9	450.966	397.809	0.138	0.127	0
LDA	GAS	AllMYr	10	0	1,371,293.79	0	0.167	2.732	0.199	816.175	751.75	0.008	0.008	0
LDA	DSL	AllMYr	10	0	4,489.21	0	0.16	0.949	0.822	420.208	372.091	0.122	0.112	0
LDA	GAS	AllMYr	15	0	3,290,623.64	0	0.117	2.351	0.178	627.742	578.193	0.006	0.005	0
LDA	DSL	AllMYr	15	0	10,772.53	0	0.127	0.678	0.703	373.959	333.419	0.096	0.089	0
LDA	GAS	AllMYr	20	0	9,817,787.85	0	0.086	2.069	0.162	501.69	462.091	0.004	0.004	0
LDA	DSL	AllMYr	20	0	32,140.55	0	0.103	0.508	0.622	342.8	307.365	0.078	0.072	0
LDA	GAS	AllMYr	25	0	20,712,146.34	0	0.066	1.853	0.15	416.206	383.353	0.003	0.003	0
LDA	DSL	AllMYr	25	0	67,805.48	0	0.085	0.398	0.568	322.558	290.439	0.065	0.06	0
LDA	GAS	AllMYr	30	0	23,409,489.59	0	0.054	1.683	0.142	357.924	329.673	0.002	0.002	0
LDA	DSL	AllMYr	30	0	76,635.79	0	0.072	0.326	0.536	310.711	280.533	0.055	0.051	0
LDA	GAS	AllMYr	35	0	13,275,147.64	0	0.045	1.547	0.137	319.16	293.972	0.002	0.002	0
LDA	DSL	AllMYr	35	0	43,458.93	0	0.063	0.278	0.522	305.86	276.477	0.048	0.044	0
LDA	GAS	AllMYr	40	0	9,339,032.58	0	0.04100	1.44900	0.13200	296.78500	273.35900	0.00200	0.00200	0
LDA	DSL	AllMYr	40	0	30,573.25	0	0.05600	0.24800	0.52500	307.44900	277.80600	0.04200	0.03900	0
Composite							0.04105	1.44508	0.13328	296.81980	273.37351	0.00213	0.00212	
LDA	GAS	AllMYr	45	0	7,872,497.49	0	0.038	1.379	0.13	286.626	263.996	0.002	0.001	0
LDA	DSL	AllMYr	45	0	25,772.24	0	0.051	0.23	0.544	315.66	284.671	0.039	0.036	0
LDA	GAS	AllMYr	50	0	6,982,995.64	0	0.037	1.327	0.131	285.927	263.354	0.002	0.001	0
LDA	DSL	AllMYr	50	0	22,860.28	0	0.048	0.222	0.584	331.443	297.869	0.036	0.033	0
LDA	GAS	AllMYr	55	0	6,248,264.84	0	0.038	1.302	0.134	295.518	272.192	0.002	0.001	0
LDA	DSL	AllMYr	55	0	20,454.98	0	0.046	0.223	0.648	356.709	318.995	0.035	0.032	0
LDA	GAS	AllMYr	60	0	8,834,362.38	0	0.041	1.308	0.143	313.965	289.203	0.002	0.002	0
LDA	DSL	AllMYr	60	0	28,921.11	0	0.045	0.235	0.745	394.714	350.773	0.034	0.031	0
LDA	GAS	AllMYr	65	0	4,122,208.42	0	0.047	1.374	0.15	349.686	322.111	0.002	0.002	0
LDA	DSL	AllMYr	65	0	13,494.90	0	0.046	0.258	0.884	450.766	397.642	0.034	0.031	0
LDA	GAS	AllMYr	70	0	1,448.51	0	0.051	1.433	0.156	373.279	343.851	0.002	0.002	0
LDA	DSL	AllMYr	70	0	4.742	0	0.048	0.295	1.086	533.463	466.79	0.036	0.033	0
LDT1	GAS	AllMYr	5	0	33,499.03	0	0.662	9.149	0.715	1,264.59	1,188.37	0.031	0.028	0
LDT1	DSL	AllMYr	5	0	45.199	0	0.318	1.887	1.29	426.806	384.741	0.268	0.247	0
LDT1	GAS	AllMYr	10	0	151,292.75	0	0.448	7.517	0.602	938.496	881.923	0.02	0.019	0
LDT1	DSL	AllMYr	10	0	204.135	0	0.28	1.563	1.174	406.721	368.533	0.237	0.218	0
LDT1	GAS	AllMYr	15	0	363,049.42	0	0.318	6.357	0.524	721.886	678.375	0.014	0.013	0
LDT1	DSL	AllMYr	15	0	489.853	0	0.222	1.109	0.998	376.519	344.161	0.188	0.173	0
LDT1	GAS	AllMYr	20	0	1,083,181.50	0	0.236	5.511	0.467	576.918	542.144	0.01	0.009	0
LDT1	DSL	AllMYr	20	0	1,461.51	0	0.18	0.824	0.878	356.171	327.741	0.153	0.14	0
LDT1	GAS	AllMYr	25	0	2,285,139.24	0	0.183	4.878	0.427	478.599	449.75	0.008	0.007	0
LDT1	DSL	AllMYr	25	0	3,083.28	0	0.15	0.641	0.8	342.953	317.074	0.126	0.116	0
LDT1	GAS	AllMYr	30	0	2,582,733.02	0	0.149	4.393	0.4	411.615	386.806	0.006	0.006	0
LDT1	DSL	AllMYr	30	0	3,484.81	0	0.127	0.521	0.753	335.217	310.832	0.107	0.099	0
LDT1	GAS	AllMYr	35	0	1,464,626.64	0	0.126	4.022	0.384	367.101	344.979	0.005	0.005	0
LDT1	DSL	AllMYr	35	0	1,976.18	0	0.11	0.443	0.734	332.049	308.275	0.093	0.086	0
LDT1	GAS	AllMYr	40	0	1,030,361.16	0	0.113	3.762	0.372	341.271	320.7	0.005	0.004	0
LDT1	DSL	AllMYr	40	0	1,390.24	0	0.098	0.393	0.738	333.087	309.113	0.083	0.076	0

EMFAC 2011

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LDT1	GAS	AllMYr	45	0	868,560.54	0	0.104	3.585	0.367	329.479	309.61	0.004	0.004	0
LDT1	DSL	AllMYr	45	0	1,171.93	0	0.089	0.364	0.768	338.448	313.439	0.075	0.069	0
LDT1	GAS	AllMYr	50	0	770,423.21	0	0.102	3.475	0.374	328.714	308.895	0.004	0.004	0
LDT1	DSL	AllMYr	50	0	1,039.51	0	0.083	0.353	0.828	348.755	321.757	0.07	0.064	0
LDT1	GAS	AllMYr	55	0	689,361.44	0	0.103	3.447	0.39	339.838	319.355	0.004	0.004	0
LDT1	DSL	AllMYr	55	0	930.137	0	0.079	0.357	0.924	365.255	335.071	0.066	0.061	0
LDT1	GAS	AllMYr	60	0	974,681.66	0	0.111	3.513	0.425	361.489	339.731	0.004	0.004	0
LDT1	DSL	AllMYr	60	0	1,315.11	0	0.077	0.377	1.069	390.072	355.098	0.064	0.059	0
LDT1	GAS	AllMYr	65	0	454,796.92	0	0.124	3.742	0.461	402.72	378.488	0.005	0.004	0
LDT1	DSL	AllMYr	65	0	613.645	0	0.077	0.417	1.278	426.676	384.636	0.064	0.059	0
LDT1	GAS	AllMYr	70	0	159.811	0	0.133	3.929	0.488	430.052	404.187	0.005	0.005	0
LDT1	DSL	AllMYr	70	0	0.216	0	0.079	0.482	1.583	480.679	428.214	0.065	0.06	0
LDT2	GAS	AllMYr	5	0	101,625.83	0	0.324	4.425	0.482	1,500.76	1,421.37	0.014	0.013	0
LDT2	DSL	AllMYr	5	0	45.496	0	0.243	1.52	1.255	428.53	389.983	0.199	0.183	0
LDT2	GAS	AllMYr	10	0	458,976.01	0	0.214	3.783	0.412	1,113.80	1,054.88	0.009	0.008	0
LDT2	DSL	AllMYr	10	0	205.473	0	0.214	1.26	1.143	406.184	371.193	0.176	0.162	0
LDT2	GAS	AllMYr	15	0	1,101,381.15	0	0.149	3.3	0.362	856.683	811.37	0.006	0.006	0
LDT2	DSL	AllMYr	15	0	493.063	0	0.17	0.896	0.973	372.582	342.937	0.14	0.128	0
LDT2	GAS	AllMYr	20	0	3,286,042.32	0	0.109	2.932	0.324	684.653	648.438	0.004	0.004	0
LDT2	DSL	AllMYr	20	0	1,471.09	0	0.138	0.667	0.857	349.943	323.902	0.113	0.104	0
LDT2	GAS	AllMYr	25	0	6,932,415.70	0	0.083	2.64	0.296	567.985	537.941	0.003	0.003	0
LDT2	DSL	AllMYr	25	0	3,103.48	0	0.114	0.52	0.78	335.237	311.535	0.094	0.086	0
LDT2	GAS	AllMYr	30	0	7,835,224.14	0	0.067	2.402	0.277	488.468	462.631	0.003	0.002	0
LDT2	DSL	AllMYr	30	0	3,507.65	0	0.097	0.424	0.735	326.63	304.298	0.08	0.073	0
LDT2	GAS	AllMYr	35	0	4,443,230.09	0	0.056	2.206	0.264	435.599	412.561	0.002	0.002	0
LDT2	DSL	AllMYr	35	0	1,989.13	0	0.084	0.361	0.716	323.105	301.334	0.069	0.064	0
LDT2	GAS	AllMYr	40	0	3,125,801.22	0	0.05	2.06	0.253	405.013	383.589	0.002	0.002	0
LDT2	DSL	AllMYr	40	0	1,399.35	0	0.075	0.32	0.72	324.26	302.305	0.061	0.056	0
LDT2	GAS	AllMYr	45	0	2,634,947.49	0	0.046	1.948	0.247	391.091	370.399	0.002	0.002	0
LDT2	DSL	AllMYr	45	0	1,179.61	0	0.068	0.297	0.749	330.225	307.321	0.056	0.051	0
LDT2	GAS	AllMYr	50	0	2,337,228.77	0	0.045	1.855	0.248	390.158	369.517	0.002	0.002	0
LDT2	DSL	AllMYr	50	0	1,046.32	0	0.063	0.287	0.807	341.692	316.964	0.052	0.048	0
LDT2	GAS	AllMYr	55	0	2,091,312.12	0	0.046	1.792	0.255	403.296	381.964	0.002	0.002	0
LDT2	DSL	AllMYr	55	0	936.232	0	0.06	0.29	0.9	360.049	332.399	0.049	0.045	0
LDT2	GAS	AllMYr	60	0	2,956,886.59	0	0.049	1.754	0.272	428.696	406.038	0.002	0.002	0
LDT2	DSL	AllMYr	60	0	1,323.73	0	0.059	0.306	1.04	387.661	355.618	0.048	0.044	0
LDT2	GAS	AllMYr	65	0	1,379,714.99	0	0.055	1.786	0.29	477.523	452.29	0.002	0.002	0
LDT2	DSL	AllMYr	65	0	617.666	0	0.059	0.338	1.242	428.385	389.861	0.048	0.044	0
LDT2	GAS	AllMYr	70	0	484.819	0	0.06	1.827	0.303	509.825	482.891	0.002	0.002	0
LDT2	DSL	AllMYr	70	0	0.217	0	0.061	0.39	1.537	488.468	440.383	0.049	0.045	0
LHD1	GAS	AllMYr	5	0	14,109.12	0	0.932	10.929	0.507	2,513.50	2,488.36	0.011	0.01	0
LHD1	DSL	AllMYr	5	0	1,904.14	0	0.53	3.523	6.583	524.804	519.556	0.124	0.114	0
LHD1	GAS	AllMYr	10	0	69,724.18	0	0.752	8.858	0.519	2,036.13	2,015.77	0.009	0.008	0
LHD1	DSL	AllMYr	10	0	9,149.19	0	0.469	2.909	5.968	524.804	519.556	0.109	0.101	0
LHD1	GAS	AllMYr	15	0	161,335.94	0	0.502	6.053	0.546	1,392.43	1,378.51	0.006	0.006	0

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LHD1	DSL	AllMYr	15	0	21,373.52	0	0.372	2.052	5.042	524.804	519.556	0.087	0.08	0
LHD1	GAS	AllMYr	20	0	430,949.84	0	0.349	4.373	0.572	1,006.07	996.008	0.004	0.004	0
LHD1	DSL	AllMYr	20	0	63,964.54	0	0.302	1.515	4.416	524.804	519.556	0.071	0.065	0
LHD1	GAS	AllMYr	25	0	814,468.34	0	0.253	3.338	0.598	768.012	760.332	0.003	0.003	0
LHD1	DSL	AllMYr	25	0	124,708.31	0	0.25	1.17	4.004	524.804	519.556	0.058	0.054	0
LHD1	GAS	AllMYr	30	0	928,056.04	0	0.191	2.69	0.626	619.434	613.239	0.002	0.002	0
LHD1	DSL	AllMYr	30	0	161,225.54	0	0.212	0.946	3.766	524.804	519.556	0.05	0.046	0
LHD1	GAS	AllMYr	35	0	673,488.23	0	0.15	2.29	0.654	527.847	522.568	0.002	0.002	0
LHD1	DSL	AllMYr	35	0	123,591.64	0	0.184	0.801	3.668	524.804	519.556	0.043	0.04	0
LHD1	GAS	AllMYr	40	0	629,075.43	0	0.124	2.065	0.676	475.233	470.481	0.002	0.001	0
LHD1	DSL	AllMYr	40	0	108,202.77	0	0.163	0.709	3.694	524.804	519.556	0.038	0.035	0
LHD1	GAS	AllMYr	45	0	606,522.72	0	0.106	1.968	0.699	452.056	447.535	0.001	0.001	0
LHD1	DSL	AllMYr	45	0	104,035.61	0	0.148	0.657	3.857	524.804	519.556	0.034	0.032	0
LHD1	GAS	AllMYr	50	0	547,046.56	0	0.095	1.975	0.728	454.322	449.779	0.001	0.001	0
LHD1	DSL	AllMYr	50	0	108,989.19	0	0.137	0.638	4.183	524.804	519.556	0.032	0.029	0
LHD1	GAS	AllMYr	55	0	502,473.91	0	0.087	2.092	0.76	482.416	477.591	0.001	0.001	0
LHD1	DSL	AllMYr	55	0	124,172.15	0	0.129	0.647	4.704	524.804	519.556	0.03	0.028	0
LHD1	GAS	AllMYr	60	0	808,634.82	0	0.083	2.329	0.806	541.209	535.797	0.001	0.001	0
LHD1	DSL	AllMYr	60	0	318,422.44	0	0.125	0.687	5.487	524.804	519.556	0.029	0.027	0
LHD1	GAS	AllMYr	65	0	659,858.71	0	0.085	2.765	0.828	641.498	635.083	0.001	0.001	0
LHD1	DSL	AllMYr	65	0	242,043.17	0	0.124	0.764	6.606	524.804	519.556	0.029	0.027	0
LHD1	GAS	AllMYr	70	0	354.92	0	0.087	3.435	0.877	803.362	795.329	0.001	0.001	0
LHD1	DSL	AllMYr	70	0	186.879	0	0.125	0.889	8.258	524.804	519.556	0.029	0.027	0
LHD2	GAS	AllMYr	5	0	1,585.22	0	0.831	10.818	0.496	2,513.50	2,488.36	0.011	0.01	0
LHD2	DSL	AllMYr	5	0	738.455	0	0.505	3.373	6.266	526.381	521.117	0.123	0.113	0
LHD2	GAS	AllMYr	10	0	7,833.82	0	0.671	8.763	0.507	2,036.13	2,015.77	0.009	0.008	0
LHD2	DSL	AllMYr	10	0	3,548.20	0	0.446	2.785	5.681	526.381	521.117	0.109	0.1	0
LHD2	GAS	AllMYr	15	0	18,126.81	0	0.448	5.993	0.534	1,392.43	1,378.51	0.006	0.006	0
LHD2	DSL	AllMYr	15	0	8,288.99	0	0.354	1.964	4.799	526.381	521.117	0.086	0.079	0
LHD2	GAS	AllMYr	20	0	48,419.14	0	0.311	4.33	0.559	1,006.07	996.008	0.004	0.004	0
LHD2	DSL	AllMYr	20	0	24,806.45	0	0.287	1.45	4.203	526.381	521.117	0.07	0.064	0
Composite							0.30287	0.49121	1.42384	178.32080	176.53753	0.02371	0.02168	0.00000
LHD2	GAS	AllMYr	25	0	91,509.15	0	0.226	3.306	0.585	768.012	760.332	0.003	0.003	0
LHD2	DSL	AllMYr	25	0	48,363.84	0	0.238	1.12	3.811	526.381	521.117	0.058	0.053	0
LHD2	GAS	AllMYr	30	0	104,271.23	0	0.17	2.667	0.612	619.434	613.239	0.002	0.002	0
LHD2	DSL	AllMYr	30	0	62,525.80	0	0.202	0.906	3.584	526.381	521.117	0.049	0.045	0
LHD2	GAS	AllMYr	35	0	75,669.41	0	0.134	2.272	0.639	527.847	522.568	0.002	0.002	0
LHD2	DSL	AllMYr	35	0	47,930.77	0	0.175	0.767	3.491	526.381	521.117	0.043	0.039	0
LHD2	GAS	AllMYr	40	0	70,679.43	0	0.11	2.046	0.661	475.233	470.481	0.002	0.001	0
LHD2	DSL	AllMYr	40	0	41,962.73	0	0.155	0.679	3.516	526.381	521.117	0.038	0.035	0
LHD2	GAS	AllMYr	45	0	68,145.53	0	0.095	1.946	0.684	452.056	447.535	0.001	0.001	0
LHD2	DSL	AllMYr	45	0	40,346.64	0	0.14	0.629	3.671	526.381	521.117	0.034	0.031	0
LHD2	GAS	AllMYr	50	0	61,463.12	0	0.084	1.956	0.712	454.322	449.779	0.001	0.001	0
LHD2	DSL	AllMYr	50	0	42,267.72	0	0.13	0.61	3.982	526.381	521.117	0.032	0.029	0
LHD2	GAS	AllMYr	55	0	56,455.19	0	0.078	2.078	0.743	482.415	477.591	0.001	0.001	0

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LHD2	DSL	AllMYr	55	0	48,155.91	0	0.123	0.62	4.477	526.381	521.117	0.03	0.028	0
LHD2	GAS	AllMYr	60	0	90,853.73	0	0.074	2.332	0.788	541.209	535.797	0.001	0.001	0
LHD2	DSL	AllMYr	60	0	123,489.23	0	0.119	0.658	5.223	526.381	521.117	0.029	0.027	0
LHD2	GAS	AllMYr	65	0	74,138.07	0	0.076	2.763	0.81	641.498	635.083	0.001	0.001	0
LHD2	DSL	AllMYr	65	0	93,868.13	0	0.118	0.732	6.287	526.381	521.117	0.029	0.026	0
LHD2	GAS	AllMYr	70	0	39.877	0	0.078	3.462	0.857	803.362	795.329	0.001	0.001	0
LHD2	DSL	AllMYr	70	0	72.474	0	0.119	0.851	7.861	526.381	521.117	0.029	0.027	0
MCY	GAS	AllMYr	5	0	2,102.29	0	4.843	29.009	1.134	252.158	249.637	0.002	0.001	0
MCY	GAS	AllMYr	10	0	9,494.64	0	4.215	26.317	1.121	230.422	228.118	0.001	0.001	0
MCY	GAS	AllMYr	15	0	22,783.79	0	3.329	22.579	1.113	196.139	194.178	0.001	0.001	0
MCY	GAS	AllMYr	20	0	67,976.92	0	2.757	20.181	1.114	171.227	169.515	0.001	0.001	0
MCY	GAS	AllMYr	25	0	143,407.85	0	2.397	18.808	1.123	153.286	151.753	0.001	0.001	0
MCY	GAS	AllMYr	30	0	162,083.86	0	2.193	18.352	1.142	140.752	139.345	0.001	0.001	0
MCY	GAS	AllMYr	35	0	91,915.18	0	2.108	18.746	1.171	132.647	131.32	0.001	0.001	0
MCY	GAS	AllMYr	40	0	64,662.09	0	2.105	19.788	1.193	128.421	127.137	0.001	0.001	0
MCY	GAS	AllMYr	45	0	54,508.01	0	2.203	21.895	1.22	127.892	126.613	0.001	0.001	0
MCY	GAS	AllMYr	50	0	48,349.24	0	2.442	25.832	1.265	131.233	129.921	0.001	0.001	0
MCY	GAS	AllMYr	55	0	43,262.07	0	2.849	32.342	1.321	139.023	137.633	0.001	0.001	0
MCY	GAS	AllMYr	60	0	61,167.83	0	3.556	44.038	1.41	152.385	150.862	0.001	0.001	0
MCY	GAS	AllMYr	65	0	28,541.57	0	4.556	61.63	1.483	173.235	171.503	0.001	0.001	0
MCY	GAS	AllMYr	70	0	10.029	0	6.135	91.57	1.57	204.733	202.685	0.002	0.002	0
MDV	GAS	AllMYr	5	0	72,991.38	0	0.467	5.856	0.682	1,901.65	1,830.21	0.015	0.013	0
MDV	DSL	AllMYr	5	0	81.029	0	0.143	0.94	0.724	465.41	438.296	0.118	0.109	0
MDV	GAS	AllMYr	10	0	329,653.35	0	0.307	4.966	0.582	1,411.31	1,358.29	0.009	0.009	0
MDV	DSL	AllMYr	10	0	365.955	0	0.126	0.784	0.664	430.27	405.692	0.104	0.096	0
MDV	GAS	AllMYr	15	0	791,052.18	0	0.212	4.309	0.51	1,085.53	1,044.75	0.006	0.006	0
MDV	DSL	AllMYr	15	0	878.163	0	0.1	0.565	0.572	377.431	356.667	0.083	0.076	0
MDV	GAS	AllMYr	20	0	2,360,155.66	0	0.153	3.815	0.456	867.542	834.954	0.005	0.004	0
MDV	DSL	AllMYr	20	0	2,620.06	0	0.081	0.426	0.509	341.833	323.637	0.067	0.062	0
MDV	GAS	AllMYr	25	0	4,979,114.03	0	0.116	3.429	0.416	719.706	692.671	0.003	0.003	0
MDV	DSL	AllMYr	25	0	5,527.42	0	0.067	0.336	0.466	318.707	302.181	0.056	0.051	0
MDV	GAS	AllMYr	30	0	5,627,543.87	0	0.093	3.118	0.389	618.953	595.704	0.003	0.003	0
MDV	DSL	AllMYr	30	0	6,247.25	0	0.057	0.277	0.441	305.172	289.623	0.047	0.043	0
MDV	GAS	AllMYr	35	0	3,191,290.23	0	0.078	2.864	0.371	551.973	531.242	0.002	0.002	0
MDV	DSL	AllMYr	35	0	3,542.72	0	0.05	0.237	0.43	299.63	284.48	0.041	0.038	0
MDV	GAS	AllMYr	40	0	2,245,064.73	0	0.069	2.679	0.356	513.199	493.921	0.002	0.002	0
MDV	DSL	AllMYr	40	0	2,492.29	0	0.044	0.212	0.431	301.446	286.165	0.037	0.034	0
MDV	GAS	AllMYr	45	0	1,892,515.84	0	0.063	2.539	0.348	495.54	476.921	0.002	0.002	0
MDV	DSL	AllMYr	45	0	2,100.92	0	0.041	0.197	0.446	310.826	294.868	0.033	0.031	0
MDV	GAS	AllMYr	50	0	1,678,683.15	0	0.061	2.428	0.35	494.364	475.791	0.002	0.002	0
MDV	DSL	AllMYr	50	0	1,863.54	0	0.038	0.19	0.476	328.858	311.599	0.031	0.029	0
MDV	GAS	AllMYr	55	0	1,502,056.95	0	0.062	2.36	0.361	511.028	491.832	0.002	0.002	0
MDV	DSL	AllMYr	55	0	1,667.47	0	0.037	0.19	0.525	357.724	338.382	0.03	0.028	0
MDV	GAS	AllMYr	60	0	2,123,744.07	0	0.065	2.332	0.386	543.288	522.898	0.002	0.002	0
MDV	DSL	AllMYr	60	0	2,357.61	0	0.037	0.199	0.599	401.144	378.668	0.03	0.027	0

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MDV	GAS	AllMYr	65	0	990,961.76	0	0.073	2.404	0.413	605.186	582.477	0.002	0.002	0
MDV	DSL	AllMYr	65	0	1,100.09	0	0.038	0.217	0.704	465.181	438.084	0.03	0.028	0
MDV	GAS	AllMYr	70	0	348.215	0	0.079	2.478	0.433	646.15	621.911	0.002	0.002	0
MDV	DSL	AllMYr	70	0	0.387	0	0.04	0.247	0.857	559.66	525.745	0.032	0.029	0
MH	GAS	AllMYr	5	0	594.181	0	1.814	43.127	0.868	2,513.50	2,488.36	0.021	0.018	0
MH	DSL	AllMYr	5	0	58.741	0	1.667	2.501	19.16	2,380.64	2,356.83	0.606	0.557	0
MH	GAS	AllMYr	10	0	2,802.91	0	1.463	34.92	0.889	2,036.13	2,015.77	0.017	0.015	0
MH	DSL	AllMYr	10	0	264.382	0	1.27	2.091	16.07	2,161.63	2,140.01	0.511	0.47	0
MH	GAS	AllMYr	15	0	6,669.59	0	0.979	23.899	0.936	1,392.43	1,378.51	0.011	0.01	0
MH	DSL	AllMYr	15	0	637.129	0	0.664	1.437	11.462	1,774.88	1,757.13	0.357	0.328	0
MH	GAS	AllMYr	20	0	18,537.06	0	0.68	17.264	0.979	1,006.07	996.008	0.008	0.007	0
MH	DSL	AllMYr	20	0	1,950.96	0	0.311	1.004	8.902	1,456.49	1,441.93	0.249	0.229	0
MH	GAS	AllMYr	25	0	36,778.73	0	0.493	13.18	1.023	768.012	760.332	0.006	0.005	0
MH	DSL	AllMYr	25	0	4,068.65	0	0.225	0.829	8.13	1,306.39	1,293.33	0.206	0.189	0
MH	GAS	AllMYr	30	0	43,222.14	0	0.372	10.636	1.068	619.434	613.239	0.004	0.004	0
MH	DSL	AllMYr	30	0	5,119.98	0	0.187	0.723	7.685	1,226.24	1,213.98	0.182	0.167	0
MH	GAS	AllMYr	35	0	32,276.20	0	0.294	9.07	1.115	527.846	522.568	0.003	0.003	0
MH	DSL	AllMYr	35	0	3,929.87	0	0.156	0.637	7.332	1,159.73	1,148.13	0.167	0.154	0
MH	GAS	AllMYr	40	0	31,596.01	0	0.241	8.154	1.153	475.233	470.481	0.003	0.002	0
MH	DSL	AllMYr	40	0	3,930.14	0	0.134	0.57	7.061	1,106.85	1,095.78	0.162	0.149	0
MH	GAS	AllMYr	45	0	32,363.91	0	0.206	7.748	1.192	452.056	447.535	0.002	0.002	0
MH	DSL	AllMYr	45	0	4,230.28	0	0.119	0.523	6.884	1,067.61	1,056.93	0.165	0.152	0
MH	GAS	AllMYr	50	0	28,380.35	0	0.184	7.792	1.238	454.322	449.779	0.002	0.002	0
MH	DSL	AllMYr	50	0	3,850.65	0	0.111	0.496	6.807	1,042.00	1,031.58	0.177	0.163	0
MH	GAS	AllMYr	55	0	24,619.16	0	0.172	8.289	1.29	482.416	477.591	0.002	0.002	0
MH	DSL	AllMYr	55	0	3,530.29	0	0.112	0.489	6.828	1,030.03	1,019.73	0.198	0.183	0
MH	GAS	AllMYr	60	0	30,885.41	0	0.167	9.362	1.362	541.209	535.797	0.002	0.002	0
MH	DSL	AllMYr	60	0	5,408.54	0	0.12	0.501	6.956	1,031.69	1,021.37	0.229	0.21	0
MH	GAS	AllMYr	65	0	26,246.40	0	0.169	11.079	1.4	641.498	635.083	0.002	0.002	0
MH	DSL	AllMYr	65	0	4,416.34	0	0.137	0.534	7.149	1,046.99	1,036.52	0.268	0.246	0
MH	GAS	AllMYr	70	0	10.8	0	0.178	14.017	1.489	803.362	795.329	0.002	0.002	0
MH	DSL	AllMYr	70	0	2.419	0	0.161	0.586	7.464	1,075.92	1,065.16	0.316	0.29	0
Motor Coach	DSL	AllMYr	5	0	192.912	0	4.312	7.989	33.425	4,031.79	3,991.48	0.585	0.538	0
Motor Coach	DSL	AllMYr	10	0	828.706	0	2.537	5.319	23.851	3,330.58	3,297.27	0.451	0.415	0
Motor Coach	DSL	AllMYr	15	0	2,142.81	0	1.305	3.404	17.137	2,734.69	2,707.35	0.345	0.317	0
Motor Coach	DSL	AllMYr	20	0	6,567.15	0	0.547	2.099	12.913	2,157.40	2,135.83	0.26	0.239	0
Motor Coach	DSL	AllMYr	25	0	13,775.33	0	0.466	1.881	11.993	2,012.90	1,992.77	0.235	0.216	0
Motor Coach	DSL	AllMYr	30	0	18,257.39	0	0.396	1.703	11.224	1,889.41	1,870.52	0.219	0.202	0
Motor Coach	DSL	AllMYr	35	0	14,720.13	0	0.339	1.566	10.604	1,786.93	1,769.06	0.213	0.196	0
Motor Coach	DSL	AllMYr	40	0	13,343.41	0	0.294	1.468	10.133	1,705.46	1,688.41	0.217	0.2	0
Motor Coach	DSL	AllMYr	45	0	13,289.67	0	0.26	1.411	9.813	1,645.00	1,628.55	0.23	0.212	0
Motor Coach	DSL	AllMYr	50	0	12,891.40	0	0.239	1.394	9.641	1,605.54	1,589.49	0.253	0.233	0
Motor Coach	DSL	AllMYr	55	0	13,436.30	0	0.23	1.417	9.62	1,587.10	1,571.22	0.286	0.263	0
Motor Coach	DSL	AllMYr	60	0	28,034.22	0	0.233	1.48	9.748	1,589.66	1,573.76	0.328	0.302	0
Motor Coach	DSL	AllMYr	65	0	21,653.39	0	0.247	1.583	10.026	1,613.23	1,597.09	0.38	0.349	0

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Motor Coach	DSL	AllMYr	70	0	15.136	0	0.274	1.727	10.454	1,657.81	1,641.23	0.441	0.406	0
OBUS	GAS	AllMYr	5	0	394.984	0	0.857	12.269	0.882	2,513.50	2,488.36	0.005	0.005	0
OBUS	GAS	AllMYr	10	0	1,863.24	0	0.693	9.942	0.903	2,036.13	2,015.77	0.004	0.004	0
OBUS	GAS	AllMYr	15	0	4,433.63	0	0.463	6.794	0.95	1,392.43	1,378.51	0.003	0.002	0
OBUS	GAS	AllMYr	20	0	12,322.58	0	0.321	4.911	0.994	1,006.07	996.008	0.002	0.002	0
OBUS	GAS	AllMYr	25	0	24,448.79	0	0.232	3.75	1.039	768.012	760.332	0.001	0.001	0
OBUS	GAS	AllMYr	30	0	28,732.06	0	0.175	3.023	1.085	619.434	613.239	0.001	0.001	0
OBUS	GAS	AllMYr	35	0	21,455.72	0	0.138	2.575	1.132	527.846	522.568	0.001	0.001	0
OBUS	GAS	AllMYr	40	0	21,003.56	0	0.113	2.322	1.172	475.233	470.481	0.001	0.001	0
OBUS	GAS	AllMYr	45	0	21,514.02	0	0.097	2.211	1.212	452.056	447.535	0.001	0.001	0
OBUS	GAS	AllMYr	50	0	18,865.93	0	0.086	2.221	1.259	454.322	449.779	0.001	< 0.001	0
OBUS	GAS	AllMYr	55	0	16,365.67	0	0.08	2.355	1.31	482.415	477.591	< 0.001	< 0.001	0
OBUS	GAS	AllMYr	60	0	20,531.18	0	0.076	2.628	1.38	541.209	535.797	< 0.001	< 0.001	0
OBUS	GAS	AllMYr	65	0	17,447.38	0	0.077	3.119	1.419	641.498	635.083	< 0.001	< 0.001	0
OBUS	GAS	AllMYr	70	0	7.18	0	0.078	3.874	1.504	803.362	795.329	0.001	< 0.001	0
PTO	DSL	AllMYr	20	0	113,521.07	0	0.726	3.408	13.153	2,149.87	2,128.37	0.411	0.378	0
SBUS	GAS	AllMYr	5	0	267.319	0	5.518	78.485	1.855	2,513.50	2,488.36	0.032	0.028	0
SBUS	DSL	AllMYr	5	0	912.893	0	3.061	3.801	29.037	2,621.95	2,595.73	0.912	0.839	0
SBUS	GAS	AllMYr	10	0	936.939	0	4.448	63.527	1.894	2,036.13	2,015.77	0.026	0.023	0
SBUS	DSL	AllMYr	10	0	3,199.64	0	1.872	2.876	20.087	2,165.93	2,144.27	0.642	0.59	0
SBUS	GAS	AllMYr	15	0	1,873.88	0	2.976	43.444	1.988	1,392.43	1,378.51	0.017	0.015	0
SBUS	DSL	AllMYr	15	0	6,399.29	0	1.012	2.147	14.054	1,778.42	1,760.64	0.435	0.4	0
SBUS	GAS	AllMYr	20	0	2,543.49	0	2.075	31.387	2.08	1,006.07	996.008	0.012	0.011	0
SBUS	DSL	AllMYr	20	0	8,685.99	0	0.414	1.56	10.686	1,403.00	1,388.97	0.277	0.255	0
SBUS	GAS	AllMYr	25	0	4,015.06	0	1.508	23.963	2.175	768.012	760.332	0.009	0.008	0
SBUS	DSL	AllMYr	25	0	13,711.42	0	0.343	1.33	10.208	1,309.03	1,295.94	0.234	0.216	0
SBUS	GAS	AllMYr	30	0	4,817.02	0	1.143	19.33	2.271	619.434	613.239	0.007	0.006	0
SBUS	DSL	AllMYr	30	0	16,450.10	0	0.285	1.132	9.822	1,228.72	1,216.43	0.201	0.185	0
SBUS	GAS	AllMYr	35	0	4,944.06	0	0.901	16.485	2.373	527.847	522.568	0.005	0.005	0
SBUS	DSL	AllMYr	35	0	16,883.96	0	0.239	0.966	9.529	1,162.07	1,150.45	0.176	0.162	0
SBUS	GAS	AllMYr	40	0	3,337.51	0	0.742	14.85	2.474	475.233	470.481	0.004	0.004	0
SBUS	DSL	AllMYr	40	0	11,397.57	0	0.206	0.833	9.33	1,109.09	1,098.00	0.16	0.147	0
SBUS	GAS	AllMYr	45	0	1,601.26	0	0.636	14.129	2.571	452.056	447.535	0.004	0.003	0
SBUS	DSL	AllMYr	45	0	5,468.28	0	0.185	0.731	9.223	1,069.77	1,059.07	0.153	0.141	0
SBUS	GAS	AllMYr	50	0	801.957	0	0.57	14.186	2.654	454.322	449.779	0.003	0.003	0
SBUS	DSL	AllMYr	50	0	2,738.68	0	0.177	0.662	9.21	1,044.11	1,033.67	0.155	0.142	0
SBUS	GAS	AllMYr	55	0	1,193.66	0	0.528	15.131	2.808	482.415	477.591	0.003	0.003	0
SBUS	DSL	AllMYr	55	0	4,076.35	0	0.181	0.625	9.29	1,032.12	1,021.80	0.165	0.152	0
SBUS	GAS	AllMYr	60	0	664.329	0	0.514	16.958	2.889	541.209	535.797	0.003	0.003	0
SBUS	DSL	AllMYr	60	0	2,268.68	0	0.198	0.62	9.463	1,033.78	1,023.44	0.185	0.17	0
T6 Ag	DSL	AllMYr	5	0	5.692	0	5.563	6.973	24.905	2,628.33	2,602.04	1.506	1.386	0
T6 Ag	DSL	AllMYr	10	0	25.62	0	3.413	5.241	17.592	2,171.20	2,149.49	1.081	0.994	0
T6 Ag	DSL	AllMYr	15	0	61.741	0	1.854	3.89	12.577	1,782.75	1,764.92	0.753	0.693	0
T6 Ag	DSL	AllMYr	20	0	189.057	0	0.762	2.825	9.628	1,406.41	1,392.35	0.5	0.46	0
T6 Ag	DSL	AllMYr	25	0	394.27	0	0.637	2.421	9.078	1,312.21	1,299.09	0.431	0.396	0

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T6 Ag	DSL	AllMYr	30	0	496.149	0	0.532	2.073	8.627	1,231.71	1,219.39	0.377	0.346	0
T6 Ag	DSL	AllMYr	35	0	380.822	0	0.45	1.782	8.274	1,164.90	1,153.25	0.337	0.31	0
T6 Ag	DSL	AllMYr	40	0	380.848	0	0.389	1.548	8.019	1,111.79	1,100.67	0.313	0.288	0
T6 Ag	DSL	AllMYr	45	0	409.933	0	0.35	1.371	7.862	1,072.37	1,061.65	0.304	0.28	0
T6 Ag	DSL	AllMYr	50	0	373.145	0	0.333	1.251	7.803	1,046.65	1,036.19	0.31	0.285	0
T6 Ag	DSL	AllMYr	55	0	342.101	0	0.337	1.187	7.842	1,034.63	1,024.28	0.331	0.305	0
T6 Ag	DSL	AllMYr	60	0	524.112	0	0.363	1.181	7.98	1,036.30	1,025.93	0.368	0.338	0
T6 Ag	DSL	AllMYr	65	0	427.963	0	0.411	1.231	8.216	1,051.66	1,041.15	0.419	0.386	0
T6 Ag	DSL	AllMYr	70	0	0.234	0	0.48	1.338	8.55	1,080.72	1,069.92	0.486	0.447	0
T6 CAIRP heavy	DSL	AllMYr	5	0	2.666	0	2.382	3.601	16.935	2,603.97	2,577.93	0.453	0.417	0
T6 CAIRP heavy	DSL	AllMYr	10	0	12	0	1.401	2.442	11.95	2,151.08	2,129.57	0.326	0.3	0
T6 CAIRP heavy	DSL	AllMYr	15	0	28.919	0	0.718	1.595	8.494	1,766.22	1,748.56	0.228	0.209	0
T6 CAIRP heavy	DSL	AllMYr	20	0	88.552	0	0.296	0.996	6.388	1,393.37	1,379.44	0.152	0.14	0
T6 CAIRP heavy	DSL	AllMYr	25	0	184.671	0	0.248	0.878	5.979	1,300.05	1,287.05	0.131	0.121	0
T6 CAIRP heavy	DSL	AllMYr	30	0	232.39	0	0.207	0.779	5.638	1,220.29	1,208.09	0.117	0.108	0
T6 CAIRP heavy	DSL	AllMYr	35	0	178.372	0	0.174	0.702	5.366	1,154.11	1,142.56	0.109	0.1	0
T6 CAIRP heavy	DSL	AllMYr	40	0	178.385	0	0.149	0.645	5.163	1,101.49	1,090.47	0.107	0.098	0
T6 CAIRP heavy	DSL	AllMYr	45	0	192.008	0	0.132	0.608	5.028	1,062.43	1,051.81	0.111	0.102	0
T6 CAIRP heavy	DSL	AllMYr	50	0	174.777	0	0.124	0.592	4.962	1,036.95	1,026.58	0.121	0.111	0
T6 CAIRP heavy	DSL	AllMYr	55	0	160.236	0	0.123	0.597	4.965	1,025.04	1,014.79	0.137	0.126	0
T6 CAIRP heavy	DSL	AllMYr	60	0	245.488	0	0.13	0.622	5.037	1,026.69	1,016.43	0.16	0.147	0
T6 CAIRP heavy	DSL	AllMYr	65	0	200.453	0	0.145	0.668	5.177	1,041.92	1,031.50	0.189	0.173	0
T6 CAIRP heavy	DSL	AllMYr	70	0	0.11	0	0.168	0.734	5.386	1,070.71	1,060.00	0.223	0.206	0
T6 CAIRP small	DSL	AllMYr	5	0	8.792	0	2.3	3.679	12.579	2,596.08	2,570.12	0.343	0.316	0
T6 CAIRP small	DSL	AllMYr	10	0	39.574	0	1.344	2.419	9.146	2,144.56	2,123.12	0.256	0.235	0
T6 CAIRP small	DSL	AllMYr	15	0	95.368	0	0.684	1.516	6.683	1,760.87	1,743.26	0.188	0.173	0
T6 CAIRP small	DSL	AllMYr	20	0	292.026	0	0.286	0.902	5.037	1,389.15	1,375.26	0.134	0.124	0
T6 CAIRP small	DSL	AllMYr	25	0	609.008	0	0.241	0.81	4.615	1,296.11	1,283.15	0.119	0.11	0
T6 CAIRP small	DSL	AllMYr	30	0	766.376	0	0.204	0.736	4.258	1,216.60	1,204.43	0.11	0.101	0
T6 CAIRP small	DSL	AllMYr	35	0	588.235	0	0.173	0.68	3.967	1,150.61	1,139.10	0.106	0.097	0
T6 CAIRP small	DSL	AllMYr	40	0	588.276	0	0.15	0.641	3.742	1,098.15	1,087.17	0.107	0.099	0
T6 CAIRP small	DSL	AllMYr	45	0	633.202	0	0.132	0.621	3.582	1,059.22	1,048.62	0.114	0.105	0
T6 CAIRP small	DSL	AllMYr	50	0	576.377	0	0.122	0.618	3.488	1,033.81	1,023.47	0.127	0.117	0
T6 CAIRP small	DSL	AllMYr	55	0	528.425	0	0.118	0.633	3.46	1,021.93	1,011.71	0.145	0.134	0
T6 CAIRP small	DSL	AllMYr	60	0	809.568	0	0.121	0.666	3.497	1,023.58	1,013.35	0.169	0.155	0
T6 CAIRP small	DSL	AllMYr	65	0	661.053	0	0.13	0.717	3.599	1,038.76	1,028.37	0.198	0.182	0
T6 CAIRP small	DSL	AllMYr	70	0	0.362	0	0.147	0.786	3.768	1,067.46	1,056.79	0.233	0.214	0
T6 instate construction heavy	DSL	AllMYr	5	0	143.169	0	4.121	5.571	24.275	2,609.63	2,583.53	1.082	0.996	0
T6 instate construction heavy	DSL	AllMYr	10	0	644.382	0	2.452	4.029	16.78	2,155.76	2,134.20	0.753	0.692	0
T6 instate construction heavy	DSL	AllMYr	15	0	1,552.88	0	1.274	2.845	11.698	1,770.06	1,752.36	0.501	0.461	0
T6 instate construction heavy	DSL	AllMYr	20	0	4,755.09	0	0.515	1.926	8.806	1,396.40	1,382.44	0.31	0.285	0
T6 instate construction heavy	DSL	AllMYr	25	0	9,916.54	0	0.421	1.645	8.379	1,302.88	1,289.85	0.26	0.239	0

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T6 instate construction heavy	DSL	AllMYr	30	0	12,478.97	0	0.343	1.406	8.031	1,222.95	1,210.72	0.221	0.203	0
T6 instate construction heavy	DSL	AllMYr	35	0	9,578.29	0	0.283	1.21	7.763	1,156.61	1,145.05	0.195	0.179	0
T6 instate construction heavy	DSL	AllMYr	40	0	9,578.96	0	0.24	1.056	7.574	1,103.88	1,092.84	0.18	0.166	0
T6 instate construction heavy	DSL	AllMYr	45	0	10,310.49	0	0.214	0.944	7.464	1,064.74	1,054.10	0.178	0.164	0
T6 instate construction heavy	DSL	AllMYr	50	0	9,385.21	0	0.206	0.874	7.433	1,039.21	1,028.81	0.189	0.174	0
T6 instate construction heavy	DSL	AllMYr	55	0	8,604.40	0	0.214	0.847	7.481	1,027.27	1,016.99	0.211	0.194	0
T6 instate construction heavy	DSL	AllMYr	60	0	13,182.27	0	0.24	0.861	7.609	1,028.92	1,018.64	0.246	0.226	0
T6 instate construction heavy	DSL	AllMYr	65	0	10,763.98	0	0.283	0.918	7.816	1,044.18	1,033.74	0.293	0.269	0
T6 instate construction heavy	DSL	AllMYr	70	0	5.895	0	0.343	1.018	8.102	1,073.04	1,062.30	0.352	0.324	0
T6 instate construction small	DSL	AllMYr	5	0	382.11	0	3.276	4.867	17.267	2,599.62	2,573.62	0.67	0.616	0
T6 instate construction small	DSL	AllMYr	10	0	1,719.82	0	1.926	3.332	12.299	2,147.49	2,126.01	0.48	0.441	0
T6 instate construction small	DSL	AllMYr	15	0	4,144.55	0	0.986	2.202	8.821	1,763.28	1,745.64	0.333	0.307	0
T6 instate construction small	DSL	AllMYr	20	0	12,691.06	0	0.404	1.39	6.643	1,391.05	1,377.14	0.221	0.203	0
T6 instate construction small	DSL	AllMYr	25	0	26,466.69	0	0.336	1.215	6.176	1,297.88	1,284.90	0.19	0.175	0
T6 instate construction small	DSL	AllMYr	30	0	33,305.67	0	0.278	1.07	5.785	1,218.26	1,206.07	0.169	0.155	0
T6 instate construction small	DSL	AllMYr	35	0	25,563.92	0	0.233	0.955	5.471	1,152.18	1,140.66	0.156	0.144	0
T6 instate construction small	DSL	AllMYr	40	0	25,565.69	0	0.199	0.869	5.233	1,099.65	1,088.65	0.153	0.141	0
T6 instate construction small	DSL	AllMYr	45	0	27,518.13	0	0.176	0.812	5.071	1,060.66	1,050.05	0.159	0.146	0
T6 instate construction small	DSL	AllMYr	50	0	25,048.59	0	0.166	0.785	4.986	1,035.22	1,024.87	0.173	0.16	0
T6 instate construction small	DSL	AllMYr	55	0	22,964.65	0	0.166	0.787	4.976	1,023.33	1,013.09	0.197	0.182	0
T6 instate construction small	DSL	AllMYr	60	0	35,182.74	0	0.179	0.818	5.043	1,024.98	1,014.73	0.23	0.212	0
T6 instate construction small	DSL	AllMYr	65	0	28,728.46	0	0.203	0.879	5.186	1,040.18	1,029.77	0.273	0.251	0
T6 instate construction small	DSL	AllMYr	70	0	15.733	0	0.239	0.969	5.406	1,068.92	1,058.23	0.324	0.298	0
T6 instate heavy	DSL	AllMYr	5	0	809.221	0	3.974	5.391	23.221	2,607.32	2,581.25	1.034	0.951	0
T6 instate heavy	DSL	AllMYr	10	0	3,642.18	0	2.364	3.891	16.06	2,153.85	2,132.31	0.719	0.662	0
T6 instate heavy	DSL	AllMYr	15	0	8,777.21	0	1.228	2.742	11.202	1,768.50	1,750.81	0.479	0.441	0
T6 instate heavy	DSL	AllMYr	20	0	26,876.76	0	0.497	1.852	8.432	1,395.17	1,381.22	0.297	0.273	0
T6 instate heavy	DSL	AllMYr	25	0	56,050.39	0	0.406	1.583	8.02	1,301.73	1,288.71	0.249	0.229	0
T6 instate heavy	DSL	AllMYr	30	0	70,533.79	0	0.332	1.355	7.685	1,221.87	1,209.65	0.212	0.195	0
T6 instate heavy	DSL	AllMYr	35	0	54,138.54	0	0.274	1.167	7.425	1,155.59	1,144.04	0.187	0.172	0
T6 instate heavy	DSL	AllMYr	40	0	54,142.28	0	0.232	1.02	7.242	1,102.91	1,091.88	0.173	0.159	0

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T6 instate heavy	DSL	AllMYr	45	0	58,277.09	0	0.207	0.914	7.135	1,063.80	1,053.17	0.171	0.158	0
T6 instate heavy	DSL	AllMYr	50	0	53,047.18	0	0.199	0.847	7.104	1,038.29	1,027.91	0.181	0.167	0
T6 instate heavy	DSL	AllMYr	55	0	48,633.88	0	0.206	0.822	7.15	1,026.36	1,016.10	0.203	0.187	0
T6 instate heavy	DSL	AllMYr	60	0	74,509.00	0	0.231	0.837	7.272	1,028.02	1,017.74	0.236	0.217	0
T6 instate heavy	DSL	AllMYr	65	0	60,840.30	0	0.272	0.893	7.469	1,043.26	1,032.83	0.281	0.259	0
T6 instate heavy	DSL	AllMYr	70	0	33.319	0	0.329	0.989	7.744	1,072.09	1,061.37	0.338	0.311	0
T6 instate small	DSL	AllMYr	5	0	2,212.29	0	3.108	4.636	16.225	2,597.08	2,571.11	0.624	0.574	0
T6 instate small	DSL	AllMYr	10	0	9,957.19	0	1.827	3.167	11.565	2,145.39	2,123.94	0.447	0.412	0
T6 instate small	DSL	AllMYr	15	0	23,995.59	0	0.935	2.087	8.299	1,761.55	1,743.94	0.311	0.287	0
T6 instate small	DSL	AllMYr	20	0	73,477.09	0	0.384	1.313	6.25	1,389.69	1,375.79	0.207	0.19	0
T6 instate small	DSL	AllMYr	25	0	153,233.47	0	0.319	1.15	5.808	1,296.61	1,283.65	0.178	0.164	0
T6 instate small	DSL	AllMYr	30	0	192,828.94	0	0.265	1.015	5.438	1,217.07	1,204.90	0.158	0.146	0
T6 instate small	DSL	AllMYr	35	0	148,006.76	0	0.222	0.907	5.141	1,151.05	1,139.54	0.147	0.135	0
T6 instate small	DSL	AllMYr	40	0	148,016.98	0	0.189	0.827	4.915	1,098.57	1,087.59	0.144	0.132	0
T6 instate small	DSL	AllMYr	45	0	159,320.95	0	0.168	0.774	4.761	1,059.62	1,049.03	0.149	0.137	0
T6 instate small	DSL	AllMYr	50	0	145,023.14	0	0.158	0.75	4.68	1,034.21	1,023.87	0.163	0.15	0
T6 instate small	DSL	AllMYr	55	0	132,957.82	0	0.158	0.752	4.67	1,022.33	1,012.10	0.186	0.171	0
T6 instate small	DSL	AllMYr	60	0	203,696.58	0	0.169	0.783	4.732	1,023.98	1,013.74	0.217	0.2	0
T6 instate small	DSL	AllMYr	65	0	166,328.36	0	0.192	0.841	4.867	1,039.16	1,028.77	0.257	0.236	0
T6 instate small	DSL	AllMYr	70	0	91.088	0	0.225	0.927	5.073	1,067.88	1,057.20	0.305	0.28	0
T6 OOS heavy	DSL	AllMYr	5	0	1.529	0	2.382	3.601	16.935	2,603.97	2,577.93	0.453	0.417	0
T6 OOS heavy	DSL	AllMYr	10	0	6.88	0	1.401	2.442	11.95	2,151.08	2,129.57	0.326	0.3	0
T6 OOS heavy	DSL	AllMYr	15	0	16.58	0	0.718	1.595	8.494	1,766.22	1,748.56	0.228	0.209	0
T6 OOS heavy	DSL	AllMYr	20	0	50.769	0	0.296	0.996	6.388	1,393.37	1,379.44	0.152	0.14	0
T6 OOS heavy	DSL	AllMYr	25	0	105.876	0	0.248	0.878	5.979	1,300.05	1,287.05	0.131	0.121	0
T6 OOS heavy	DSL	AllMYr	30	0	133.234	0	0.207	0.779	5.638	1,220.29	1,208.09	0.117	0.108	0
T6 OOS heavy	DSL	AllMYr	35	0	102.265	0	0.174	0.702	5.366	1,154.11	1,142.56	0.109	0.1	0
T6 OOS heavy	DSL	AllMYr	40	0	102.272	0	0.149	0.645	5.163	1,101.49	1,090.47	0.107	0.098	0
T6 OOS heavy	DSL	AllMYr	45	0	110.082	0	0.132	0.608	5.028	1,062.43	1,051.81	0.111	0.102	0
T6 OOS heavy	DSL	AllMYr	50	0	100.203	0	0.124	0.592	4.962	1,036.95	1,026.58	0.121	0.111	0
T6 OOS heavy	DSL	AllMYr	55	0	91.867	0	0.123	0.597	4.965	1,025.04	1,014.79	0.137	0.126	0
T6 OOS heavy	DSL	AllMYr	60	0	140.743	0	0.13	0.622	5.037	1,026.69	1,016.43	0.16	0.147	0
T6 OOS heavy	DSL	AllMYr	65	0	114.924	0	0.145	0.668	5.177	1,041.92	1,031.50	0.189	0.173	0
T6 OOS heavy	DSL	AllMYr	70	0	0.063	0	0.168	0.734	5.386	1,070.71	1,060.00	0.223	0.206	0
T6 OOS small	DSL	AllMYr	5	0	5.041	0	2.3	3.679	12.579	2,596.08	2,570.12	0.343	0.316	0
T6 OOS small	DSL	AllMYr	10	0	22.688	0	1.344	2.419	9.146	2,144.56	2,123.12	0.256	0.235	0
T6 OOS small	DSL	AllMYr	15	0	54.676	0	0.684	1.516	6.683	1,760.87	1,743.26	0.188	0.173	0
T6 OOS small	DSL	AllMYr	20	0	167.425	0	0.286	0.902	5.037	1,389.15	1,375.26	0.134	0.124	0
T6 OOS small	DSL	AllMYr	25	0	349.157	0	0.241	0.81	4.615	1,296.11	1,283.15	0.119	0.11	0
T6 OOS small	DSL	AllMYr	30	0	439.379	0	0.204	0.736	4.258	1,216.60	1,204.43	0.11	0.101	0
T6 OOS small	DSL	AllMYr	35	0	337.248	0	0.173	0.68	3.967	1,150.61	1,139.10	0.106	0.097	0
T6 OOS small	DSL	AllMYr	40	0	337.271	0	0.15	0.641	3.742	1,098.15	1,087.17	0.107	0.099	0
T6 OOS small	DSL	AllMYr	45	0	363.028	0	0.132	0.621	3.582	1,059.22	1,048.62	0.114	0.105	0
T6 OOS small	DSL	AllMYr	50	0	330.449	0	0.122	0.618	3.488	1,033.81	1,023.47	0.127	0.117	0
T6 OOS small	DSL	AllMYr	55	0	302.957	0	0.118	0.633	3.46	1,021.93	1,011.71	0.145	0.134	0

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T6 OOS small	DSL	AllMYr	60	0	464.142	0	0.121	0.666	3.497	1,023.58	1,013.35	0.169	0.155	0
T6 OOS small	DSL	AllMYr	65	0	378.995	0	0.13	0.717	3.599	1,038.76	1,028.37	0.198	0.182	0
T6 OOS small	DSL	AllMYr	70	0	0.208	0	0.147	0.786	3.768	1,067.46	1,056.79	0.233	0.214	0
T6 Public	DSL	AllMYr	5	0	88.993	0	0.69	1.008	24.29	2,648.32	2,621.84	0.165	0.152	0
T6 Public	DSL	AllMYr	10	0	400.546	0	0.411	0.697	16.785	2,187.72	2,165.85	0.117	0.107	0
T6 Public	DSL	AllMYr	15	0	965.265	0	0.214	0.468	11.717	1,796.31	1,778.35	0.08	0.073	0
T6 Public	DSL	AllMYr	20	0	2,955.75	0	0.088	0.304	8.87	1,417.11	1,402.94	0.051	0.047	0
T6 Public	DSL	AllMYr	25	0	6,164.09	0	0.074	0.266	8.463	1,322.20	1,308.97	0.044	0.04	0
T6 Public	DSL	AllMYr	30	0	7,756.89	0	0.062	0.235	8.134	1,241.08	1,228.67	0.038	0.035	0
T6 Public	DSL	AllMYr	35	0	5,953.84	0	0.053	0.209	7.882	1,173.76	1,162.03	0.034	0.031	0
T6 Public	DSL	AllMYr	40	0	5,954.25	0	0.045	0.19	7.709	1,120.25	1,109.05	0.032	0.029	0
T6 Public	DSL	AllMYr	45	0	6,408.97	0	0.04	0.177	7.613	1,080.53	1,069.73	0.032	0.029	0
T6 Public	DSL	AllMYr	50	0	5,833.81	0	0.038	0.171	7.596	1,054.62	1,044.07	0.034	0.031	0
T6 Public	DSL	AllMYr	55	0	5,348.47	0	0.037	0.17	7.656	1,042.50	1,032.07	0.037	0.034	0
T6 Public	DSL	AllMYr	60	0	8,194.06	0	0.04	0.175	7.794	1,044.18	1,033.74	0.043	0.04	0
T6 Public	DSL	AllMYr	65	0	6,690.86	0	0.044	0.187	8.01	1,059.66	1,049.07	0.051	0.047	0
T6 Public	DSL	AllMYr	70	0	3.664	0	0.051	0.205	8.304	1,088.95	1,078.06	0.06	0.055	0
T6 utility	DSL	AllMYr	5	0	16.171	0	1.777	2.688	17.597	2,599.52	2,573.53	0.464	0.427	0
T6 utility	DSL	AllMYr	10	0	72.783	0	1.041	1.829	12.341	2,147.41	2,125.94	0.33	0.304	0
T6 utility	DSL	AllMYr	15	0	175.399	0	0.53	1.198	8.718	1,763.21	1,745.58	0.228	0.21	0
T6 utility	DSL	AllMYr	20	0	537.09	0	0.217	0.746	6.548	1,391.00	1,377.09	0.15	0.138	0
T6 utility	DSL	AllMYr	25	0	1,120.08	0	0.18	0.654	6.154	1,297.83	1,284.85	0.128	0.118	0
T6 utility	DSL	AllMYr	30	0	1,409.51	0	0.149	0.577	5.827	1,218.21	1,206.03	0.114	0.105	0
T6 utility	DSL	AllMYr	35	0	1,081.87	0	0.125	0.516	5.567	1,152.14	1,140.61	0.105	0.097	0
T6 utility	DSL	AllMYr	40	0	1,081.95	0	0.106	0.472	5.375	1,099.61	1,088.61	0.103	0.095	0
T6 utility	DSL	AllMYr	45	0	1,164.58	0	0.094	0.443	5.25	1,060.62	1,050.02	0.107	0.099	0
T6 utility	DSL	AllMYr	50	0	1,060.06	0	0.088	0.429	5.193	1,035.18	1,024.83	0.118	0.109	0
T6 utility	DSL	AllMYr	55	0	971.871	0	0.089	0.432	5.203	1,023.29	1,013.06	0.135	0.124	0
T6 utility	DSL	AllMYr	60	0	1,488.95	0	0.095	0.451	5.281	1,024.94	1,014.69	0.158	0.146	0
T6 utility	DSL	AllMYr	65	0	1,215.80	0	0.108	0.485	5.426	1,040.14	1,029.74	0.188	0.173	0
T6 utility	DSL	AllMYr	70	0	0.666	0	0.128	0.535	5.639	1,068.88	1,058.19	0.224	0.206	0
T6TS	GAS	AllMYr	5	0	1,309.35	0	1.853	26.557	1.335	2,513.50	2,488.36	0.01	0.009	0
T6TS	GAS	AllMYr	10	0	6,176.56	0	1.496	21.51	1.367	2,036.13	2,015.77	0.008	0.008	0
T6TS	GAS	AllMYr	15	0	14,697.30	0	1	14.713	1.438	1,392.43	1,378.51	0.006	0.005	0
T6TS	GAS	AllMYr	20	0	40,848.80	0	0.694	10.631	1.504	1,006.07	996.008	0.004	0.004	0
T6TS	GAS	AllMYr	25	0	81,046.67	0	0.503	8.116	1.572	768.012	760.332	0.003	0.003	0
T6TS	GAS	AllMYr	30	0	95,245.53	0	0.379	6.547	1.642	619.434	613.239	0.002	0.002	0
T6TS	GAS	AllMYr	35	0	71,124.76	0	0.299	5.58	1.713	527.847	522.568	0.002	0.002	0
T6TS	GAS	AllMYr	40	0	69,625.86	0	0.246	5.022	1.773	475.233	470.481	0.001	0.001	0
T6TS	GAS	AllMYr	45	0	71,318.02	0	0.21	4.776	1.834	452.056	447.535	0.001	0.001	0
T6TS	GAS	AllMYr	50	0	62,539.74	0	0.188	4.801	1.905	454.322	449.779	0.001	0.001	0
T6TS	GAS	AllMYr	55	0	54,251.48	0	0.174	5.101	1.982	482.416	477.591	0.001	0.001	0
T6TS	GAS	AllMYr	60	0	68,059.96	0	0.167	5.735	2.088	541.209	535.797	0.001	0.001	0
T6TS	GAS	AllMYr	65	0	57,837.31	0	0.17	6.794	2.148	641.498	635.083	0.001	0.001	0
T6TS	GAS	AllMYr	70	0	23.8	0	0.175	8.536	2.278	803.362	795.329	0.001	0.001	0

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T7 Ag	DSL	AllMYr	5	0	12.599	0	7.849	13.392	43.33	4,063.28	4,022.64	1.971	1.813	0
T7 Ag	DSL	AllMYr	10	0	54.12	0	4.768	10.116	30.418	3,356.58	3,323.02	1.424	1.31	0
T7 Ag	DSL	AllMYr	15	0	139.94	0	2.555	7.556	21.588	2,756.05	2,728.49	1.002	0.922	0
T7 Ag	DSL	AllMYr	20	0	428.88	0	1.047	5.536	16.437	2,174.25	2,152.50	0.675	0.621	0
T7 Ag	DSL	AllMYr	25	0	899.625	0	0.871	4.747	15.532	2,028.62	2,008.33	0.584	0.537	0
T7 Ag	DSL	AllMYr	30	0	1,192.33	0	0.725	4.067	14.79	1,904.17	1,885.13	0.514	0.472	0
T7 Ag	DSL	AllMYr	35	0	961.327	0	0.609	3.498	14.21	1,800.89	1,782.88	0.463	0.426	0
T7 Ag	DSL	AllMYr	40	0	871.417	0	0.525	3.039	13.793	1,718.78	1,701.59	0.432	0.397	0
T7 Ag	DSL	AllMYr	45	0	867.908	0	0.471	2.689	13.539	1,657.84	1,641.26	0.42	0.387	0
T7 Ag	DSL	AllMYr	50	0	841.898	0	0.447	2.45	13.448	1,618.08	1,601.90	0.429	0.394	0
T7 Ag	DSL	AllMYr	55	0	877.483	0	0.455	2.32	13.519	1,599.49	1,583.49	0.457	0.42	0
T7 Ag	DSL	AllMYr	60	0	1,830.83	0	0.493	2.301	13.752	1,602.07	1,586.05	0.505	0.465	0
T7 Ag	DSL	AllMYr	65	0	1,414.12	0	0.563	2.391	14.149	1,625.82	1,609.57	0.573	0.527	0
T7 Ag	DSL	AllMYr	70	0	0.988	0	0.662	2.591	14.708	1,670.75	1,654.04	0.66	0.607	0
T7 CAIRP	DSL	AllMYr	5	0	1,065.13	0	5.81	11.034	27.682	4,022.54	3,982.32	0.532	0.489	0
T7 CAIRP	DSL	AllMYr	10	0	4,575.56	0	3.389	7.077	20.326	3,322.93	3,289.70	0.426	0.392	0
T7 CAIRP	DSL	AllMYr	15	0	11,831.13	0	1.723	4.287	14.982	2,728.42	2,701.13	0.342	0.314	0
T7 CAIRP	DSL	AllMYr	20	0	36,259.34	0	0.73	2.455	11.302	2,152.45	2,130.92	0.271	0.249	0
T7 CAIRP	DSL	AllMYr	25	0	76,058.06	0	0.627	2.252	10.288	2,008.28	1,988.20	0.249	0.229	0
T7 CAIRP	DSL	AllMYr	30	0	100,804.95	0	0.538	2.094	9.429	1,885.08	1,866.23	0.239	0.219	0
T7 CAIRP	DSL	AllMYr	35	0	81,274.63	0	0.463	1.982	8.724	1,782.83	1,765.00	0.239	0.219	0
T7 CAIRP	DSL	AllMYr	40	0	73,673.26	0	0.402	1.915	8.175	1,701.55	1,684.53	0.249	0.229	0
T7 CAIRP	DSL	AllMYr	45	0	73,376.57	0	0.355	1.893	7.78	1,641.22	1,624.81	0.271	0.249	0
T7 CAIRP	DSL	AllMYr	50	0	71,177.59	0	0.323	1.917	7.541	1,601.86	1,585.84	0.303	0.279	0
T7 CAIRP	DSL	AllMYr	55	0	74,186.14	0	0.304	1.987	7.456	1,583.45	1,567.62	0.346	0.319	0
T7 CAIRP	DSL	AllMYr	60	0	154,786.01	0	0.299	2.102	7.527	1,586.01	1,570.15	0.4	0.368	0
T7 CAIRP	DSL	AllMYr	65	0	119,555.40	0	0.308	2.262	7.752	1,609.52	1,593.43	0.465	0.428	0
T7 CAIRP	DSL	AllMYr	70	0	83.568	0	0.331	2.468	8.132	1,654.00	1,637.46	0.541	0.498	0
T7 CAIRP construction	DSL	AllMYr	5	0	87.733	0	5.905	11.209	28.308	4,024.29	3,984.05	0.544	0.501	0
T7 CAIRP construction	DSL	AllMYr	10	0	376.881	0	3.444	7.191	20.782	3,324.38	3,291.13	0.436	0.401	0
T7 CAIRP construction	DSL	AllMYr	15	0	974.511	0	1.752	4.358	15.317	2,729.60	2,702.31	0.349	0.321	0
T7 CAIRP construction	DSL	AllMYr	20	0	2,986.62	0	0.741	2.497	11.554	2,153.39	2,131.85	0.277	0.255	0
T7 CAIRP construction	DSL	AllMYr	25	0	6,264.78	0	0.637	2.29	10.518	2,009.16	1,989.07	0.255	0.235	0
T7 CAIRP construction	DSL	AllMYr	30	0	8,303.14	0	0.546	2.129	9.641	1,885.90	1,867.04	0.244	0.224	0
T7 CAIRP construction	DSL	AllMYr	35	0	6,694.46	0	0.47	2.014	8.922	1,783.61	1,765.77	0.244	0.224	0
T7 CAIRP construction	DSL	AllMYr	40	0	6,068.35	0	0.409	1.945	8.361	1,702.29	1,685.26	0.255	0.234	0
T7 CAIRP construction	DSL	AllMYr	45	0	6,043.91	0	0.361	1.923	7.958	1,641.94	1,625.52	0.277	0.255	0
T7 CAIRP construction	DSL	AllMYr	50	0	5,862.79	0	0.328	1.947	7.713	1,602.55	1,586.53	0.31	0.285	0

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T7 CAIRP construction	DSL	AllMYr	55	0	6,110.59	0	0.309	2.017	7.627	1,584.14	1,568.30	0.354	0.326	0
T7 CAIRP construction	DSL	AllMYr	60	0	12,749.48	0	0.304	2.134	7.699	1,586.70	1,570.83	0.409	0.376	0
T7 CAIRP construction	DSL	AllMYr	65	0	9,847.59	0	0.313	2.297	7.93	1,610.22	1,594.12	0.475	0.437	0
T7 CAIRP construction	DSL	AllMYr	70	0	6.883	0	0.337	2.506	8.318	1,654.72	1,638.17	0.553	0.509	0
T7 NNOOS	DSL	AllMYr	5	0	1,198.23	0	3.601	7.065	15.59	3,995.53	3,955.57	0.205	0.189	0
T7 NNOOS	DSL	AllMYr	10	0	5,147.33	0	2.097	4.436	11.581	3,300.62	3,267.61	0.178	0.164	0
T7 NNOOS	DSL	AllMYr	15	0	13,309.58	0	1.066	2.605	8.624	2,710.09	2,682.99	0.155	0.142	0
T7 NNOOS	DSL	AllMYr	20	0	40,790.41	0	0.456	1.435	6.512	2,137.99	2,116.61	0.133	0.122	0
T7 NNOOS	DSL	AllMYr	25	0	85,562.47	0	0.397	1.344	5.883	1,994.80	1,974.85	0.125	0.115	0
T7 NNOOS	DSL	AllMYr	30	0	113,401.80	0	0.344	1.277	5.348	1,872.42	1,853.69	0.123	0.113	0
T7 NNOOS	DSL	AllMYr	35	0	91,430.92	0	0.299	1.235	4.908	1,770.86	1,753.15	0.126	0.116	0
T7 NNOOS	DSL	AllMYr	40	0	82,879.67	0	0.262	1.218	4.562	1,690.12	1,673.22	0.134	0.123	0
T7 NNOOS	DSL	AllMYr	45	0	82,545.90	0	0.231	1.225	4.31	1,630.20	1,613.90	0.147	0.135	0
T7 NNOOS	DSL	AllMYr	50	0	80,072.13	0	0.207	1.258	4.153	1,591.10	1,575.19	0.165	0.152	0
T7 NNOOS	DSL	AllMYr	55	0	83,456.63	0	0.191	1.315	4.09	1,572.82	1,557.09	0.189	0.174	0
T7 NNOOS	DSL	AllMYr	60	0	174,128.48	0	0.182	1.398	4.122	1,575.36	1,559.60	0.218	0.2	0
T7 NNOOS	DSL	AllMYr	65	0	134,495.36	0	0.18	1.505	4.249	1,598.72	1,582.73	0.252	0.231	0
T7 NNOOS	DSL	AllMYr	70	0	94.011	0	0.185	1.637	4.469	1,642.89	1,626.46	0.291	0.268	0
T7 NOOS	DSL	AllMYr	5	0	387.893	0	5.351	10.276	27.682	4,025.91	3,985.65	0.452	0.415	0
T7 NOOS	DSL	AllMYr	10	0	1,666.30	0	3.12	6.554	20.326	3,325.71	3,292.46	0.369	0.339	0
T7 NOOS	DSL	AllMYr	15	0	4,308.60	0	1.587	3.938	14.982	2,730.70	2,703.39	0.301	0.277	0
T7 NOOS	DSL	AllMYr	20	0	13,204.73	0	0.674	2.234	11.302	2,154.25	2,132.71	0.244	0.225	0
T7 NOOS	DSL	AllMYr	25	0	27,698.41	0	0.581	2.061	10.288	2,009.96	1,989.86	0.226	0.208	0
T7 NOOS	DSL	AllMYr	30	0	36,710.60	0	0.501	1.927	9.429	1,886.66	1,867.79	0.218	0.201	0
T7 NOOS	DSL	AllMYr	35	0	29,598.15	0	0.432	1.835	8.724	1,784.32	1,766.48	0.219	0.202	0
T7 NOOS	DSL	AllMYr	40	0	26,829.93	0	0.376	1.783	8.175	1,702.97	1,685.94	0.23	0.212	0
T7 NOOS	DSL	AllMYr	45	0	26,721.88	0	0.332	1.771	7.78	1,642.60	1,626.17	0.251	0.231	0
T7 NOOS	DSL	AllMYr	50	0	25,921.07	0	0.301	1.8	7.541	1,603.20	1,587.17	0.281	0.259	0
T7 NOOS	DSL	AllMYr	55	0	27,016.71	0	0.281	1.87	7.456	1,584.78	1,568.93	0.321	0.295	0
T7 NOOS	DSL	AllMYr	60	0	56,369.13	0	0.274	1.98	7.527	1,587.34	1,571.46	0.371	0.341	0
T7 NOOS	DSL	AllMYr	65	0	43,539.04	0	0.279	2.131	7.752	1,610.87	1,594.76	0.43	0.396	0
T7 NOOS	DSL	AllMYr	70	0	30.433	0	0.296	2.322	8.132	1,655.38	1,638.83	0.499	0.459	0
T7 other port	DSL	AllMYr	5	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	10	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	15	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	20	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	25	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	30	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	35	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	40	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	45	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	50	0	0	0	0	0	0	0	0	0	0	0

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T7 other port	DSL	AllMYr	55	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	60	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	65	0	0	0	0	0	0	0	0	0	0	0
T7 other port	DSL	AllMYr	70	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	5	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	10	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	15	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	20	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	25	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	30	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	35	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	40	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	45	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	50	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	55	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	60	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	65	0	0	0	0	0	0	0	0	0	0	0
T7 POAK	DSL	AllMYr	70	0	0	0	0	0	0	0	0	0	0	0
T7 POLA	DSL	AllMYr	5	0	1,279.21	0	4.115	8.109	27.226	4,086.25	4,045.39	0.121	0.111	0
T7 POLA	DSL	AllMYr	10	0	5,495.20	0	2.395	5.074	20.198	3,375.56	3,341.81	0.104	0.096	0
T7 POLA	DSL	AllMYr	15	0	14,209.07	0	1.217	2.964	15.022	2,771.63	2,743.91	0.089	0.082	0
T7 POLA	DSL	AllMYr	20	0	43,547.13	0	0.522	1.621	11.34	2,186.54	2,164.68	0.076	0.07	0
T7 POLA	DSL	AllMYr	25	0	91,345.01	0	0.454	1.522	10.252	2,040.09	2,019.69	0.072	0.066	0
T7 POLA	DSL	AllMYr	30	0	121,065.79	0	0.395	1.452	9.328	1,914.93	1,895.78	0.07	0.065	0
T7 POLA	DSL	AllMYr	35	0	97,610.06	0	0.344	1.409	8.568	1,811.07	1,792.96	0.072	0.066	0
T7 POLA	DSL	AllMYr	40	0	88,480.89	0	0.301	1.394	7.971	1,728.50	1,711.21	0.076	0.07	0
T7 POLA	DSL	AllMYr	45	0	88,124.57	0	0.265	1.407	7.537	1,667.22	1,650.54	0.084	0.077	0
T7 POLA	DSL	AllMYr	50	0	85,483.62	0	0.238	1.448	7.267	1,627.23	1,610.96	0.094	0.087	0
T7 POLA	DSL	AllMYr	55	0	89,096.85	0	0.219	1.516	7.16	1,608.53	1,592.45	0.108	0.099	0
T7 POLA	DSL	AllMYr	60	0	185,896.53	0	0.207	1.612	7.217	1,611.13	1,595.02	0.124	0.114	0
T7 POLA	DSL	AllMYr	65	0	143,584.91	0	0.204	1.736	7.438	1,635.02	1,618.67	0.144	0.132	0
T7 POLA	DSL	AllMYr	70	0	100.365	0	0.208	1.887	7.822	1,680.20	1,663.40	0.166	0.153	0
T7 Public	DSL	AllMYr	5	0	71.896	0	1.093	1.895	44.254	4,118.22	4,077.03	0.315	0.29	0
T7 Public	DSL	AllMYr	10	0	308.849	0	0.659	1.396	30.529	3,401.97	3,367.95	0.223	0.205	0
T7 Public	DSL	AllMYr	15	0	798.6	0	0.349	1.013	21.322	2,793.31	2,765.38	0.153	0.141	0
T7 Public	DSL	AllMYr	20	0	2,447.50	0	0.144	0.72	16.271	2,203.64	2,181.61	0.099	0.091	0
T7 Public	DSL	AllMYr	25	0	5,133.91	0	0.12	0.621	15.6	2,056.05	2,035.49	0.084	0.077	0
T7 Public	DSL	AllMYr	30	0	6,804.32	0	0.1	0.535	15.066	1,929.91	1,910.61	0.073	0.067	0
T7 Public	DSL	AllMYr	35	0	5,486.03	0	0.084	0.465	14.667	1,825.24	1,806.98	0.064	0.059	0
T7 Public	DSL	AllMYr	40	0	4,972.94	0	0.072	0.408	14.404	1,742.02	1,724.60	0.059	0.054	0
T7 Public	DSL	AllMYr	45	0	4,952.91	0	0.065	0.366	14.277	1,680.26	1,663.46	0.057	0.052	0
T7 Public	DSL	AllMYr	50	0	4,804.48	0	0.061	0.338	14.286	1,639.96	1,623.56	0.058	0.053	0
T7 Public	DSL	AllMYr	55	0	5,007.56	0	0.062	0.325	14.431	1,621.11	1,604.90	0.062	0.057	0
T7 Public	DSL	AllMYr	60	0	10,448.04	0	0.066	0.326	14.713	1,623.73	1,607.49	0.069	0.063	0
T7 Public	DSL	AllMYr	65	0	8,069.98	0	0.075	0.342	15.13	1,647.81	1,631.33	0.079	0.073	0

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T7 Public	DSL	AllMYr	70	0	5.641	0	0.088	0.372	15.683	1,693.34	1,676.41	0.092	0.085	0
T7 Single	DSL	AllMYr	5	0	572.982	0	5.866	9.802	36.309	4,017.71	3,977.54	1.407	1.295	0
T7 Single	DSL	AllMYr	10	0	2,461.40	0	3.475	7.093	25.083	3,318.95	3,285.76	0.982	0.904	0
T7 Single	DSL	AllMYr	15	0	6,364.50	0	1.795	5.017	17.476	2,725.14	2,697.89	0.658	0.605	0
T7 Single	DSL	AllMYr	20	0	19,505.54	0	0.726	3.408	13.153	2,149.87	2,128.37	0.411	0.378	0
T7 Single	DSL	AllMYr	25	0	40,915.08	0	0.593	2.914	12.52	2,005.87	1,985.81	0.345	0.317	0
T7 Single	DSL	AllMYr	30	0	54,227.55	0	0.484	2.494	12.006	1,882.82	1,863.99	0.295	0.271	0
T7 Single	DSL	AllMYr	35	0	43,721.30	0	0.398	2.149	11.609	1,780.69	1,762.89	0.261	0.24	0
T7 Single	DSL	AllMYr	40	0	39,632.19	0	0.337	1.877	11.33	1,699.50	1,682.51	0.243	0.223	0
T7 Single	DSL	AllMYr	45	0	39,472.58	0	0.301	1.68	11.168	1,639.25	1,622.86	0.241	0.221	0
T7 Single	DSL	AllMYr	50	0	38,289.65	0	0.288	1.557	11.124	1,599.93	1,583.94	0.254	0.234	0
T7 Single	DSL	AllMYr	55	0	39,908.08	0	0.299	1.508	11.198	1,581.55	1,565.74	0.284	0.261	0
T7 Single	DSL	AllMYr	60	0	83,266.41	0	0.335	1.533	11.39	1,584.10	1,568.26	0.33	0.303	0
T7 Single	DSL	AllMYr	65	0	64,314.27	0	0.395	1.632	11.699	1,607.59	1,591.52	0.391	0.36	0
T7 Single	DSL	AllMYr	70	0	44.955	0	0.479	1.805	12.127	1,652.02	1,635.50	0.469	0.431	0
T7 single construction	DSL	AllMYr	5	0	226.954	0	5.953	9.935	37.043	4,019.02	3,978.83	1.437	1.322	0
T7 single construction	DSL	AllMYr	10	0	974.942	0	3.527	7.198	25.585	3,320.02	3,286.82	1.003	0.923	0
T7 single construction	DSL	AllMYr	15	0	2,520.93	0	1.822	5.097	17.822	2,726.03	2,698.77	0.671	0.618	0
T7 single construction	DSL	AllMYr	20	0	7,726.00	0	0.737	3.466	13.413	2,150.56	2,129.06	0.419	0.386	0
T7 single construction	DSL	AllMYr	25	0	16,206.16	0	0.601	2.963	12.77	2,006.52	1,986.46	0.352	0.324	0
T7 single construction	DSL	AllMYr	30	0	21,479.14	0	0.49	2.535	12.247	1,883.43	1,864.59	0.301	0.277	0
T7 single construction	DSL	AllMYr	35	0	17,317.69	0	0.404	2.182	11.844	1,781.27	1,763.46	0.266	0.245	0
T7 single construction	DSL	AllMYr	40	0	15,698.02	0	0.342	1.905	11.561	1,700.06	1,683.06	0.247	0.228	0
T7 single construction	DSL	AllMYr	45	0	15,634.80	0	0.305	1.703	11.398	1,639.78	1,623.39	0.245	0.225	0
T7 single construction	DSL	AllMYr	50	0	15,166.25	0	0.292	1.577	11.354	1,600.45	1,584.45	0.259	0.238	0
T7 single construction	DSL	AllMYr	55	0	15,807.30	0	0.304	1.526	11.43	1,582.07	1,566.24	0.289	0.266	0
T7 single construction	DSL	AllMYr	60	0	32,981.22	0	0.34	1.55	11.626	1,584.62	1,568.77	0.335	0.309	0
T7 single construction	DSL	AllMYr	65	0	25,474.41	0	0.401	1.65	11.942	1,608.11	1,592.03	0.398	0.366	0
T7 single construction	DSL	AllMYr	70	0	17.806	0	0.487	1.825	12.377	1,652.55	1,636.03	0.477	0.439	0
T7 SWCV	DSL	AllMYr	5	0	194.806	0	1.439	2.555	40.425	4,127.31	4,086.04	0.333	0.307	0
T7 SWCV	DSL	AllMYr	10	0	836.841	0	0.87	1.861	28.433	3,409.48	3,375.39	0.242	0.222	0
T7 SWCV	DSL	AllMYr	15	0	2,163.84	0	0.464	1.338	20.262	2,799.48	2,771.49	0.171	0.157	0
T7 SWCV	DSL	AllMYr	20	0	6,631.61	0	0.193	0.95	15.556	2,208.51	2,186.43	0.116	0.107	0
T7 SWCV	DSL	AllMYr	25	0	13,910.56	0	0.163	0.826	14.735	2,060.59	2,039.99	0.101	0.093	0
T7 SWCV	DSL	AllMYr	30	0	18,436.62	0	0.137	0.72	14.066	1,934.18	1,914.83	0.089	0.082	0
T7 SWCV	DSL	AllMYr	35	0	14,864.64	0	0.117	0.632	13.548	1,829.27	1,810.98	0.08	0.074	0

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T7 SWCV	DSL	AllMYr	40	0	13,474.39	0	0.101	0.562	13.181	1,745.87	1,728.41	0.075	0.069	0
T7 SWCV	DSL	AllMYr	45	0	13,420.13	0	0.091	0.511	12.967	1,683.97	1,667.13	0.073	0.067	0
T7 SWCV	DSL	AllMYr	50	0	13,017.95	0	0.085	0.477	12.904	1,643.58	1,627.14	0.074	0.068	0
T7 SWCV	DSL	AllMYr	55	0	13,568.20	0	0.084	0.462	12.993	1,624.70	1,608.45	0.079	0.073	0
T7 SWCV	DSL	AllMYr	60	0	28,309.43	0	0.088	0.465	13.233	1,627.32	1,611.04	0.087	0.08	0
T7 SWCV	DSL	AllMYr	65	0	21,865.96	0	0.097	0.486	13.625	1,651.45	1,634.93	0.098	0.09	0
T7 SWCV	DSL	AllMYr	70	0	15.284	0	0.111	0.526	14.169	1,697.08	1,680.11	0.113	0.104	0
T7 tractor	DSL	AllMYr	5	0	1,502.84	0	7.927	13.747	36.585	4,026.09	3,985.83	1.455	1.338	0
T7 tractor	DSL	AllMYr	10	0	6,455.85	0	4.689	9.646	25.904	3,325.86	3,292.61	1.047	0.963	0
T7 tractor	DSL	AllMYr	15	0	16,693.06	0	2.421	6.591	18.489	2,730.82	2,703.51	0.733	0.675	0
T7 tractor	DSL	AllMYr	20	0	51,159.89	0	0.994	4.347	13.959	2,154.35	2,132.80	0.491	0.452	0
T7 tractor	DSL	AllMYr	25	0	107,313.63	0	0.825	3.777	13.054	2,010.05	1,989.95	0.424	0.39	0
T7 tractor	DSL	AllMYr	30	0	142,230.10	0	0.685	3.298	12.301	1,886.74	1,867.87	0.376	0.346	0
T7 tractor	DSL	AllMYr	35	0	114,673.92	0	0.573	2.909	11.7	1,784.40	1,766.56	0.347	0.319	0
T7 tractor	DSL	AllMYr	40	0	103,948.82	0	0.49	2.61	11.251	1,703.05	1,686.02	0.335	0.308	0
T7 tractor	DSL	AllMYr	45	0	103,530.20	0	0.436	2.402	10.954	1,642.67	1,626.24	0.342	0.315	0
T7 tractor	DSL	AllMYr	50	0	100,427.57	0	0.41	2.284	10.81	1,603.27	1,587.24	0.367	0.338	0
T7 tractor	DSL	AllMYr	55	0	104,672.45	0	0.413	2.256	10.817	1,584.85	1,569.00	0.411	0.378	0
T7 tractor	DSL	AllMYr	60	0	218,394.33	0	0.445	2.318	10.976	1,587.41	1,571.53	0.473	0.435	0
T7 tractor	DSL	AllMYr	65	0	168,685.93	0	0.506	2.471	11.288	1,610.94	1,594.83	0.553	0.508	0
T7 tractor	DSL	AllMYr	70	0	117.91	0	0.595	2.713	11.751	1,655.46	1,638.91	0.651	0.599	0
T7 tractor construction	DSL	AllMYr	5	0	169.211	0	8.549	14.628	37.993	4,024.85	3,984.60	1.644	1.513	0
T7 tractor construction	DSL	AllMYr	10	0	726.891	0	5.059	10.359	26.774	3,324.84	3,291.59	1.173	1.079	0
T7 tractor construction	DSL	AllMYr	15	0	1,879.54	0	2.612	7.152	19.025	2,729.98	2,702.68	0.811	0.747	0
T7 tractor construction	DSL	AllMYr	20	0	5,760.31	0	1.067	4.759	14.359	2,153.68	2,132.15	0.533	0.491	0
T7 tractor construction	DSL	AllMYr	25	0	12,082.89	0	0.881	4.115	13.475	2,009.43	1,989.34	0.458	0.421	0
T7 tractor construction	DSL	AllMYr	30	0	16,014.29	0	0.727	3.57	12.741	1,886.16	1,867.30	0.402	0.37	0
T7 tractor construction	DSL	AllMYr	35	0	12,911.62	0	0.606	3.126	12.158	1,783.85	1,766.02	0.367	0.337	0
T7 tractor construction	DSL	AllMYr	40	0	11,704.04	0	0.517	2.783	11.727	1,702.52	1,685.50	0.351	0.323	0
T7 tractor construction	DSL	AllMYr	45	0	11,656.90	0	0.46	2.54	11.447	1,642.16	1,625.74	0.356	0.328	0
T7 tractor construction	DSL	AllMYr	50	0	11,307.56	0	0.435	2.397	11.318	1,602.78	1,586.75	0.381	0.351	0
T7 tractor construction	DSL	AllMYr	55	0	11,785.51	0	0.443	2.354	11.34	1,584.36	1,568.52	0.426	0.392	0
T7 tractor construction	DSL	AllMYr	60	0	24,589.94	0	0.482	2.412	11.513	1,586.92	1,571.05	0.491	0.452	0
T7 tractor construction	DSL	AllMYr	65	0	18,993.06	0	0.554	2.57	11.837	1,610.45	1,594.34	0.576	0.53	0
T7 tractor construction	DSL	AllMYr	70	0	13.276	0	0.659	2.829	12.312	1,654.95	1,638.40	0.681	0.627	0
T7 utility	DSL	AllMYr	5	0	8.435	0	3.35	5.735	33.301	4,014.23	3,974.09	0.896	0.825	0

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VEH	FUEL	MDLYR	SPEED (Miles/hr)	POP (Vehicles)	VMT (Miles/day)	TRIPS (Trips/day)	ROG_RUNEX (gms/mile)	CO_RUNEX (gms/mile)	NOX_RUNEX (gms/mile)	CO2_RUNEX (gms/mile)	CO2_RUNEX(PAVLEY I+LCFS) (gms/mile)	PM10_RUNEX (gms/mile)	PM2_5_RUNEX (gms/mile)	SOX_RUNEX (gms/mile)
T7 utility	DSL	AllMYr	10	0	36.235	0	1.969	4.004	23.091	3,316.07	3,282.91	0.629	0.579	0
T7 utility	DSL	AllMYr	15	0	93.693	0	1.006	2.711	16.141	2,722.78	2,695.55	0.425	0.391	0
T7 utility	DSL	AllMYr	20	0	287.145	0	0.41	1.753	12.134	2,148.00	2,126.52	0.269	0.247	0
T7 utility	DSL	AllMYr	25	0	602.318	0	0.337	1.516	11.51	2,004.14	1,984.09	0.227	0.209	0
T7 utility	DSL	AllMYr	30	0	798.293	0	0.277	1.318	10.999	1,881.18	1,862.37	0.197	0.181	0
T7 utility	DSL	AllMYr	35	0	643.629	0	0.23	1.158	10.601	1,779.15	1,761.36	0.178	0.163	0
T7 utility	DSL	AllMYr	40	0	583.433	0	0.195	1.036	10.316	1,698.03	1,681.05	0.17	0.156	0
T7 utility	DSL	AllMYr	45	0	581.083	0	0.173	0.952	10.144	1,637.83	1,621.45	0.173	0.159	0
T7 utility	DSL	AllMYr	50	0	563.669	0	0.164	0.905	10.085	1,598.55	1,582.56	0.187	0.172	0
T7 utility	DSL	AllMYr	55	0	587.494	0	0.168	0.897	10.139	1,580.18	1,564.38	0.213	0.196	0
T7 utility	DSL	AllMYr	60	0	1,225.78	0	0.184	0.927	10.306	1,582.73	1,566.91	0.25	0.23	0
T7 utility	DSL	AllMYr	65	0	946.782	0	0.213	0.994	10.587	1,606.20	1,590.14	0.298	0.274	0
T7 utility	DSL	AllMYr	70	0	0.662	0	0.254	1.1	10.98	1,650.58	1,634.08	0.357	0.329	0
T7IS	GAS	AllMYr	5	0	294.812	0	4.345	124.064	3.546	2,513.50	2,488.36	0.005	0.004	0
T7IS	GAS	AllMYr	10	0	1,390.71	0	3.509	100.507	3.631	2,036.13	2,015.77	0.004	0.003	0
T7IS	GAS	AllMYr	15	0	3,309.22	0	2.345	68.717	3.82	1,392.43	1,378.51	0.002	0.002	0
T7IS	GAS	AllMYr	20	0	9,197.46	0	1.627	49.663	3.996	1,006.07	996.008	0.002	0.001	0
T7IS	GAS	AllMYr	25	0	18,248.35	0	1.179	37.915	4.175	768.012	760.332	0.001	0.001	0
T7IS	GAS	AllMYr	30	0	21,445.35	0	0.89	30.579	4.361	619.434	613.239	0.001	0.001	0
T7IS	GAS	AllMYr	35	0	16,014.35	0	0.701	26.053	4.551	527.847	522.568	0.001	0.001	0
T7IS	GAS	AllMYr	40	0	15,676.86	0	0.577	23.469	4.711	475.233	470.481	0.001	0.001	0
T7IS	GAS	AllMYr	45	0	16,057.86	0	0.493	22.335	4.871	452.056	447.535	0.001	< 0.001	0
T7IS	GAS	AllMYr	50	0	14,081.36	0	0.44	22.444	5.059	454.322	449.779	< 0.001	< 0.001	0
T7IS	GAS	AllMYr	55	0	12,215.19	0	0.409	23.822	5.265	482.416	477.591	< 0.001	< 0.001	0
T7IS	GAS	AllMYr	60	0	15,324.28	0	0.393	26.683	5.547	541.209	535.797	< 0.001	< 0.001	0
T7IS	GAS	AllMYr	65	0	13,022.56	0	0.399	31.64	5.705	641.498	635.083	< 0.001	< 0.001	0
T7IS	GAS	AllMYr	70	0	5.359	0	0.412	39.534	6.05	803.362	795.329	< 0.001	< 0.001	0
UBUS	GAS	AllMYr	5	0	1,007.58	0	8.415	67.157	2.842	2,513.50	2,488.36	0.019	0.016	0
UBUS	DSL	AllMYr	5	0	5,834.05	0	1.888	12.218	32.78	2,600.71	2,574.70	0.806	0.741	0
UBUS	GAS	AllMYr	10	0	3,616.52	0	6.776	54.402	2.914	2,036.13	2,015.77	0.015	0.013	0
UBUS	DSL	AllMYr	10	0	20,940.17	0	1.601	9.621	28.491	2,600.71	2,574.70	0.683	0.629	0
UBUS	GAS	AllMYr	15	0	7,233.03	0	4.533	37.204	3.058	1,392.43	1,378.51	0.01	0.009	0
UBUS	DSL	AllMYr	15	0	41,880.33	0	1.182	6.24	22.344	2,600.71	2,574.70	0.504	0.464	0
UBUS	GAS	AllMYr	20	0	9,545.08	0	3.161	26.881	3.202	1,006.07	996.008	0.007	0.006	0
UBUS	DSL	AllMYr	20	0	55,267.44	0	0.904	4.297	18.423	2,600.71	2,574.70	0.386	0.355	0
UBUS	GAS	AllMYr	25	0	14,375.57	0	2.298	20.52	3.346	768.012	760.332	0.005	0.004	0
UBUS	DSL	AllMYr	25	0	83,236.73	0	0.716	3.142	15.968	2,600.70	2,574.70	0.305	0.281	0
UBUS	GAS	AllMYr	30	0	17,992.09	0	1.741	16.55	3.49	619.434	613.239	0.004	0.003	0
UBUS	DSL	AllMYr	30	0	104,176.88	0	0.587	2.44	14.55	2,600.71	2,574.70	0.25	0.23	0
UBUS	GAS	AllMYr	35	0	17,632.17	0	1.375	14.103	3.634	527.847	522.568	0.003	0.003	0
UBUS	DSL	AllMYr	35	0	102,092.88	0	0.498	2.012	13.937	2,600.71	2,574.70	0.213	0.196	0
UBUS	GAS	AllMYr	40	0	12,711.18	0	1.132	12.698	3.778	475.233	470.481	0.002	0.002	0
UBUS	DSL	AllMYr	40	0	73,599.65	0	0.438	1.761	14.035	2,600.71	2,574.70	0.187	0.172	0
UBUS	GAS	AllMYr	45	0	5,541.19	0	0.971	12.078	3.922	452.056	447.535	0.002	0.002	0
UBUS	DSL	AllMYr	45	0	32,084.32	0	0.399	1.637	14.859	2,600.71	2,574.70	0.17	0.157	0

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UBUS	GAS	AllMYr	50	0	2,815.33	0	0.869	12.139	4.066	454.322	449.779	0.002	0.002	0
UBUS	DSL	AllMYr	50	0	16,301.19	0	0.376	1.616	16.537	2,600.71	2,574.70	0.161	0.148	0
UBUS	GAS	AllMYr	55	0	3,490.44	0	0.81	12.889	4.21	482.415	477.591	0.002	0.002	0
UBUS	DSL	AllMYr	55	0	20,210.18	0	0.368	1.694	19.348	2,600.71	2,574.70	0.157	0.144	0
UBUS	GAS	AllMYr	60	0	5,713.02	0	0.787	14.46	4.354	541.209	535.797	0.002	0.002	0
UBUS	DSL	AllMYr	60	0	33,079.23	0	0.372	1.885	23.797	2,600.71	2,574.70	0.159	0.146	0
All Other Buses	DSL	AllMYr	5	0	223.682	0	3.858	5.18	25.062	2,628.60	2,602.31	0.947	0.871	0
All Other Buses	DSL	AllMYr	10	0	1,006.76	0	2.336	3.737	17.639	2,171.43	2,149.71	0.682	0.627	0
All Other Buses	DSL	AllMYr	15	0	2,426.16	0	1.248	2.647	12.532	1,782.93	1,765.10	0.477	0.439	0
All Other Buses	DSL	AllMYr	20	0	7,429.17	0	0.515	1.832	9.496	1,406.55	1,392.49	0.319	0.294	0
All Other Buses	DSL	AllMYr	25	0	15,493.22	0	0.431	1.587	8.937	1,312.35	1,299.22	0.276	0.254	0
All Other Buses	DSL	AllMYr	30	0	19,496.67	0	0.361	1.378	8.475	1,231.84	1,219.52	0.243	0.224	0
All Other Buses	DSL	AllMYr	35	0	14,964.76	0	0.306	1.206	8.11	1,165.02	1,153.37	0.221	0.203	0
All Other Buses	DSL	AllMYr	40	0	14,965.79	0	0.264	1.07	7.843	1,111.90	1,100.79	0.209	0.192	0
All Other Buses	DSL	AllMYr	45	0	16,108.72	0	0.237	0.972	7.674	1,072.48	1,061.76	0.208	0.191	0
All Other Buses	DSL	AllMYr	50	0	14,663.09	0	0.223	0.91	7.602	1,046.76	1,036.29	0.217	0.2	0
All Other Buses	DSL	AllMYr	55	0	13,443.18	0	0.224	0.885	7.628	1,034.73	1,024.39	0.237	0.218	0
All Other Buses	DSL	AllMYr	60	0	20,595.48	0	0.238	0.896	7.751	1,036.40	1,026.04	0.267	0.246	0
All Other Buses	DSL	AllMYr	65	0	16,817.23	0	0.267	0.944	7.972	1,051.77	1,041.25	0.308	0.283	0
All Other Buses	DSL	AllMYr	70	0	9.21	0	0.31	1.03	8.29	1,080.83	1,070.03	0.359	0.33	0

2007 OFF-ROAD EMISSIONS

CY	Season	AvgDays	Code	Equipment	Fuel		MaxHP	grams/bhp-hr ROG Exhaust	CO Exhaust	NOX Exhaust	CO2 Exhaust	SO2 Exhaust	PM Exhaust	N2O Exhaust	CH4 Exhaust
2013	Annual	Mon-Sun	8.61E+13	Pavers	D	Pavers	25	0.45	1.45	2.72	338.56	0.00	0.14	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Pavers	D	Pavers	50	1.24	3.26	2.67	253.92	0.00	0.28	-	0.11
2013	Annual	Mon-Sun	8.61E+13	Pavers	D	Pavers	120	0.52	1.91	3.16	261.56	0.00	0.28	-	0.05
2013	Annual	Mon-Sun	8.61E+13	Pavers	D	Pavers	175	0.46	2.02	3.57	332.51	0.00	0.20	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Pavers	D	Pavers	250	0.38	1.10	3.53	352.66	0.00	0.14	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Pavers	D	Pavers	500	0.21	0.84	1.91	211.60	0.00	0.07	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Plate Compactors	D	Plate Compactors	15	0.15	0.80	0.95	130.45	0.00	0.04	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Rollers	D	Rollers	15	0.22	1.17	1.39	191.12	0.00	0.05	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Rollers	D	Rollers	25	0.29	1.00	1.86	242.09	0.00	0.07	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Rollers	D	Rollers	50	0.93	2.64	2.34	235.72	0.00	0.22	-	0.08
2013	Annual	Mon-Sun	8.61E+13	Rollers	D	Rollers	120	0.37	1.54	2.36	222.97	0.00	0.20	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Rollers	D	Rollers	175	0.32	1.61	2.62	280.31	0.00	0.14	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Rollers	D	Rollers	250	0.23	0.71	2.38	277.76	0.00	0.08	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Rollers	D	Rollers	500	0.15	0.57	1.53	198.77	0.00	0.05	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Scrapers	D	Scrapers	120	0.71	2.62	4.21	354.94	0.00	0.37	-	0.06
2013	Annual	Mon-Sun	8.61E+13	Scrapers	D	Scrapers	175	0.54	2.36	4.03	383.80	0.00	0.23	-	0.05
2013	Annual	Mon-Sun	8.61E+13	Scrapers	D	Scrapers	250	0.41	1.16	3.72	380.06	0.00	0.14	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Scrapers	D	Scrapers	500	0.29	1.10	2.57	291.60	0.00	0.10	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Scrapers	D	Scrapers	750	0.33	1.26	3.02	335.83	0.00	0.12	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Paving Equipment	D	Paving Equipment	25	0.28	0.94	1.76	229.12	0.00	0.07	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Paving Equipment	D	Paving Equipment	50	1.06	2.77	2.28	217.06	0.00	0.24	-	0.10
2013	Annual	Mon-Sun	8.61E+13	Paving Equipment	D	Paving Equipment	120	0.41	1.50	2.48	206.00	0.00	0.22	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Paving Equipment	D	Paving Equipment	175	0.36	1.58	2.80	261.85	0.00	0.16	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Paving Equipment	D	Paving Equipment	250	0.23	0.68	2.21	221.88	0.00	0.08	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Surfacing Equipment	D	Surfacing Equipment	50	0.43	1.27	1.23	127.98	0.00	0.11	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Surfacing Equipment	D	Surfacing Equipment	120	0.37	1.59	2.47	241.03	0.00	0.20	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Surfacing Equipment	D	Surfacing Equipment	175	0.23	1.23	2.01	222.32	0.00	0.10	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Surfacing Equipment	D	Surfacing Equipment	250	0.19	0.61	2.03	244.70	0.00	0.07	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Surfacing Equipment	D	Surfacing Equipment	500	0.14	0.58	1.51	200.68	0.00	0.05	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Surfacing Equipment	D	Surfacing Equipment	750	0.15	0.61	1.61	209.89	0.00	0.05	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Signal Boards	D	Signal Boards	15	0.22	1.14	1.36	186.57	0.00	0.05	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Signal Boards	D	Signal Boards	50	1.04	3.14	3.10	328.32	0.00	0.27	-	0.09
2013	Annual	Mon-Sun	8.61E+13	Signal Boards	D	Signal Boards	120	0.44	1.97	2.95	303.18	0.00	0.24	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Signal Boards	D	Signal Boards	175	0.40	2.16	3.46	400.57	0.00	0.18	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Signal Boards	D	Signal Boards	250	0.30	0.97	3.62	463.19	0.01	0.11	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	15	0.30	1.56	1.87	255.96	0.00	0.07	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	25	0.72	2.46	4.56	597.25	0.01	0.18	-	0.07
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	50	1.42	3.70	3.11	298.63	0.00	0.32	-	0.13
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	120	0.48	1.77	2.97	245.30	0.00	0.25	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	175	0.51	2.24	4.02	372.98	0.00	0.22	-	0.05
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	250	0.43	1.29	4.08	404.42	0.00	0.16	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	500	0.27	1.18	2.58	282.41	0.00	0.10	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Trenchers	D	Trenchers	750	0.34	1.48	3.31	354.94	0.00	0.13	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	15	0.36	1.91	2.28	312.85	0.00	0.09	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	25	0.35	1.19	2.22	290.09	0.00	0.09	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	50	0.26	2.07	2.33	281.56	0.00	0.11	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	120	0.17	1.78	1.73	291.52	0.00	0.10	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	175	0.18	1.95	1.80	365.66	0.00	0.08	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	250	0.14	0.62	1.38	341.29	0.00	0.04	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	500	0.12	0.50	1.06	282.41	0.00	0.03	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	750	0.16	0.66	1.41	372.00	0.00	0.04	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Bore/Drill Rigs	D	Bore/Drill Rigs	1000	0.19	0.76	2.70	421.06	0.00	0.07	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Excavators	D	Excavators	25	0.36	1.23	2.27	298.28	0.00	0.09	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Excavators	D	Excavators	50	0.74	2.58	2.23	226.96	0.00	0.19	-	0.07
2013	Annual	Mon-Sun	8.61E+13	Excavators	D	Excavators	120	0.41	1.96	2.57	278.29	0.00	0.22	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Excavators	D	Excavators	175	0.31	1.73	2.32	290.87	0.00	0.13	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Excavators	D	Excavators	250	0.23	0.64	2.06	287.91	0.00	0.07	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Excavators	D	Excavators	500	0.16	0.48	1.34	212.04	0.00	0.05	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Excavators	D	Excavators	750	0.17	0.53	1.53	234.30	0.00	0.05	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Concrete/Industrial Saws	D	Concrete/Industrial Saws	25	0.36	1.23	2.28	298.97	0.00	0.09	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Concrete/Industrial Saws	D	Concrete/Industrial Saws	50	0.87	2.65	2.59	274.05	0.00	0.22	-	0.08
2013	Annual	Mon-Sun	8.61E+13	Concrete/Industrial Saws	D	Concrete/Industrial Saws	120	0.40	1.83	2.70	280.28	0.00	0.22	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Concrete/Industrial Saws	D	Concrete/Industrial Saws	175	0.41	2.26	3.53	415.23	0.00	0.18	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Cement and Mortar Mixers	D	Cement and Mortar Mixers	15	0.23	1.17	1.42	191.12	0.00	0.06	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Cement and Mortar Mixers	D	Cement and Mortar Mixers	25	0.49	1.47	2.74	318.53	0.00	0.15	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Cranes	D	Cranes	50	0.92	2.62	2.17	210.35	0.00	0.22	-	0.08
2013	Annual	Mon-Sun	8.61E+13	Cranes	D	Cranes	120	0.35	1.37	2.08	189.56	0.00	0.19	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Cranes	D	Cranes	175	0.27	1.25	2.01	208.25	0.00	0.12	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Cranes	D	Cranes	250	0.19	0.53	1.80	203.50	0.00	0.06	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Cranes	D	Cranes	500	0.14	0.48	1.29	163.39	0.00	0.05	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Cranes	D	Cranes	750	0.16	0.54	1.49	183.28	0.00	0.05	-	0.01
2013	Annual	Mon-Sun	8.61E+13	Cranes	D	Cranes	9999	0.04	0.15	0.47	44.03	0.00	0.01	-	0.00
2013	Annual	Mon-Sun	8.61E+13	Graders	D	Graders	50	0.98	2.96	2.52	249.82	0.00	0.24	-	0.09
2013	Annual	Mon-Sun	8.61E+13	Graders	D	Graders	120	0.47	2.01	2.92	283.36	0.00	0.26	-	0.04
2013	Annual	Mon-Sun	8.61E+13	Graders	D	Graders	175	0.38	1.90	2.90	321.20	0.00	0.16	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Graders	D	Graders	250	0.27	0.79	2.57	312.28	0.00	0.09	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Graders	D	Graders	500	0.17	0.57	1.53	208.18	0.00	0.06	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Graders	D	Graders	750	0.24	0.80	2.21	293.77	0.00	0.08	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Off-Highway Trucks	D	Off-Highway Trucks	175	0.37	1.96	2.67	324.22	0.00	0.16	-	0.03
2013	Annual	Mon-Sun	8.61E+13	Off-Highway Trucks	D	Off-Highway Trucks	250	0.25	0.70	2.25	302.17	0.00	0.07	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Off-Highway Trucks	D	Off-Highway Trucks	500	0.20	0.58	1.62	247.06	0.00	0.06	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Off-Highway Trucks	D	Off-Highway Trucks	750	0.21	0.62	1.81	267.16	0.00	0.06	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Off-Highway Trucks	D	Off-Highway Trucks	1000	0.25	0.76	2.71	283.37	0.00	0.08	-	0.02
2013	Annual	Mon-Sun	8.61E+13	Crushing/Proc. Equipment	D	Crushing/Proc. Equipment	50	1.58	4.54	3.95	399.30	0.01	0.38	-	0.14
2013	Annual	Mon-Sun	8.61E+13	Crushing/Proc. Equipment	D	Crushing/Proc. Equipment	120	0.53	2.18	3.23	314.27	0.00	0.29	-	0.05

								grams/bhp-hr							
							MaxHP	ROG Exhau	CO Exhaus	NOX Exhau	CO2 Exhau	SO2 Exhau	PM Exhaus	N2O Exhau	CH4 Exhaust
						Bore/Drill Rigs	15	0.364169	1.910214	2.280565	312.8458	0.004868	0.088481	0	0.032858386
						Bore/Drill Rigs	25	0.350892	1.194472	2.22425	290.0934	0.003681	0.089062	0	0.031660457
						Bore/Drill Rigs	50	0.262179	2.069901	2.329711	281.5612	0.00364	0.108617	0	0.023655959
						Bore/Drill Rigs	120	0.168814	1.775739	1.73241	291.5155	0.00342	0.097203	0	0.015231848
						Bore/Drill Rigs	175	0.182366	1.953823	1.796392	365.6638	0.004114	0.078163	0	0.016454548
						Bore/Drill Rigs	250	0.144164	0.622109	1.384645	341.2863	0.00384	0.040058	0	0.013007714
						Bore/Drill Rigs	500	0.117446	0.500469	1.062901	282.4143	0.002772	0.032768	0	0.010596949
						Bore/Drill Rigs	750	0.155234	0.659216	1.414738	372.002	0.00374	0.043315	0	0.014006481
						Bore/Drill Rigs	1000	0.189006	0.756447	2.703645	421.0617	0.004234	0.07009	0	0.017053679
						Cement and Mortar Mixers	15	0.225079	1.166967	1.420221	191.1203	0.002974	0.064517	0	0.020308482
						Cement and Mortar Mixers	25	0.490608	1.474363	2.739398	318.5339	0.004042	0.150844	0	0.044266808
						Concrete/Industrial Saws	25	0.360802	1.231009	2.28097	298.9668	0.003793	0.08844	0	0.032554572
						Concrete/Industrial Saws	50	0.866311	2.647329	2.593026	274.0529	0.003543	0.223739	0	0.078165896
						Concrete/Industrial Saws	120	0.402477	1.828138	2.704297	280.2815	0.003288	0.222739	0	0.036314888
						Concrete/Industrial Saws	175	0.406643	2.255328	3.528473	415.2318	0.004672	0.182968	0	0.036690745
						Cranes	50	0.9207	2.623269	2.171996	210.3461	0.002719	0.217113	0	0.083073265
						Cranes	120	0.347364	1.367511	2.082159	189.5561	0.002224	0.186298	0	0.031342064
						Cranes	175	0.267352	1.249602	2.013727	208.2497	0.002343	0.115398	0	0.02412278
						Cranes	250	0.188757	0.534817	1.804955	203.4978	0.00229	0.06367	0	0.017031243
						Cranes	500	0.140691	0.480063	1.290984	163.3851	0.001604	0.047023	0	0.012694281
						Cranes	750	0.158716	0.538238	1.486233	183.2783	0.001843	0.053497	0	0.014320664
						Cranes	9999	0.04307	0.151102	0.470078	44.03036	0.000443	0.01447	0	0.003886168
						Crawler Tractors	50	1.066534	2.945007	2.383313	225.7041	0.002918	0.245016	0	0.096231628
						Crawler Tractors	120	0.488861	1.83614	2.905526	248.7598	0.002918	0.256027	0	0.04410916
						Crawler Tractors	175	0.433845	1.930612	3.247593	314.1134	0.003534	0.184878	0	0.039145102
						Crawler Tractors	250	0.320026	0.907107	2.893219	301.4242	0.003392	0.111272	0	0.028875467
						Crawler Tractors	500	0.230625	0.862148	2.031138	235.1691	0.002308	0.078785	0	0.020808966
						Crawler Tractors	750	0.276752	1.029449	2.478266	281.0378	0.002826	0.095124	0	0.024970865
						Crawler Tractors	1000	0.313211	1.225584	3.343219	298.5118	0.003001	0.107139	0	0.028260505
						Crushing/Proc. Equipment	50	1.57967	4.544148	3.954631	399.305	0.005162	0.383294	0	0.142531081
						Crushing/Proc. Equipment	120	0.530163	2.178873	3.232694	314.2679	0.003687	0.294611	0	0.047835735
						Crushing/Proc. Equipment	175	0.5033	2.492305	3.949601	433.5312	0.004878	0.224029	0	0.045411922
						Crushing/Proc. Equipment	250	0.335313	0.984257	3.665639	443.6722	0.004992	0.112541	0	0.030254775
						Crushing/Proc. Equipment	500	0.236642	0.76929	2.458284	338.9654	0.003327	0.080167	0	0.02135184
						Crushing/Proc. Equipment	750	0.25053	0.798256	2.68578	356.1209	0.003581	0.085673	0	0.022604967
						Crushing/Proc. Equipment	9999	0.051121	0.166949	0.603975	59.3249	0.000596	0.017595	0	0.004612542
						Dumpers/Tenders	25	0.175157	0.580693	1.089992	138.3348	0.001755	0.052583	0	0.015804146
						Excavators	25	0.359845	1.228199	2.273931	298.2843	0.003785	0.085175	0	0.032468203
						Excavators	50	0.74015	2.576998	2.230234	226.9554	0.002934	0.192649	0	0.066782581
						Excavators	120	0.41069	1.956755	2.567216	278.2905	0.003264	0.221657	0	0.037055967
						Excavators	175	0.313163	1.728429	2.315229	290.8733	0.003273	0.13279	0	0.028256163
						Excavators	250	0.225423	0.642551	2.06131	287.9091	0.003239	0.067557	0	0.020339534
						Excavators	500	0.157384	0.478168	1.339338	212.0413	0.002081	0.046822	0	0.014200489
						Excavators	750	0.174998	0.528278	1.525922	234.3044	0.002356	0.05263	0	0.015789762
						Graders	50	0.980108	2.960158	2.515183	249.8215	0.00323	0.23774	0	0.088433531
						Graders	120	0.473978	2.007011	2.921521	283.3625	0.003324	0.25543	0	0.042766228
						Graders	175	0.380277	1.903886	2.901534	321.1991	0.003614	0.163678	0	0.034311785
						Graders	250	0.270691	0.785778	2.573767	312.277	0.003514	0.089605	0	0.024423966
						Graders	500	0.168325	0.570508	1.527964	208.1847	0.002043	0.05516	0	0.015187727
						Graders	750	0.238879	0.804683	2.213157	293.7717	0.002954	0.078943	0	0.021553651
						Off-Highway Tractors	120	0.798828	2.718061	4.675223	354.3215	0.004156	0.407503	0	0.072076939
						Off-Highway Tractors	175	0.530152	2.16037	3.97535	338.0359	0.003803	0.225795	0	0.047834757
						Off-Highway Tractors	250	0.297787	0.851006	2.622353	236.6252	0.002662	0.109083	0	0.026868818
						Off-Highway Tractors	750	0.395814	1.747885	3.513042	343.5995	0.003455	0.142459	0	0.035713667
						Off-Highway Tractors	1000	0.445853	2.046574	4.561556	369.3571	0.003714	0.155996	0	0.040228646
						Off-Highway Trucks	175	0.373571	1.964747	2.67115	324.2221	0.003648	0.156041	0	0.033706705
						Off-Highway Trucks	250	0.253967	0.696096	2.245123	302.175	0.0034	0.074822	0	0.022915042
						Off-Highway Trucks	500	0.19682	0.577128	1.620763	247.0572	0.002425	0.057472	0	0.017758737
						Off-Highway Trucks	750	0.214103	0.623948	1.806586	267.1589	0.002686	0.063199	0	0.019318206
						Off-Highway Trucks	1000	0.248729	0.75788	2.710896	283.37	0.002849	0.081436	0	0.022442418
						Other Construction Equipment	15	0.355782	1.866222	2.228043	305.6409	0.004756	0.086443	0	0.032101648
						Other Construction Equipment	25	0.290071	0.98743	1.838712	239.8104	0.003043	0.073624	0	0.026172632
						Other Construction Equipment	50	0.683235	2.406698	2.345418	253.9171	0.003283	0.185963	0	0.061647251
						Other Construction Equipment	120	0.380239	1.99464	2.655599	305.6409	0.003585	0.214384	0	0.03430832
						Other Construction Equipment	175	0.242435	1.522196	2.076503	276.0844	0.003106	0.108834	0	0.021874537
						Other Construction Equipment	500	0.131726	0.474845	1.377778	230.6412	0.002264	0.044559	0	0.011885383
						Pavers	25	0.44734	1.449779	2.722259	338.5561	0.004296	0.136396	0	0.040362762
						Pavers	50	1.239164	3.258778	2.674055	253.9169	0.003283	0.279519	0	0.111807712
						Pavers	120	0.524368	1.911511	3.158932	261.558	0.003068	0.275571	0	0.047312877
						Pavers	175	0.460694	2.01749	3.569169	332.5103	0.003741	0.199331	0	0.041567641
						Pavers	250	0.375876	1.103166	3.532495	352.6626	0.003968	0.137095	0	0.033914718
						Pavers	500	0.206394	0.839463	1.912355	211.5974	0.002077	0.074176	0	0.018622582
						Paving Equipment	25	0.277136	0.943399	1.756721	229.1169	0.002907	0.070341	0	0.025005543
						Paving Equipment	50	1.058098	2.765758	2.280661	217.0582	0.002806	0.238635	0	0.095470512
						Paving Equipment	120	0.411027	1.496208	2.480132	206.0041	0.002417	0.216881	0	0.037086294
						Paving Equipment	175	0.359608	1.575583	2.803619	261.8479	0.002946	0.156014	0	0.032446881
						Paving Equipment	250	0.231779	0.6827	2.214648	221.8816	0.002497	0.084752	0	0.020913022
						Plate Compactors	15	0.151848	0.796502	0.950927	130.4473	0.00203	0.037249	0	0.013700958
						Rollers	15	0.222474	1.166967	1.393217	191.1203	0.002974	0.054054	0	0.020073481
						Rollers	25	0.292823	0.996799	1.856158	242.0858	0.003072	0.074323	0	0.026420958
						Rollers	50	0.929524	2.641152	2.342874	235.715	0.003047	0.221946	0	0.083869453
						Rollers	120	0.372762	1.535825	2.36375	222.9737	0.002616	0.201715	0	0.033633749
						Rollers	175	0.323248	1.606875	2.621787	280.3099	0.003154	0.142575	0	0.029166123
						Rollers	250	0.229031	0.705233	2.381399	277.7616	0.003125	0.081832	0	0.020665103
						Rollers	500	0.150024	0.57267	1.525889	198.7652	0.001951	0.05376	0	0.013536423

2007 OFF-ROAD EMISSIONS

CY	Season	AvgDays	Code	Equipment	Fuel		grams/bhp-hr MaxHP	ROG Exhaust	CO Exhaust	NOX Exhaust	CO2 Exhaust	SO2 Exhaust	PM Exhaust	N2O Exhaust	CH4 Exhaust		grams/bhp-hr MaxHP	ROG Exhaus	CO Exhaust	NOX Exhaus	CO2 Exhau	SO2 Exhau	PM Exhaus	N2O Exhau	CH4 Exhaust
	2013 Annual	Mon-Sun	8.61E+13	Crushing/Proc. Equipment	D	Crushing/Proc. Equipment	175	0.50	2.49	3.95	433.53	0.00	0.22	-	0.05	Rough Terrain Forklifts	50	1.071669	3.427179	3.008586	307.1578	0.003971	0.272461	0	0.096694974
	2013 Annual	Mon-Sun	8.61E+13	Crushing/Proc. Equipment	D	Crushing/Proc. Equipment	250	0.34	0.98	3.67	443.67	0.00	0.11	-	0.03	Rough Terrain Forklifts	120	0.361089	1.635425	2.266188	236.0563	0.002769	0.200149	0	0.032580532
	2013 Annual	Mon-Sun	8.61E+13	Crushing/Proc. Equipment	D	Crushing/Proc. Equipment	500	0.24	0.77	2.46	338.97	0.00	0.08	-	0.02	Rough Terrain Forklifts	175	0.350385	1.880688	2.708293	323.7346	0.003643	0.153487	0	0.03161473
	2013 Annual	Mon-Sun	8.61E+13	Crushing/Proc. Equipment	D	Crushing/Proc. Equipment	750	0.25	0.80	2.69	356.12	0.00	0.09	-	0.02	Rough Terrain Forklifts	250	0.234802	0.689145	2.350656	309.888	0.003487	0.075427	0	0.02118577
	2013 Annual	Mon-Sun	8.61E+13	Crushing/Proc. Equipment	D	Crushing/Proc. Equipment	9999	0.05	0.17	0.60	59.32	0.00	0.02	-	0.00	Rough Terrain Forklifts	500	0.165461	0.518605	1.550982	232.7572	0.002285	0.053	0	0.014929282
	2013 Annual	Mon-Sun	8.61E+13	Rough Terrain Forklifts	D	Rough Terrain Forklifts	50	1.07	3.43	3.01	307.16	0.00	0.27	-	0.10	Rubber Tired Dozers	175	0.549364	2.192019	4.033384	335.5983	0.003776	0.231399	0	0.049568208
	2013 Annual	Mon-Sun	8.61E+13	Rough Terrain Forklifts	D	Rough Terrain Forklifts	120	0.36	1.64	2.27	236.06	0.00	0.20	-	0.03	Rubber Tired Dozers	250	0.441835	1.239635	3.777037	332.9132	0.003746	0.159761	0	0.039866114
	2013 Annual	Mon-Sun	8.61E+13	Rough Terrain Forklifts	D	Rough Terrain Forklifts	175	0.35	1.88	2.71	323.73	0.00	0.15	-	0.03	Rubber Tired Dozers	500	0.291322	1.290595	2.477059	240.2883	0.002359	0.102794	0	0.026285488
	2013 Annual	Mon-Sun	8.61E+13	Rough Terrain Forklifts	D	Rough Terrain Forklifts	250	0.23	0.69	2.35	309.89	0.00	0.08	-	0.02	Rubber Tired Dozers	750	0.293226	1.293942	2.526266	241.1832	0.002425	0.10392	0	0.026457303
	2013 Annual	Mon-Sun	8.61E+13	Rough Terrain Forklifts	D	Rough Terrain Forklifts	500	0.17	0.52	1.55	232.76	0.00	0.05	-	0.01	Rubber Tired Dozers	1000	0.340462	1.561848	3.380329	268.4786	0.002699	0.117658	0	0.030719372
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	25	0.37	1.26	2.34	307.16	0.00	0.09	-	0.03	Rubber Tired Loaders	25	0.370687	1.264735	2.343463	307.1577	0.003897	0.090863	0	0.033446471
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	50	1.09	3.30	2.83	282.59	0.00	0.27	-	0.10	Rubber Tired Loaders	50	1.088427	3.303357	2.828646	282.5852	0.003653	0.265105	0	0.098206975
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	120	0.37	1.57	2.27	222.69	0.00	0.20	-	0.03	Rubber Tired Loaders	120	0.36694	1.56941	2.273942	222.6893	0.002612	0.198492	0	0.033108433
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	175	0.32	1.63	2.46	275.56	0.00	0.14	-	0.03	Rubber Tired Loaders	175	0.320854	1.62608	2.462904	275.5643	0.003101	0.138726	0	0.028950143
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	250	0.23	0.67	2.20	270.30	0.00	0.08	-	0.02	Rubber Tired Loaders	250	0.228348	0.668493	2.200067	270.2987	0.003041	0.075642	0	0.020603454
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	500	0.17	0.58	1.56	215.01	0.00	0.06	-	0.02	Rubber Tired Loaders	500	0.169384	0.58031	1.556641	215.0104	0.00211	0.055625	0	0.015283211
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	750	0.23	0.79	2.18	293.64	0.00	0.08	-	0.02	Rubber Tired Loaders	750	0.232733	0.792203	2.1838	293.6427	0.002952	0.077096	0	0.020999119
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Loaders	D	Rubber Tired Loaders	1000	0.24	0.84	2.70	269.38	0.00	0.08	-	0.02	Rubber Tired Loaders	1000	0.235381	0.835412	2.704326	269.3774	0.002709	0.081393	0	0.021238101
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Dozers	D	Rubber Tired Dozers	175	0.55	2.19	4.03	335.60	0.00	0.23	-	0.05	Scrapers	120	0.709381	2.624574	4.211503	354.9377	0.004164	0.371544	0	0.064006334
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Dozers	D	Rubber Tired Dozers	250	0.44	1.24	3.78	332.91	0.00	0.16	-	0.04	Scrapers	175	0.536519	2.360461	4.034422	383.801	0.004318	0.229102	0	0.048409259
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Dozers	D	Rubber Tired Dozers	500	0.29	1.29	2.48	240.29	0.00	0.10	-	0.03	Scrapers	250	0.408679	1.162661	3.716211	380.0566	0.004276	0.143459	0	0.036874422
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Dozers	D	Rubber Tired Dozers	750	0.29	1.29	2.53	241.18	0.00	0.10	-	0.03	Scrapers	500	0.289053	1.098786	2.56625	291.5951	0.002862	0.09971	0	0.026080777
	2013 Annual	Mon-Sun	8.61E+13	Rubber Tired Dozers	D	Rubber Tired Dozers	1000	0.34	1.56	3.38	268.48	0.00	0.12	-	0.03	Scrapers	750	0.334276	1.264434	3.016874	335.8259	0.003377	0.116007	0	0.030161192
	2013 Annual	Mon-Sun	8.61E+13	Tractors/Loaders/Backhoes	D	Tractors/Loaders/Backhoes	25	0.35	1.19	2.24	287.82	0.00	0.10	-	0.03	Signal Boards	15	0.217177	1.139183	1.360046	186.5699	0.002903	0.053076	0	0.019595544
	2013 Annual	Mon-Sun	8.61E+13	Tractors/Loaders/Backhoes	D	Tractors/Loaders/Backhoes	50	0.81	2.90	2.62	275.30	0.00	0.22	-	0.07	Signal Boards	50	1.044562	3.135588	3.098129	328.3174	0.004244	0.268653	0	0.094249115
	2013 Annual	Mon-Sun	8.61E+13	Tractors/Loaders/Backhoes	D	Tractors/Loaders/Backhoes	120	0.26	1.33	1.73	195.53	0.00	0.14	-	0.02	Signal Boards	120	0.4445	1.97094	2.951283	303.1759	0.003556	0.243595	0	0.04010648
	2013 Annual	Mon-Sun	8.61E+13	Tractors/Loaders/Backhoes	D	Tractors/Loaders/Backhoes	175	0.26	1.52	2.00	262.79	0.00	0.11	-	0.02	Signal Boards	175	0.397989	2.161859	3.456181	400.5728	0.004507	0.177636	0	0.035909889
	2013 Annual	Mon-Sun	8.61E+13	Tractors/Loaders/Backhoes	D	Tractors/Loaders/Backhoes	250	0.22	0.67	2.12	311.59	0.00	0.07	-	0.02	Signal Boards	250	0.2962	0.970663	3.62219	463.194	0.005212	0.105284	0	0.026725665
	2013 Annual	Mon-Sun	8.61E+13	Tractors/Loaders/Backhoes	D	Tractors/Loaders/Backhoes	500	0.21	0.68	1.87	312.85	0.00	0.06	-	0.02	Skid Steer Loaders	25	0.365923	1.125696	2.114754	250.2767	0.003176	0.114038	0	0.033016664
	2013 Annual	Mon-Sun	8.61E+13	Tractors/Loaders/Backhoes	D	Tractors/Loaders/Backhoes	750	0.21	0.68	1.93	312.85	0.00	0.06	-	0.02	Skid Steer Loaders	50	0.469001	2.052617	2.067223	231.506	0.002993	0.142375	0	0.042317225
	2013 Annual	Mon-Sun	8.61E+13	Crawler Tractors	D	Crawler Tractors	50	1.07	2.95	2.38	225.70	0.00	0.25	-	0.10	Skid Steer Loaders	120	0.162031	1.038591	1.235053	161.637	0.001896	0.092454	0	0.014619826
	2013 Annual	Mon-Sun	8.61E+13	Crawler Tractors	D	Crawler Tractors	120	0.49	1.84	2.91	248.76	0.00	0.26	-	0.04	Surfacing Equipment	50	0.432443	1.273008	1.233041	127.9824	0.001654	0.107665	0	0.039018643
	2013 Annual	Mon-Sun	8.61E+13	Crawler Tractors	D	Crawler Tractors	175	0.43	1.93	3.25	314.11	0.00	0.18	-	0.04	Surfacing Equipment	120	0.366692	1.593207	2.465759	241.0334	0.002827	0.19529	0	0.03308602
	2013 Annual	Mon-Sun	8.61E+13	Crawler Tractors	D	Crawler Tractors	250	0.32	0.91	2.89	301.42	0.00	0.11	-	0.03	Surfacing Equipment	175	0.231742	1.225873	2.006767	222.3236	0.002502	0.101544	0	0.020909735
	2013 Annual	Mon-Sun	8.61E+13	Crawler Tractors	D	Crawler Tractors	500	0.23	0.86	2.03	235.17	0.00	0.08	-	0.02	Surfacing Equipment	250	0.185973	0.612082	2.027969	244.7024	0.002753	0.068211	0	0.016780015
	2013 Annual	Mon-Sun	8.61E+13	Crawler Tractors	D	Crawler Tractors	750	0.28	1.03	2.48	281.04	0.00	0.10	-	0.02	Surfacing Equipment	500	0.138976	0.58218	1.505728	200.6764	0.00197	0.051429	0	0.012539583
	2013 Annual	Mon-Sun	8.61E+13	Crawler Tractors	D	Crawler Tractors	1000	0.31	1.23	3.34	298.51	0.00	0.11	-	0.03	Surfacing Equipment	750	0.147675	0.608547	1.61201	209.8911	0.00211	0.05443	0	0.013324503
	2013 Annual	Mon-Sun	8.61E+13	Skid Steer Loaders	D	Skid Steer Loaders	25	0.37	1.13	2.11	250.28	0.00	0.11	-	0.03	Tractors/Loaders/Backhoes	25	0.354041	1.191352	2.243799	287.8181	0.003652	0.102482	0	0.031944527
	2013 Annual	Mon-Sun	8.61E+13	Skid Steer Loaders	D	Skid Steer Loaders	50	0.47	2.05	2.07	231.51	0.00	0.14	-	0.04	Tractors/Loaders/Backhoes	50	0.810669	2.901824	2.624932	275.3044	0.003559	0.216209	0	0.073145319
	2013 Annual	Mon-Sun	8.61E+13	Skid Steer Loaders	D	Skid Steer Loaders	120	0.16	1.04	1.24	161.64	0.00	0.09	-	0.01	Tractors/Loaders/Backhoes	120	0.262489	1.333825	1.72557	195.5286	0.002294	0.144772	0	0.023683996
	2013 Annual	Mon-Sun	8.61E+13	Off-Highway Tractors	D	Off-Highway Tractors	120	0.80	2.72	4.68	354.32	0.00	0.41	-	0.07	Tractors/Loaders/Backhoes	175	0.256079	1.519177	1.995042	262.7905	0.002957	0.110904	0	0.023105565
	2013 Annual	Mon-Sun	8.61E+13	Off-Highway Tractors	D	Off-Highway Tractors	175	0.53	2.16	3.98	338.04	0.00	0.23	-	0.05	Tractors/Loaders/Backhoes	250	0.218457	0.665087	2.115489	311.5943	0.003506	0.067133	0	0.019711001
	2013 Annual	Mon-Sun	8.61E+13	Off-Highway Tractors	D	Off-Highway Tractors	250	0.30	0.85	2.62	236.63	0.00	0.11	-	0.03	Tractors/Loaders/Backhoes	500	0.207755	0.675227	1.874309	312.8457	0.00352	0.063581	0	0.018745431
	2013 Annual	Mon-Sun	8.61E+13	Off-Highway Tractors	D	Off-Highway Tractors	750	0.40	1.75	3.51	343.60	0.00	0.14	-	0.04	Tractors/Loaders/Backhoes	750	0.20918	0.675141	1.9328	312.8458	0.00352	0.064712	0	0.018873988
	2013 Annual	Mon-Sun	8.61E+13	Off-Highway Tractors	D	Off-Highway Tractors	1000	0.45	2.05	4.56	369.36	0.00	0.16	-	0.04	Trenchers	15	0.297956	1.562903	1.865917	255.9647	0.003983	0.072817	0	0.026884128
	2013 Annual	Mon-Sun	8.61E+13	Dumpers/Tenders	D	Dumpers/Tenders	25	0.18	0.58	1.09	138.33	0.00	0.05	-	0.02	Trenchers	25	0.72078	2.459208	4.556732	597.2511	0.007578	0.176677	0	0.065034811
	2013 Annual	Mon-Sun	8.61E+13	Other Construction Equipment	D	Other Construction Equipme	15	0.36	1.87	2.23	305.64	0.00	0.09	-	0.03	Trenchers	50	1.420712	3.70359	3.113628	298.6255	0.00386	0.320404	0	0.12818853
	2013 Annual	Mon-Sun	8.61E+13	Other Construction Equipment	D	Other Construction Equipme	25	0.29	0.99	1.84	239.81	0.00	0.07	-	0.03	Trenchers	120	0.484297	1.770512	2.972035	245.2995	0.002877	0.252719	0	0.043697318
	2013 Annual	Mon-Sun	8.61E+13	Other Construction Equipment	D	Other Construction Equipme	50	0.68	2.41	2.35	253.92	0.00	0.19	-	0.06	Trenchers	175	0.506681	2.237465	4.022812	372.9771	0.004197	0.220041	0	0.045717052
	2013 Annual	Mon-Sun	8.61E+13	Other Construction Equipment	D	Other Construction Equipme	120	0.38	1.99	2.66	305.64	0.00	0.21	-	0.03	Trenchers	250	0.427012	1.286064	4.079743	404.4243	0.00455	0.159684	0	0.038528569
	2013 Annual	Mon-Sun	8.61E+13	Other Construction Equipment	D	Other Construction Equipme	175	0.24	1.52	2.08	276.08	0.00	0.11	-	0.02	Trenchers	500	0.27079	1.180254	2.582716	282.4144	0.002772	0.100223	0	0.024432913
	2013 Annual	Mon-Sun	8.61E+13	Other Construction Equipment	D	Other Construction Equipme	500	0.13	0.47	1.38	230.64	0.00	0.04	-	0.01	Trenchers	750	0.342669	1.481945	3.30566	354.9378	0.003569	0.127032	0	0.030918437

2011 OFF-ROAD EMISSIONS

CalendarYear	AirBasin	Equipment Class	EquipmentTypeID	Equipment Type	HorsepowerBin	BaseNOx	BasePM	BaseHC	ScenNOx	ScenPM	ScenHC	BaseActivity (hours/year)	ScenActivity	BasePopulation	ScenPopulation	Nox EMFAC lbs/hr	PM EMFAC lbs/hr	PM2.5 EMFAC lbs/hr	HC EMFAC lbs/hr
2014	SC	Construction and Mining	11	Bore/Drill Rigs	50	1.43	0.10	0.18	1.43	0.10	0.18	12,305	12,305	38	38	0.2320	0.0166	0.0153	0.0300
2014	SC	Construction and Mining	11	Bore/Drill Rigs	120	8.17	0.49	0.52	8.09	0.48	0.51	42,266	42,266	118	118	0.3868	0.0231	0.0212	0.0245
2014	SC	Construction and Mining	11	Bore/Drill Rigs	175	8.80	0.40	0.55	8.80	0.40	0.55	26,297	26,297	92	92	0.6691	0.0307	0.0282	0.0419
2014	SC	Construction and Mining	11	Bore/Drill Rigs	250	11.29	0.34	0.58	11.00	0.33	0.56	27,128	27,128	92	92	0.8322	0.0250	0.0230	0.0425
2014	SC	Construction and Mining	11	Bore/Drill Rigs	500	11.57	0.37	0.61	11.24	0.36	0.59	18,232	18,232	64	64	1.2692	0.0410	0.0377	0.0671
2014	SC	Construction and Mining	11	Bore/Drill Rigs	750	11.27	0.38	0.62	11.10	0.38	0.61	13,795	13,795	32	32	1.6340	0.0556	0.0511	0.0895
2014	SC	Construction and Mining	11	Bore/Drill Rigs	1000	1.12	0.02	0.03	1.12	0.02	0.03	735	735	1	1	3.0383	0.0593	0.0546	0.0883
2014	SC	Construction and Mining	11	Bore/Drill Rigs	9999	5.38	0.13	0.18	5.38	0.13	0.18	858	858	1	1	12.5414	0.3043	0.2799	0.4178
2014	SC	Construction and Mining	12	Cranes	50	0.55	0.06	0.16	0.55	0.06	0.16	7,055	7,055	18	18	0.1572	0.0157	0.0144	0.0451
2014	SC	Construction and Mining	12	Cranes	120	25.08	1.86	2.51	24.67	1.83	2.46	84,778	84,778	214	214	0.5916	0.0440	0.0404	0.0593
2014	SC	Construction and Mining	12	Cranes	175	53.22	2.88	4.12	52.97	2.86	4.10	133,158	133,158	322	322	0.7993	0.0432	0.0398	0.0619
2014	SC	Construction and Mining	12	Cranes	250	84.23	3.88	5.86	83.33	3.82	5.79	153,829	153,829	361	361	1.0951	0.0504	0.0464	0.0762
2014	SC	Construction and Mining	12	Cranes	500	103.26	4.29	6.59	101.93	4.22	6.49	152,450	152,450	346	346	1.3547	0.0563	0.0518	0.0864
2014	SC	Construction and Mining	12	Cranes	750	18.60	0.65	0.99	18.60	0.65	0.99	23,856	23,856	51	51	1.5589	0.0543	0.0500	0.0833
2014	SC	Construction and Mining	12	Cranes	1000	11.73	0.58	0.87	11.73	0.58	0.87	3,391	3,391	8	8	6.9186	0.3429	0.3155	0.5128
2014	SC	Construction and Mining	12	Cranes	9999	0.18	0.00	0.01	0.18	0.00	0.01	236	236	1	1	1.4921	0.0356	0.0327	0.0651
2014	SC	Construction and Mining	13	Crawler Tractors	50	1.79	0.21	0.59	1.78	0.21	0.58	13,865	13,865	45	45	0.2576	0.0301	0.0277	0.0844
2014	SC	Construction and Mining	13	Crawler Tractors	120	100.92	8.44	9.81	100.47	8.39	9.75	325,227	325,227	776	776	0.6206	0.0519	0.0477	0.0603
2014	SC	Construction and Mining	13	Crawler Tractors	175	102.08	5.57	7.73	100.95	5.49	7.63	207,718	207,718	508	508	0.9828	0.0536	0.0493	0.0745
2014	SC	Construction and Mining	13	Crawler Tractors	250	93.26	3.63	5.63	92.10	3.56	5.54	154,007	154,007	371	371	1.2111	0.0471	0.0433	0.0732
2014	SC	Construction and Mining	13	Crawler Tractors	500	224.81	8.74	13.68	221.24	8.56	13.42	244,636	244,636	596	596	1.8379	0.0714	0.0657	0.1118
2014	SC	Construction and Mining	13	Crawler Tractors	750	75.63	2.76	4.43	75.43	2.75	4.42	57,189	57,189	122	122	2.6450	0.0966	0.0889	0.1551
2014	SC	Construction and Mining	13	Crawler Tractors	1000	15.08	0.44	0.80	15.08	0.44	0.80	5,188	5,188	11	11	5.8136	0.1708	0.1572	0.3075
2014	SC	Construction and Mining	13	Crawler Tractors	9999	6.78	0.18	0.31	6.78	0.18	0.31	1,558	1,558	3	3	8.7010	0.2286	0.2103	0.4020
2014	SC	Construction and Mining	14	Excavators	50	54.37	4.17	7.47	54.35	4.16	7.46	727,548	727,548	1,104	1,104	0.1495	0.0114	0.0105	0.0205
2014	SC	Construction and Mining	14	Excavators	120	82.45	6.16	6.83	82.07	6.12	6.78	464,602	464,602	799	799	0.3549	0.0265	0.0244	0.0294
2014	SC	Construction and Mining	14	Excavators	175	156.47	7.72	10.86	155.19	7.63	10.74	542,031	542,031	1,015	1,015	0.5773	0.0285	0.0262	0.0401
2014	SC	Construction and Mining	14	Excavators	250	189.21	6.12	10.62	185.27	5.88	10.30	460,572	460,572	872	872	0.8216	0.0266	0.0244	0.0461
2014	SC	Construction and Mining	14	Excavators	500	242.63	7.95	14.01	236.60	7.62	13.57	510,069	510,069	887	887	0.9514	0.0312	0.0287	0.0549
2014	SC	Construction and Mining	14	Excavators	750	22.60	0.72	1.25	22.75	0.73	1.27	26,405	26,405	45	45	1.7120	0.0547	0.0503	0.0949
2014	SC	Construction and Mining	14	Excavators	1000	4.68	0.15	0.25	3.96	0.11	0.18	2,019	2,019	4	4	4.6323	0.1480	0.1362	0.2454
2014	SC	Construction and Mining	14	Excavators	9999	5.05	0.13	0.23	5.05	0.13	0.23	2,128	2,128	3	3	4.7483	0.1225	0.1127	0.2205
2014	SC	Construction and Mining	15	Graders	50	0.51	0.07	0.20	0.51	0.07	0.20	4,372	4,372	14	14	0.2311	0.0306	0.0282	0.0902
2014	SC	Construction and Mining	15	Graders	120	22.08	1.84	2.32	21.76	1.81	2.29	53,149	53,149	150	150	0.8310	0.0692	0.0637	0.0874
2014	SC	Construction and Mining	15	Graders	175	173.04	9.73	13.91	171.99	9.65	13.83	296,533	296,533	701	701	1.1671	0.0656	0.0604	0.0940
2014	SC	Construction and Mining	15	Graders	250	199.22	6.44	11.18	199.08	6.43	11.17	376,728	376,728	557	557	1.0576	0.0342	0.0314	0.0594
2014	SC	Construction and Mining	15	Graders	500	37.28	1.43	2.61	37.08	1.42	2.59	75,600	75,600	104	104	0.9861	0.0380	0.0349	0.0689
2014	SC	Construction and Mining	15	Graders	1000	0.90	0.03	0.06	0.90	0.03	0.06	270	270	0	0	6.6646	0.2319	0.2134	0.4206
2014	SC	Construction and Mining	15	Graders	9999	8.94	0.27	0.49	8.94	0.27	0.49	1,520	1,520	2	2	11.7702	0.3550	0.3266	0.6488
2014	SC	Construction and Mining	16	Off-Highway Tractors	50	26.13	2.64	6.43	25.59	2.53	6.09	251,152	251,152	423	423	0.2081	0.0210	0.0194	0.0512
2014	SC	Construction and Mining	16	Off-Highway Tractors	120	41.62	3.43	3.87	40.12	3.28	3.69	178,558	178,558	308	308	0.4661	0.0384	0.0354	0.0433
2014	SC	Construction and Mining	16	Off-Highway Tractors	175	27.81	1.43	1.95	27.52	1.41	1.92	72,176	72,176	117	117	0.7707	0.0397	0.0365	0.0539
2014	SC	Construction and Mining	16	Off-Highway Tractors	250	26.17	0.94	1.55	26.13	0.94	1.54	44,971	44,971	76	76	1.1640	0.0418	0.0385	0.0688
2014	SC	Construction and Mining	16	Off-Highway Tractors	500	52.50	1.88	3.10	51.23	1.83	3.01	80,966	80,966	131	131	1.2968	0.0465	0.0428	0.0765
2014	SC	Construction and Mining	16	Off-Highway Tractors	750	13.20	0.44	0.73	13.07	0.43	0.72	11,850	11,850	19	19	2.2280	0.0749	0.0689	0.1229
2014	SC	Construction and Mining	16	Off-Highway Tractors	1000	1.14	0.06	0.08	0.21	0.01	0.01	193	193	0	0	11.7828	0.5995	0.5515	0.8237
2014	SC	Construction and Mining	16	Off-Highway Tractors	9999	7.24	0.27	0.48	4.31	0.14	0.24	895	895	2	2	16.1909	0.6088	0.5601	1.0692
2014	SC	Construction and Mining	17	Off-Highway Trucks	50	2.60	0.27	0.61	2.60	0.27	0.61	36,487	36,487	25	25	0.1426	0.0148	0.0137	0.0336
2014	SC	Construction and Mining	17	Off-Highway Trucks	120	3.58	0.29	0.35	3.39	0.27	0.33	16,376	16,376	14	14	0.4368	0.0354	0.0326	0.0432
2014	SC	Construction and Mining	17	Off-Highway Trucks	175	60.28	3.38	4.90	60.01	3.36	4.87	171,909	171,909	135	135	0.7013	0.0393	0.0362	0.0570
2014	SC	Construction and Mining	17	Off-Highway Trucks	250	136.04	6.01	10.03	128.61	5.57	9.43	266,094	266,094	231	231	1.0225	0.0452	0.0416	0.0754
2014	SC	Construction and Mining	17	Off-Highway Trucks	500	476.87	18.51	33.13	463.87	17.77	32.19	631,437	631,437	514	514	1.5104	0.0586	0.0539	0.1049
2014	SC	Construction and Mining	17	Off-Highway Trucks	750	217.39	9.30	15.70	197.81	8.18	14.21	128,428	128,428	117	117	3.3854	0.1448	0.1332	0.2445
2014	SC	Construction and Mining	17	Off-Highway Trucks	1000	159.75	4.71	8.64	157.55	4.63	8.48	65,531	65,531	54	54	4.8757	0.1437	0.1322	0.2638
2014	SC	Construction and Mining	17	Off-Highway Trucks	9999	209.30	6.56	12.37	207.69	6.50	12.22	47,604	47,604	35	35	8.7933	0.2755	0.2535	0.5197
2014	SC	Construction and Mining	18	Other Construction Equipment	50	13.56	1.22	2.62	13.56	1.22	2.62	139,974	139,974	327	327	0.1937	0.0175	0.0161	0.0374
2014	SC	Construction and Mining	18	Other Construction Equipment	120	56.96	4.45	5.18	56.74	4.43	5.15	229,034	229,034	576	576	0.4974	0.0388	0.0357	0.0452
2014	SC	Construction and Mining	18	Other Construction Equipment	175	30.39	1.61	2.25	29.76	1.56	2.19	66,898	66,898	179	179	0.9087	0.0481	0.0442	0.0671
2014	SC	Construction and Mining	18	Other Construction Equipment	250	34.69	1.29	2.02	34.20	1.26	1.99	59,661	59,661	161	161	1.1629	0.0431	0.0397	0.0676
2014	SC	Construction and Mining	18	Other Construction Equipment	500	95.84	3.61	5.78	92.19	3.40	5.51	123,703	123,703	313	313	1.5495	0.0583	0.0536	0.0935
2014	SC	Construction and Mining	18	Other Construction Equipment	750	33.78	1.15	1.85	30.66	0.98	1.61	28,963	28,963	65	65	2.3326	0.0792	0.0729	0.1277
2014	SC	Construction and Mining	18	Other Construction Equipment	1000	4.12	0.11	0.17	4.12	0.11	0.17	2,440	2,440	6	6	3.3802	0.0888	0.0817	0.1390
2014	SC	Construction and Mining	18	Other Construction Equipment	9999	3.13	0.09	0.14	2.90	0.08	0.14	1,143	1,143	3	3	5.4761	0.1504	0.1384	0.2531
2014	SC	Construction and Mining	19	Pavers	50	1.71	0.18	0.47	1.71	0.18	0.47	16,924	16,924	53	53	0.2022	0.0210	0.0193	0.0555
2014	SC	Construction and Mining	19	Pavers	120	20.24	1.58	1.85	20.15	1.57	1.83	89,184	89,184	257	257	0.4539	0.0354	0.0325	0.0414
2014	SC	Construction and Mining	19	Pavers	175	25.31	1.27	1.83	25.19	1.26	1.82	60,635	60,635	174	174	0.8349	0.0418	0.0384	0.0605
2014	SC	Construction and Mining	19	Pavers	250	12.24	0.31	0.51	12.23	0.31	0.51	30,261	30,261	75	75	0.8091	0.0206	0.0189	0.0336
2014	SC	Construction and Mining	19	Pavers	500	3.44	0.11	0.17	3.44	0.11	0.17	7,532	7,532	19	19	0.9136	0.0303	0.0279	0.0446
2014	SC	Construction and Mining	19	Pavers	750	0.31	0.01	0.02	0.31	0.01	0.02	376	376	1	1	1.6708	0.0716	0.0658	0.0945
2014	SC	Construction and Mining	20	Paving Equipment	50	1.97	0.17	0.34	1.96	0.16	0.33	27,673	27,673	65	65	0.1422	0.0122	0.0112	0.0247
2014	SC	Construction and Mining	20	Paving Equipment	120	12.12	0.93	1.07	12.00	0.91	1.05	54,311	54,311	133	133	0.4465	0.0341	0.0314	0.0394
2014	SC	Construction and Mining	20	Paving Equipment	175	9.36	0.45	0.62	9.31	0.44	0.61	30,730	30,730	73	73	0.6090	0.0293	0.0269	0.0401
2014	SC	Construction and Mining	20	Paving Equipment	250	4.98	0.18	0.28	4.46	0.15	0.24	11,053	11,053	26	26	0.9009	0.0327	0.0301	0.0512
2014	SC	Construction and Mining	20	Paving Equipment	500	6.14	0.22	0.34	6.12	0.22	0.34	9,992	9,992	24	24	1.2299	0.0440	0.0405	0.0690
2014	SC	Construction and Mining	20	Paving Equipment	750	2.46	0.06	0.11	2.46	0.06	0.11	2,635	2,635	6	6	1.8665	0.0430	0.0395	0.0853
2014	SC	Construction and Mining	20	Paving Equipment	1000	0.56	0.01	0.02	0.56	0.01	0.02	370	370	1	1	3.0141	0.0729	0.0671	0.1190
2014	SC	Construction and Mining	21	Rollers	50	33.30	3.00	6.71	33.20	2.98	6.65	417,161	417,161	1,338	1,338	0.1597	0.0144	0.0132	0.0322
2014	SC	Construction and Mining	21	Rollers	120	68.96	5.15	6.22	68.21	5.08	6.13	297,111	297,111	997	997	0.4642	0.0347	0.0319	0.0419
2014	SC	Construction and Mining	21	Rollers	175	53.21	2.49	3.45	52.35	2.43	3.37	186,363	186,363	577	577	0.5711	0.0267	0.0245	0.0370
2014	SC	Construction and Mining	21	Rollers	250	9.21	0.33	0.53	9.43	0.33	0.55	19,784	19,784	71	71	0.9311	0.0330	0.0304	0.0539
2014	SC	Construction and Mining	21	Rollers	500	6.41	0.26	0.40	5.65	0.22	0.34	7,873	7,873	29	29	1.6295	0.0671	0.0617	0.1022
2014	SC	Construction and Mining	21	Rollers	750	0.46	0.02	0.03	0.46	0.02	0.03	250	250	1	1	3.7031	0.1379	0.1269	0.2188
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	50	1.64	0.14	0.31	1.64	0.14	0.31	14,975	14,975	61	61	0.2190	0.0183	0.0168	0.0409
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	120	126.39	7.41	8.25	125.39	7.32	8.14	657,545	657,545	2,603	2,603	0.3844	0.0225	0.0207	0.0251
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	175	19.24	0.76	1.00	18.59	0.72	0.95	90,078	90,078	348	348	0.4272	0.0169	0.0155	0.0222
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	250	2.59	0.11	0.18	1.27	0.04	0.07	4,594	4,594	20	20	1.1276	0.0499	0.0459	0.0763
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	500	0.84	0.03	0.04	0.64	0.01	0.03	1,098	1,098	5	5	1.5388	0.0471	0.0433	0.0781
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	750	0.42	0.02	0.03	0.04	0.00	0.00	102	102	1	1	8.3526	0.4441	0.4085	0.6689
2014	SC	Construction and Mining	23	Rubber Tired Dozers	50	1.83	0.24	0.67	1.83	0.24	0.67	15,146	15,146	18	18	0.2411	0.0318	0.0292	0.0887

Equipment Type	HorsepowerBin	Nox EMFAC g/bhp-hr	PM EMFAC g/bhp-hr	PM2.5 EMFAC g/bhp-hr	HC EMFAC g/bhp-hr
Bore/Drill Rigs	50	2.11	0.15	0.14	0.27
Bore/Drill Rigs	120	1.46	0.09	0.08	0.09
Bore/Drill Rigs	175	1.74	0.08	0.07	0.11
Bore/Drill Rigs	250	1.51	0.05	0.04	0.08
Bore/Drill Rigs	500	1.15	0.04	0.03	0.06
Bore/Drill Rigs	750	0.99	0.03	0.03	0.05
Bore/Drill Rigs	1000	1.38	0.03	0.02	0.04
Bore/Drill Rigs	9999	0.57	0.01	0.01	0.02
Cranes	50	1.43	0.14	0.13	0.41
Cranes	120	2.24	0.17	0.15	0.22
Cranes	175	2.07	0.11	0.10	0.16
Cranes	250	1.99	0.09	0.08	0.14
Cranes	500	1.23	0.05	0.05	0.08
Cranes	750	0.94	0.03	0.03	0.05
Cranes	1000	3.14	0.16	0.14	0.23
Cranes	9999	0.07	0.00	0.00	0.00
Crawler Tractors	50	2.34	0.27	0.25	0.77
Crawler Tractors	120	2.35	0.20	0.18	0.23
Crawler Tractors	175	2.55	0.14	0.13	0.19
Crawler Tractors	250	2.20	0.09	0.08	0.13
Crawler Tractors	500	1.67	0.06	0.06	0.10
Crawler Tractors	750	1.60	0.06	0.05	0.09
Crawler Tractors	1000	2.64	0.08	0.07	0.14
Crawler Tractors	9999	0.40	0.01	0.01	0.02
Excavators	50	1.36	0.10	0.10	0.19
Excavators	120	1.34	0.10	0.09	0.11
Excavators	175	1.50	0.07	0.07	0.10
Excavators	250	1.49	0.05	0.04	0.08
Excavators	500	0.86	0.03	0.03	0.05
Excavators	750	1.04	0.03	0.03	0.06
Excavators	1000	2.10	0.07	0.06	0.11
Excavators	9999	0.22	0.01	0.01	0.01
Graders	50	2.10	0.28	0.26	0.82
Graders	120	3.14	0.26	0.24	0.33
Graders	175	3.03	0.17	0.16	0.24
Graders	250	1.92	0.06	0.06	0.11
Graders	500	0.90	0.03	0.03	0.06
Graders	1000	3.03	0.11	0.10	0.19
Graders	9999	0.53	0.02	0.01	0.03
Off-Highway Tractors	50	1.89	0.19	0.18	0.46
Off-Highway Tractors	120	1.76	0.15	0.13	0.16
Off-Highway Tractors	175	2.00	0.10	0.09	0.14
Off-Highway Tractors	250	2.11	0.08	0.07	0.12
Off-Highway Tractors	500	1.18	0.04	0.04	0.07
Off-Highway Tractors	750	1.35	0.05	0.04	0.07
Off-Highway Tractors	1000	5.35	0.27	0.25	0.37
Off-Highway Tractors	9999	0.74	0.03	0.03	0.05
Off-Highway Trucks	50	1.29	0.13	0.12	0.30
Off-Highway Trucks	120	1.65	0.13	0.12	0.16
Off-Highway Trucks	175	1.82	0.10	0.09	0.15
Off-Highway Trucks	250	1.86	0.08	0.08	0.14
Off-Highway Trucks	500	1.37	0.05	0.05	0.10
Off-Highway Trucks	750	2.05	0.09	0.08	0.15
Off-Highway Trucks	1000	2.21	0.07	0.06	0.12
Off-Highway Trucks	9999	0.40	0.01	0.01	0.02
Other Construction Equipment	50	1.76	0.16	0.15	0.34
Other Construction Equipment	120	1.88	0.15	0.14	0.17
Other Construction Equipment	175	2.36	0.12	0.11	0.17
Other Construction Equipment	250	2.11	0.08	0.07	0.12
Other Construction Equipment	500	1.41	0.05	0.05	0.08
Other Construction Equipment	750	1.41	0.05	0.04	0.08
Other Construction Equipment	1000	1.53	0.04	0.04	0.06
Other Construction Equipment	9999	0.25	0.01	0.01	0.01
Pavers	50	1.84	0.19	0.18	0.50
Pavers	120	1.72	0.13	0.12	0.16
Pavers	175	2.17	0.11	0.10	0.16
Pavers	250	1.47	0.04	0.03	0.06
Pavers	500	0.83	0.03	0.03	0.04
Pavers	750	1.01	0.04	0.04	0.06
Paving Equipment	50	1.29	0.11	0.10	0.22
Paving Equipment	120	1.69	0.13	0.12	0.15
Paving Equipment	175	1.58	0.08	0.07	0.10
Paving Equipment	250	1.64	0.06	0.05	0.09
Paving Equipment	500	1.12	0.04	0.04	0.06
Paving Equipment	750	1.13	0.03	0.02	0.05
Paving Equipment	1000	1.37	0.03	0.03	0.05
Rollers	50	1.45	0.13	0.12	0.29
Rollers	120	1.76	0.13	0.12	0.16
Rollers	175	1.48	0.07	0.06	0.10
Rollers	250	1.69	0.06	0.06	0.10
Rollers	500	1.48	0.06	0.06	0.09
Rollers	750	2.24	0.08	0.08	0.13
Rough Terrain Forklifts	50	1.99	0.17	0.15	0.37
Rough Terrain Forklifts	120	1.45	0.09	0.08	0.09
Rough Terrain Forklifts	175	1.11	0.04	0.04	0.06
Rough Terrain Forklifts	250	2.05	0.09	0.08	0.14
Rough Terrain Forklifts	500	1.40	0.04	0.04	0.07
Rough Terrain Forklifts	750	5.06	0.27	0.25	0.40
Rubber Tired Dozers	50	2.19	0.29	0.27	0.81

2011 OFF-ROAD EMISSIONS

CalendarYear	AirBasin	Equipment Class	EquipmentTypeID	Equipment Type	HorsepowerBin	BaseNOx	BasePM	BaseHC	ScenNOx	ScenPM	ScenHC	BaseActivity (hours/year)	ScenActivity	BasePopulation	ScenPopulation	Nox EMFAC lbs/hr	PM EMFAC lbs/hr	PM2.5 EMFAC lbs/hr	HC EMFAC lbs/hr
2014	SC	Construction and Mining	23	Rubber Tired Dozers	120	13.62	1.22	1.45	13.62	1.22	1.45	40,024	40,024	53	53	0.6807	0.0609	0.0561	0.0724
2014	SC	Construction and Mining	23	Rubber Tired Dozers	175	11.78	0.67	0.95	11.78	0.67	0.95	18,366	18,366	27	27	1.2828	0.0734	0.0675	0.1036
2014	SC	Construction and Mining	23	Rubber Tired Dozers	250	9.93	0.49	0.74	9.93	0.49	0.74	13,549	13,549	21	21	1.4658	0.0722	0.0664	0.1096
2014	SC	Construction and Mining	23	Rubber Tired Dozers	500	114.94	5.36	8.34	113.92	5.31	8.26	91,635	91,635	141	141	2.5086	0.1171	0.1077	0.1820
2014	SC	Construction and Mining	23	Rubber Tired Dozers	750	12.64	0.46	0.76	12.04	0.43	0.71	6,619	6,619	9	9	3.8187	0.1404	0.1291	0.2288
2014	SC	Construction and Mining	24	Rubber Tired Loaders	50	5.28	0.59	1.52	5.23	0.58	1.50	51,565	51,565	67	67	0.2047	0.0228	0.0209	0.0588
2014	SC	Construction and Mining	24	Rubber Tired Loaders	120	169.74	14.77	17.12	167.40	14.53	16.84	683,442	683,442	828	828	0.4967	0.0432	0.0398	0.0501
2014	SC	Construction and Mining	24	Rubber Tired Loaders	175	348.24	19.54	27.81	345.85	19.32	27.58	921,784	921,784	1,085	1,085	0.7556	0.0424	0.0390	0.0603
2014	SC	Construction and Mining	24	Rubber Tired Loaders	250	420.60	14.32	25.75	418.83	14.24	25.61	928,112	928,112	964	964	0.9064	0.0309	0.0284	0.0555
2014	SC	Construction and Mining	24	Rubber Tired Loaders	500	531.94	20.24	35.71	518.14	19.53	34.72	782,366	782,366	896	896	1.3598	0.0517	0.0476	0.0913
2014	SC	Construction and Mining	24	Rubber Tired Loaders	750	86.45	3.42	6.04	86.81	3.43	6.06	75,352	75,352	79	79	2.2945	0.0908	0.0836	0.1603
2014	SC	Construction and Mining	24	Rubber Tired Loaders	1000	34.15	1.00	1.75	34.15	0.99	1.74	15,288	15,288	14	14	4.4674	0.1302	0.1198	0.2283
2014	SC	Construction and Mining	24	Rubber Tired Loaders	9999	12.96	0.37	0.70	12.96	0.37	0.70	3,358	3,358	3	3	7.7192	0.2227	0.2049	0.4162
2014	SC	Construction and Mining	25	Scrapers	50	0.13	0.02	0.05	0.13	0.02	0.05	1,026	1,026	3	3	0.2582	0.0344	0.0317	0.1013
2014	SC	Construction and Mining	25	Scrapers	120	6.87	0.51	0.58	6.87	0.51	0.58	21,671	21,671	45	45	0.6336	0.0472	0.0434	0.0533
2014	SC	Construction and Mining	25	Scrapers	175	82.86	4.40	6.23	81.98	4.34	6.15	117,342	117,342	289	289	1.4123	0.0750	0.0690	0.1062
2014	SC	Construction and Mining	25	Scrapers	250	109.57	5.02	7.64	107.28	4.90	7.46	101,732	101,732	280	280	2.1540	0.0987	0.0908	0.1502
2014	SC	Construction and Mining	25	Scrapers	500	675.41	27.45	43.06	658.95	26.58	41.83	521,338	521,338	1,232	1,232	2.5911	0.1053	0.0969	0.1652
2014	SC	Construction and Mining	25	Scrapers	750	248.68	9.53	15.20	242.54	9.17	14.75	161,069	161,069	351	351	3.0879	0.1184	0.1089	0.1887
2014	SC	Construction and Mining	25	Scrapers	1000	10.15	0.47	0.73	10.15	0.47	0.73	1,500	1,500	6	6	13.5304	0.6308	0.5804	0.9800
2014	SC	Construction and Mining	25	Scrapers	9999	19.71	0.74	1.13	19.71	0.74	1.13	2,635	2,635	6	6	14.9609	0.5610	0.5161	0.8611
2014	SC	Construction and Mining	26	Skid Steer Loaders	50	21.19	1.34	2.59	21.08	1.33	2.55	262,908	262,908	927	927	0.1612	0.0102	0.0094	0.0197
2014	SC	Construction and Mining	26	Skid Steer Loaders	120	110.84	6.49	6.96	110.50	6.46	6.92	960,974	960,974	2,990	2,990	0.2307	0.0135	0.0124	0.0145
2014	SC	Construction and Mining	26	Skid Steer Loaders	175	0.78	0.04	0.05	0.78	0.04	0.05	3,020	3,020	12	12	0.5161	0.0235	0.0216	0.0311
2014	SC	Construction and Mining	26	Skid Steer Loaders	250	0.51	0.02	0.03	0.53	0.02	0.03	1,786	1,786	7	7	0.5732	0.0204	0.0187	0.0321
2014	SC	Construction and Mining	26	Skid Steer Loaders	500	0.12	0.00	0.01	0.12	0.00	0.01	359	359	1	1	0.6903	0.0243	0.0223	0.0421
2014	SC	Construction and Mining	26	Skid Steer Loaders	750	0.10	0.00	0.00	0.10	0.00	0.00	193	193	0	0	1.0331	0.0428	0.0393	0.0507
2014	SC	Construction and Mining	26	Skid Steer Loaders	1000	0.56	0.02	0.04	0.26	0.01	0.01	167	167	1	1	6.7147	0.2404	0.2212	0.4282
2014	SC	Construction and Mining	27	Surfacing Equipment	50	0.23	0.02	0.04	0.23	0.02	0.04	3,572	3,572	16	16	0.1286	0.0103	0.0095	0.0224
2014	SC	Construction and Mining	27	Surfacing Equipment	120	2.07	0.15	0.17	2.07	0.15	0.17	12,743	12,743	52	52	0.3255	0.0231	0.0212	0.0272
2014	SC	Construction and Mining	27	Surfacing Equipment	175	1.11	0.05	0.08	1.11	0.05	0.08	3,881	3,881	18	18	0.5741	0.0277	0.0255	0.0392
2014	SC	Construction and Mining	27	Surfacing Equipment	250	2.15	0.06	0.11	2.08	0.06	0.10	5,690	5,690	26	26	0.7560	0.0228	0.0210	0.0381
2014	SC	Construction and Mining	27	Surfacing Equipment	500	5.11	0.16	0.26	5.11	0.16	0.26	10,893	10,893	43	43	0.9382	0.0302	0.0278	0.0472
2014	SC	Construction and Mining	27	Surfacing Equipment	750	3.97	0.12	0.17	3.97	0.12	0.17	5,911	5,911	22	22	1.3428	0.0422	0.0388	0.0587
2014	SC	Construction and Mining	27	Surfacing Equipment	1000	1.12	0.03	0.05	1.12	0.03	0.05	724	724	3	3	3.1045	0.0758	0.0697	0.1331
2014	SC	Construction and Mining	27	Surfacing Equipment	9999	0.27	0.01	0.01	0.27	0.01	0.01	185	185	1	1	2.9042	0.0654	0.0602	0.1018
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	50	50.81	4.66	10.58	50.45	4.59	10.37	603,894	603,894	1,297	1,297	0.1683	0.0154	0.0142	0.0350
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	120	918.61	72.32	79.38	913.74	71.78	78.77	4,876,841	4,876,841	8,805	8,805	0.3767	0.0297	0.0273	0.0326
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	175	143.48	7.24	10.18	142.20	7.15	10.07	492,559	492,559	985	985	0.5826	0.0294	0.0270	0.0413
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	250	82.73	2.69	4.55	81.92	2.64	4.50	200,658	200,658	394	394	0.8246	0.0268	0.0246	0.0454
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	500	100.83	3.42	5.82	100.17	3.39	5.76	171,624	171,624	356	356	1.1750	0.0399	0.0367	0.0678
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	750	13.55	0.49	0.80	13.55	0.49	0.80	13,685	13,685	25	25	1.9809	0.0717	0.0660	0.1175
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	1000	2.00	0.04	0.07	2.00	0.04	0.07	1,492	1,492	2	2	2.6869	0.0596	0.0548	0.0989
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	9999	40.24	1.21	2.00	41.24	1.27	2.09	9,176	9,176	17	17	8.7716	0.2630	0.2419	0.4354
2014	SC	Construction and Mining	29	Trenchers	50	17.77	1.63	3.43	17.74	1.63	3.41	147,602	147,602	425	425	0.2408	0.0221	0.0204	0.0464
2014	SC	Construction and Mining	29	Trenchers	120	19.10	1.49	1.80	18.87	1.47	1.77	57,519	57,519	197	197	0.6641	0.0520	0.0478	0.0624
2014	SC	Construction and Mining	29	Trenchers	175	4.29	0.22	0.32	4.18	0.21	0.31	6,805	6,805	26	26	1.2624	0.0652	0.0600	0.0942
2014	SC	Construction and Mining	29	Trenchers	250	6.84	0.27	0.43	6.81	0.27	0.43	8,686	8,686	31	31	1.5746	0.0628	0.0578	0.0996
2014	SC	Construction and Mining	29	Trenchers	500	7.78	0.29	0.45	7.78	0.29	0.45	8,962	8,962	28	28	1.7357	0.0640	0.0589	0.1004
2014	SC	Construction and Mining	29	Trenchers	750	1.46	0.05	0.08	1.46	0.05	0.08	2,325	2,325	6	6	1.2520	0.0420	0.0387	0.0667
2014	SC	Construction and Mining	29	Trenchers	1000	0.62	0.03	0.04	0.62	0.03	0.04	99	99	0	0	12.4905	0.5657	0.5204	0.8897
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	50	16.41	1.72	4.18	16.34	1.71	4.15	158,979	158,979	250	250	0.2065	0.0217	0.0200	0.0526
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	120	34.39	3.04	3.43	33.74	2.97	3.35	124,966	124,966	203	203	0.5504	0.0486	0.0447	0.0549
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	175	11.50	0.64	0.92	11.08	0.61	0.88	15,186	15,186	23	23	1.5146	0.0842	0.0774	0.1208
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	250	4.37	0.17	0.27	4.37	0.17	0.27	6,354	6,354	10	10	1.3764	0.0545	0.0501	0.0856
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	500	1.09	0.05	0.07	1.09	0.05	0.07	1,193	1,193	2	2	1.8298	0.0790	0.0727	0.1148
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	1000	0.51	0.01	0.02	0.51	0.01	0.02	298	298	0	0	3.4348	0.0874	0.0804	0.1116

Equipment Type	HorsepowerBin	Nox EMFAC g/bhp-hr	PM EMFAC g/bhp-hr	PM2.5 EMFAC g/bhp-hr	HC EMFAC g/bhp-hr
Rubber Tired Dozers	120	2.58	0.23	0.21	0.27
Rubber Tired Dozers	175	3.33	0.19	0.18	0.27
Rubber Tired Dozers	250	2.66	0.13	0.12	0.20
Rubber Tired Dozers	500	2.28	0.11	0.10	0.17
Rubber Tired Dozers	750	2.31	0.08	0.08	0.14
Rubber Tired Loaders	50	1.86	0.21	0.19	0.53
Rubber Tired Loaders	120	1.88	0.16	0.15	0.19
Rubber Tired Loaders	175	1.96	0.11	0.10	0.16
Rubber Tired Loaders	250	1.65	0.06	0.05	0.10
Rubber Tired Loaders	500	1.23	0.05	0.04	0.08
Rubber Tired Loaders	750	1.39	0.05	0.05	0.10
Rubber Tired Loaders	1000	2.03	0.06	0.05	0.10
Rubber Tired Loaders	9999	0.35	0.01	0.01	0.02
Scrapers	50	2.34	0.31	0.29	0.92
Scrapers	120	2.40	0.18	0.16	0.20
Scrapers	175	3.66	0.19	0.18	0.28
Scrapers	250	3.91	0.18	0.16	0.27
Scrapers	500	2.35	0.10	0.09	0.15
Scrapers	750	1.87	0.07	0.07	0.11
Scrapers	1000	6.14	0.29	0.26	0.44
Scrapers	9999	0.68	0.03	0.02	0.04
Skid Steer Loaders	50	1.46	0.09	0.09	0.18
Skid Steer Loaders	120	0.87	0.05	0.05	0.05
Skid Steer Loaders	175	1.34	0.06	0.06	0.08
Skid Steer Loaders	250	1.04	0.04	0.03	0.06
Skid Steer Loaders	500	0.63	0.02	0.02	0.04
Skid Steer Loaders	750	0.63	0.03	0.02	0.03
Skid Steer Loaders	1000	3.05	0.11	0.10	0.19
Surfacing Equipment	50	1.17	0.09	0.09	0.20
Surfacing Equipment	120	1.23	0.09	0.08	0.10
Surfacing Equipment	175	1.49	0.07	0.07	0.10
Surfacing Equipment	250	1.37	0.04	0.04	0.07
Surfacing Equipment	500	0.85	0.03	0.03	0.04
Surfacing Equipment	750	0.81	0.03	0.02	0.04
Surfacing Equipment	1000	1.41	0.03	0.03	0.06
Surfacing Equipment	9999	0.13	0.00	0.00	0.00
Tractors/Loaders/Backhoes	50	1.53	0.14	0.13	0.32
Tractors/Loaders/Backhoes	120	1.43	0.11	0.10	0.12
Tractors/Loaders/Backhoes	175	1.51	0.08	0.07	0.11
Tractors/Loaders/Backhoes	250	1.50	0.05	0.04	0.08
Tractors/Loaders/Backhoes	500	1.07	0.04	0.03	0.06
Tractors/Loaders/Backhoes	750	1.20	0.04	0.04	0.07
Tractors/Loaders/Backhoes	1000	1.22	0.03	0.02	0.04
Tractors/Loaders/Backhoes	9999	0.40	0.01	0.01	0.02
Trenchers	50	2.19	0.20	0.18	0.42
Trenchers	120	2.51	0.20	0.18	0.24
Trenchers	175	3.27	0.17	0.16	0.24
Trenchers	250	2.86	0.11	0.10	0.18
Trenchers	500	1.58	0.06	0.05	0.09
Trenchers	750	0.76	0.03	0.02	0.04
Trenchers	1000	5.67	0.26	0.24	0.40
Sweepers/Scrubbers	50	1.87	0.20	0.18	0.48
Sweepers/Scrubbers	120	2.08	0.18	0.17	0.21
Sweepers/Scrubbers	175	3.93	0.22	0.20	0.31
Sweepers/Scrubbers	250	2.50	0.10	0.09	0.16
Sweepers/Scrubbers	500	1.66	0.07	0.07	0.10
Sweepers/Scrubbers	1000	1.56	0.04	0.04	0.05

EMISSIONS INVENTORY

CalendarYear	AirBasin	Equipment Class	EquipmentTypeID	Equipment Type	HorsepowerBin	BaseNOx			BasePM	BaseHC	ScenNOx	ScenPM	ScenHC	BaseActivity	ScenActivity	BasePopulation	ScenPopulation	BaseAvgHP	ScenAvgHP
2013	SC	Construction and Mining	11	Bore/Drill Rigs	50	1.39	1.43	0.04	0.10	0.18	1.39	0.10	0.18	11,710	11,710	37	37	39.27	39.27
2013	SC	Construction and Mining	11	Bore/Drill Rigs	120	8.30	8.17	-0.13	0.51	0.53	8.30	0.51	0.53	40,221	40,221	114	114	82.33	82.33
2013	SC	Construction and Mining	11	Bore/Drill Rigs	175	8.88	8.80	-0.09	0.41	0.55	8.86	0.41	0.54	25,025	25,025	89	89	148.54	148.54
2013	SC	Construction and Mining	11	Bore/Drill Rigs	250	12.02	11.29	-0.73	0.37	0.60	11.94	0.37	0.59	25,815	25,815	89	89	207.75	207.75
2013	SC	Construction and Mining	11	Bore/Drill Rigs	500	11.75	11.57	-0.18	0.39	0.61	11.73	0.39	0.61	17,349	17,349	62	62	349.18	349.18
2013	SC	Construction and Mining	11	Bore/Drill Rigs	750	11.46	11.27	-0.19	0.39	0.60	11.46	0.39	0.60	13,128	13,128	31	31	611.96	611.96
2013	SC	Construction and Mining	11	Bore/Drill Rigs	1000	1.23	1.12	-0.12	0.03	0.04	1.23	0.03	0.04	699	699	1	1	919.00	919.00
2013	SC	Construction and Mining	11	Bore/Drill Rigs	9999	5.09	5.38	0.29	0.12	0.16	5.09	0.12	0.16	816	816	1	1	2,666.67	2,666.67
2013	SC	Construction and Mining	12	Cranes	50	0.53	0.55	0.03	0.05	0.15	0.53	0.05	0.15	6,713	6,713	17	17	40.63	40.63
2013	SC	Construction and Mining	12	Cranes	120	24.02	25.08	1.06	1.78	2.40	23.85	1.77	2.38	80,675	80,675	207	207	88.95	88.95
2013	SC	Construction and Mining	12	Cranes	175	52.56	53.22	0.65	2.84	4.06	52.56	2.83	4.06	126,715	126,715	311	311	147.88	147.88
2013	SC	Construction and Mining	12	Cranes	250	82.31	84.23	1.92	3.78	5.70	82.27	3.78	5.70	146,385	146,385	349	349	217.00	217.00
2013	SC	Construction and Mining	12	Cranes	500	101.20	103.26	2.06	4.20	6.40	100.89	4.18	6.38	145,073	145,073	335	335	336.11	336.11
2013	SC	Construction and Mining	12	Cranes	750	17.86	18.60	0.74	0.61	0.93	17.86	0.61	0.93	22,702	22,702	49	49	567.19	567.19
2013	SC	Construction and Mining	12	Cranes	1000	11.15	11.73	0.58	0.55	0.83	11.15	0.55	0.83	3,227	3,227	7	7	937.60	937.60
2013	SC	Construction and Mining	12	Cranes	9999	0.48	0.18	-0.30	0.01	0.02	0.48	0.01	0.02	225	225	0	0	1,030.00	1,030.00
2013	SC	Construction and Mining	13	Crawler Tractors	50	1.70	1.79	0.08	0.20	0.56	1.70	0.20	0.56	13,194	13,194	44	44	42.51	42.51
2013	SC	Construction and Mining	13	Crawler Tractors	120	97.29	100.92	3.63	8.09	9.43	97.17	8.08	9.42	309,489	309,489	750	750	86.86	86.86
2013	SC	Construction and Mining	13	Crawler Tractors	175	98.55	102.08	3.53	5.33	7.40	98.13	5.30	7.36	197,666	197,666	490	490	149.54	149.54
2013	SC	Construction and Mining	13	Crawler Tractors	250	89.79	93.26	3.47	3.49	5.37	89.48	3.47	5.35	146,554	146,554	358	358	202.85	202.85
2013	SC	Construction and Mining	13	Crawler Tractors	500	219.94	224.81	4.87	8.50	13.16	218.46	8.42	13.05	232,798	232,798	576	576	340.69	340.69
2013	SC	Construction and Mining	13	Crawler Tractors	750	74.97	75.63	0.67	2.69	4.27	74.78	2.68	4.26	54,422	54,422	118	118	570.11	570.11
2013	SC	Construction and Mining	13	Crawler Tractors	1000	14.27	15.08	0.81	0.42	0.75	14.27	0.42	0.75	4,937	4,937	10	10	828.17	828.17
2013	SC	Construction and Mining	13	Crawler Tractors	9999	6.42	6.78	0.36	0.17	0.29	6.42	0.17	0.29	1,483	1,483	3	3	1,526.50	1,526.50
2013	SC	Construction and Mining	14	Excavators	50	52.66	54.37	1.71	4.10	7.21	52.63	4.09	7.20	692,342	692,342	1,067	1,067	35.74	35.74
2013	SC	Construction and Mining	14	Excavators	120	81.81	82.45	0.64	6.16	6.76	81.74	6.15	6.75	442,120	442,120	772	772	81.78	81.78
2013	SC	Construction and Mining	14	Excavators	175	161.73	156.47	-5.26	8.06	11.13	161.41	8.04	11.10	515,802	515,802	980	980	146.04	146.04
2013	SC	Construction and Mining	14	Excavators	250	201.27	189.21	-12.06	6.47	10.93	199.03	6.34	10.74	438,285	438,285	843	843	218.47	218.47
2013	SC	Construction and Mining	14	Excavators	500	253.20	242.63	-10.57	8.24	13.96	250.82	8.11	13.78	485,386	485,386	857	857	328.64	328.64
2013	SC	Construction and Mining	14	Excavators	750	24.79	22.60	-2.19	0.82	1.35	24.02	0.77	1.28	25,127	25,127	44	44	577.94	577.94
2013	SC	Construction and Mining	14	Excavators	1000	4.67	4.68	0.00	0.15	0.25	3.99	0.11	0.19	1,922	1,922	3	3	842.88	842.88
2013	SC	Construction and Mining	14	Excavators	9999	5.38	5.05	-0.32	0.15	0.25	5.38	0.15	0.25	2,025	2,025	3	3	1,569.14	1,569.14
2013	SC	Construction and Mining	15	Graders	50	0.48	0.51	0.02	0.06	0.19	0.48	0.06	0.19	4,161	4,161	14	14	39.16	39.16
2013	SC	Construction and Mining	15	Graders	120	21.24	22.08	0.85	1.76	2.23	21.24	1.76	2.23	50,577	50,577	145	145	91.00	91.00
2013	SC	Construction and Mining	15	Graders	175	166.26	173.04	6.78	9.32	13.33	166.15	9.31	13.32	282,183	282,183	678	678	147.95	147.95
2013	SC	Construction and Mining	15	Graders	250	189.66	199.22	9.55	6.10	10.45	189.64	6.10	10.45	358,497	358,497	538	538	204.35	204.35
2013	SC	Construction and Mining	15	Graders	500	35.27	37.28	2.00	1.34	2.37	35.27	1.34	2.37	71,942	71,942	100	100	293.17	293.17
2013	SC	Construction and Mining	15	Graders	1000	0.85	0.90	0.04	0.03	0.05	0.85	0.03	0.05	257	257	0	0	796.00	796.00
2013	SC	Construction and Mining	15	Graders	9999	8.48	8.94	0.47	0.25	0.46	8.48	0.25	0.46	1,446	1,446	2	2	1,992.80	1,992.80
2013	SC	Construction and Mining	16	Off-Highway Tractors	50	25.00	26.13	1.13	2.54	6.16	24.89	2.51	6.06	238,998	238,998	409	409	37.66	37.66
2013	SC	Construction and Mining	16	Off-Highway Tractors	120	41.88	41.62	-0.27	3.48	3.93	41.31	3.43	3.86	169,917	169,917	297	297	74.53	74.53
2013	SC	Construction and Mining	16	Off-Highway Tractors	175	28.26	27.81	-0.44	1.46	1.97	28.26	1.46	1.97	68,684	68,684	113	113	158.08	158.08
2013	SC	Construction and Mining	16	Off-Highway Tractors	250	26.90	26.17	-0.73	0.96	1.55	26.86	0.96	1.55	42,795	42,795	74	74	213.84	213.84
2013	SC	Construction and Mining	16	Off-Highway Tractors	500	54.93	52.50	-2.43	1.97	3.13	54.51	1.94	3.11	77,048	77,048	127	127	334.44	334.44
2013	SC	Construction and Mining	16	Off-Highway Tractors	750	14.08	13.20	-0.88	0.50	0.79	13.43	0.46	0.74	11,277	11,277	19	19	573.53	573.53
2013	SC	Construction and Mining	16	Off-Highway Tractors	1000	1.08	1.14	0.05	0.05	0.08	1.08	0.05	0.08	183	183	0	0	1,000.00	1,000.00
2013	SC	Construction and Mining	16	Off-Highway Tractors	9999	6.85	7.24	0.39	0.26	0.45	5.20	0.17	0.30	852	852	2	2	1,726.25	1,726.25
2013	SC	Construction and Mining	17	Off-Highway Trucks	50	2.46	2.60	0.14	0.26	0.58	2.46	0.26	0.58	34,721	34,721	24	24	29.14	29.14
2013	SC	Construction and Mining	17	Off-Highway Trucks	120	4.13	3.58	-0.55	0.33	0.42	4.13	0.33	0.42	15,584	15,584	14	14	87.06	87.06
2013	SC	Construction and Mining	17	Off-Highway Trucks	175	63.28	60.28	-3.00	3.61	5.10	63.28	3.61	5.10	163,590	163,590	131	131	158.89	158.89
2013	SC	Construction and Mining	17	Off-Highway Trucks	250	138.37	136.04	-2.32	6.03	9.92	136.27	5.91	9.74	253,217	253,217	224	224	211.02	211.02
2013	SC	Construction and Mining	17	Off-Highway Trucks	500	480.82	476.87	-3.95	18.75	33.16	476.90	18.51	32.87	600,881	600,881	497	497	372.42	372.42
2013	SC	Construction and Mining	17	Off-Highway Trucks	750	215.44	217.39	1.95	9.24	15.32	212.89	9.06	15.13	122,214	122,214	113	113	655.92	655.92
2013	SC	Construction and Mining	17	Off-Highway Trucks	1000	162.35	159.75	-2.60	4.83	8.88	162.35	4.83	8.88	62,360	62,360	52	52	897.23	897.23
2013	SC	Construction and Mining	17	Off-Highway Trucks	9999	212.06	209.30	-2.77	6.80	12.54	217.63	7.00	12.90	45,300	45,300	34	34	1,764.19	1,764.19
2013	SC	Construction and Mining	18	Other Construction Equipment	50	12.99	13.56	0.57	1.18	2.53	12.99	1.18	2.53	133,201	133,201	316	316	38.01	38.01
2013	SC	Construction and Mining	18	Other Construction Equipment	120	55.73	56.96	1.23	4.34	5.06	55.58	4.33	5.05	217,951	217,951	557	557	81.56	81.56
2013	SC	Construction and Mining	18	Other Construction Equipment	175	29.77	30.39	0.62	1.57	2.19	29.74	1.56	2.19	63,661	63,661	173	173	152.49	152.49
2013	SC	Construction and Mining	18	Other Construction Equipment	250	35.60	34.69	-0.91	1.36	2.09	35.23	1.33	2.06	56,774	56,774	155	155	216.90	216.90
2013	SC	Construction and Mining	18	Other Construction Equipment	500	100.01	95.84	-4.17	3.80	5.96	98.93	3.74	5.88	117,717	117,717	302	302	356.86	356.86
2013	SC	Construction and Mining	18	Other Construction Equipment	750	33.40	33.78	0.38	1.13	1.79	32.04	1.06	1.68	27,562	27,562	62	62	597.67	597.67
2013	SC	Construction and Mining	18	Other Construction Equipment	1000	4.38	4.12	-0.25	0.12	0.19	4.38	0.12	0.19	2,322	2,322	6	6	830.15	830.15
2013	SC	Construction and Mining	18	Other Construction Equipment	9999	3.72	3.13	-0.58	0.12	0.20	3.72	0.12	0.20	1,088	1,088	3	3	1,126.67	1,126.67
2013	SC	Construction and Mining	19	Pavers	50	1.66	1.71	0.05	0.17	0.45	1.66	0.17	0.45	16,105	16,105	51	51	38.63	38.63
2013	SC	Construction and Mining	19	Pavers	120	19.95	20.24	0.29	1.55	1.82	19.90	1.55	1.82	84,868	84,868	248	248	79.58	79.58
2013	SC	Construction and Mining	19	Pavers	175	25.44	25.31	-0.12	1.28	1.84	25.32	1.27	1.83	57,701	57,701	168	168	158.13	158.13
2013	SC	Construction and Mining	19	Pavers	250	11.90	12.24	0.34	0.30	0.48	11.89	0.30	0.48	28,797	28,797	72	72	213.21	213.21
2013	SC	Construction and Mining	19	Pavers	500	3.65	3.44	-0.21	0.13	0.18	3.65	0.13	0.18	7,168	7,168	18	18	327.38	327.38
2013	SC	Construction and Mining	19	Pavers	750	0.30	0.31	0.02	0.01	0.02	0.30	0.01	0.02	358	358	1	1	750.00	750.00
2013	SC	Construction and Mining	20	Paving Equipment	50	1.91	1.97	0.06	0.17	0.34	1.90	0.16	0.33	26,334	26,334	63	63	34.82	34.82
2013	SC	Construction and Mining	20	Paving Equipment	120	11.99	12.12	0.14	0.91	1.06	11.93	0.91	1.05	51,683	51,683	128	128	88.60	88.60
2013	SC	Construction and Mining	20	Paving Equipment	175	9.52	9.36	-0.16	0.46	0.63	9.52	0.46	0.63	29,243	29,243	70	70	148.41	148.41
2013	SC	Construction and Mining	20	Paving Equipment	250	5.08	4.98	-0.10	0.19	0.29	4.66	0.16	0.25	10,518	10,518	26	26	215.67	215.67
2013	SC	Construction and Mining	20	Paving Equipment	500	6.05	6.14	0.09	0.22	0.33	6.02	0.21	0.33	9,509	9,509	23	23	338.76	338.76
2013	SC	Construction and Mining	20	Paving Equipment	750	2.33	2.46	0.13	0.05	0.10	2.33	0.05	0.10	2,508	2,508	6	6	605.00	605.00
2013	SC	Construction and Mining	20	Paving Equipment	1000	0.87	0.56	-0.31	0.03	0.05	0.87	0.03	0.05	352	352	1	1	842.00	842.00
2013	SC	Construction and Mining	21	Rollers	50	32.24	33.30	1.06	2.93	6.52	32.23	2.93	6.50	396,974	396,974	1,292	1,292	35.68	35.68
2013	SC	Construction and Mining	21	Rollers	120	69.13	68.96	-0.17	5.17	6.23	68.56	5.12	6.16	282,734	282,734	964	964	86.86	86.86
2013	SC	Construction and Mining	21	Rollers	175	54.41	53.21	-1.19	2.54	3.47	53.92	2.51	3.43	177,345	177,345	557	557	143.78	143.78
2013	SC	Construction and Mining	21	Rollers	250	9.87	9.21	-0.66	0.35	0.57	9.87	0.35	0.57	18,827	18,827	68	68	213.25	213.25
2013	SC	Construction and Mining	21	Rollers	500	6.22	6.41	0.20	0.26	0.39	5.64	0.22	0.34	7,492	7,492	28	28	334.88	334.88
2013	SC	Construction and Mining	21	Rollers	750	0.44	0.46	0.02	0.02	0.03	0.44	0.02	0.03	238	238	1	1	520.50	520.50
2013	SC	Construction and Mining	22	Rough Terrain Forklifts	50	1.59	1.64	0.05	0.14	0.30	1.59	0.14	0.30	14,250	14,250	59	59	47.28	47.28
2013	SC	Construction and Mining	22	Rough Terrain Forklifts	120	131.97	126.39	-5.58	8.02	8.77	131.50	7.98	8.72	625,726	625,726	2,514	2,514	96.33	96.33
2013	SC	Construction and Mining	22	Rough Terrain Forklifts	175	19.63	19.24	-0.39	0.78	1.00	19.23	0.75	0.97	85,719	85,719	336	336	129.59	129.59

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CalendarYear	AirBasin	Equipment Class	EquipmentTypeID	Equipment Type	HorsepowerBin	BaseNOx				BasePM	BaseHC	ScenNOx	ScenPM	ScenHC	BaseActivity	ScenActivity	BasePopulation	ScenPopulation	BaseAvgHP	ScenAvgHP
2013	SC	Construction and Mining	22	Rough Terrain Forklifts	250	2.56	2.59	0.03		0.11	0.17	1.94	0.07	0.12	4,372	4,372	20	20	208.31	208.31
2013	SC	Construction and Mining	22	Rough Terrain Forklifts	500	0.80	0.84	0.04		0.02	0.04	0.80	0.02	0.04	1,044	1,044	5	5	373.89	373.89
2013	SC	Construction and Mining	22	Rough Terrain Forklifts	750	0.40	0.42	0.02		0.02	0.03	0.03	0.00	0.00	97	97	1	1	625.00	625.00
2013	SC	Construction and Mining	23	Rubber Tired Dozers	50	1.73	1.83	0.10		0.23	0.63	1.73	0.23	0.63	14,413	14,413	17	17	41.59	41.59
2013	SC	Construction and Mining	23	Rubber Tired Dozers	120	12.92	13.62	0.70		1.15	1.37	12.92	1.15	1.37	38,087	38,087	51	51	81.59	81.59
2013	SC	Construction and Mining	23	Rubber Tired Dozers	175	11.20	11.78	0.58		0.64	0.90	11.20	0.64	0.90	17,478	17,478	26	26	149.68	149.68
2013	SC	Construction and Mining	23	Rubber Tired Dozers	250	9.61	9.93	0.32		0.47	0.71	9.61	0.47	0.71	12,893	12,893	20	20	210.98	210.98
2013	SC	Construction and Mining	23	Rubber Tired Dozers	500	112.15	114.94	2.78		5.24	8.07	112.15	5.24	8.07	87,201	87,201	136	136	354.05	354.05
2013	SC	Construction and Mining	23	Rubber Tired Dozers	750	12.01	12.64	0.63		0.44	0.71	12.01	0.44	0.71	6,298	6,298	8	8	584.10	584.10
2013	SC	Construction and Mining	24	Rubber Tired Loaders	50	5.06	5.28	0.21		0.57	1.48	5.05	0.57	1.48	49,070	49,070	64	64	41.70	41.70
2013	SC	Construction and Mining	24	Rubber Tired Loaders	120	167.81	169.74	1.93		14.68	16.96	167.07	14.61	16.88	650,370	650,370	800	800	86.15	86.15
2013	SC	Construction and Mining	24	Rubber Tired Loaders	175	347.44	348.24	0.80		19.40	27.43	346.66	19.34	27.36	877,178	877,178	1,048	1,048	150.00	150.00
2013	SC	Construction and Mining	24	Rubber Tired Loaders	250	417.47	420.60	3.12		14.25	25.03	417.24	14.23	25.01	883,200	883,200	932	932	205.91	205.91
2013	SC	Construction and Mining	24	Rubber Tired Loaders	500	523.15	531.94	8.79		19.91	34.38	519.59	19.71	34.11	744,507	744,507	866	866	319.69	319.69
2013	SC	Construction and Mining	24	Rubber Tired Loaders	750	85.91	86.45	0.54		3.43	5.86	85.71	3.41	5.85	71,706	71,706	77	77	600.48	600.48
2013	SC	Construction and Mining	24	Rubber Tired Loaders	1000	32.37	34.15	1.78		0.94	1.63	32.37	0.94	1.63	14,548	14,548	14	14	836.81	836.81
2013	SC	Construction and Mining	24	Rubber Tired Loaders	9999	12.25	12.96	0.71		0.35	0.65	12.25	0.35	0.65	3,196	3,196	3	3	1,521.00	1,521.00
2013	SC	Construction and Mining	25	Scrapers	50	0.13	0.13	0.01		0.02	0.05	0.13	0.02	0.05	976	976	3	3	36.14	36.14
2013	SC	Construction and Mining	25	Scrapers	120	6.55	6.87	0.31		0.48	0.55	6.55	0.48	0.55	20,622	20,622	43	43	84.33	84.33
2013	SC	Construction and Mining	25	Scrapers	175	82.36	82.86	0.50		4.33	6.15	82.19	4.32	6.14	111,664	111,664	279	279	166.16	166.16
2013	SC	Construction and Mining	25	Scrapers	250	106.59	109.57	2.98		4.90	7.42	106.59	4.90	7.42	96,810	96,810	271	271	224.97	224.97
2013	SC	Construction and Mining	25	Scrapers	500	658.77	675.41	16.64		26.68	41.49	655.65	26.51	41.26	496,110	496,110	1,190	1,190	381.35	381.35
2013	SC	Construction and Mining	25	Scrapers	750	247.13	248.68	1.55		9.46	14.87	245.88	9.37	14.79	153,275	153,275	339	339	564.95	564.95
2013	SC	Construction and Mining	25	Scrapers	1000	9.66	10.15	0.49		0.45	0.70	9.66	0.45	0.70	1,427	1,427	6	6	950.00	950.00
2013	SC	Construction and Mining	25	Scrapers	9999	18.58	19.71	1.13		0.69	1.05	18.58	0.69	1.05	2,508	2,508	6	6	1,923.31	1,923.31
2013	SC	Construction and Mining	26	Skid Steer Loaders	50	21.43	21.19	-0.24		1.49	2.80	21.40	1.49	2.79	250,186	250,186	895	895	43.47	43.47
2013	SC	Construction and Mining	26	Skid Steer Loaders	120	116.56	110.84	-5.72		7.12	7.39	116.40	7.10	7.37	914,471	914,471	2,889	2,889	70.54	70.54
2013	SC	Construction and Mining	26	Skid Steer Loaders	175	0.77	0.78	0.01		0.04	0.05	0.77	0.04	0.05	2,874	2,874	12	12	152.93	152.93
2013	SC	Construction and Mining	26	Skid Steer Loaders	250	0.63	0.51	-0.12		0.02	0.04	0.61	0.02	0.04	1,699	1,699	7	7	200.53	200.53
2013	SC	Construction and Mining	26	Skid Steer Loaders	500	0.12	0.12	0.01		0.00	0.01	0.12	0.00	0.01	342	342	1	1	276.67	276.67
2013	SC	Construction and Mining	26	Skid Steer Loaders	750	0.09	0.10	0.01		0.00	0.00	0.09	0.00	0.00	183	183	0	0	530.00	530.00
2013	SC	Construction and Mining	26	Skid Steer Loaders	1000	0.53	0.56	0.03		0.02	0.03	0.24	0.01	0.01	159	159	1	1	1,000.00	1,000.00
2013	SC	Construction and Mining	27	Surfacing Equipment	50	0.22	0.23	0.01		0.02	0.04	0.22	0.02	0.04	3,399	3,399	16	16	35.67	35.67
2013	SC	Construction and Mining	27	Surfacing Equipment	120	2.08	2.07	0.00		0.15	0.17	2.08	0.15	0.17	12,126	12,126	50	50	88.68	88.68
2013	SC	Construction and Mining	27	Surfacing Equipment	175	1.10	1.11	0.01		0.05	0.08	1.10	0.05	0.08	3,694	3,694	17	17	150.98	150.98
2013	SC	Construction and Mining	27	Surfacing Equipment	250	2.30	2.15	-0.15		0.07	0.12	2.29	0.07	0.12	5,415	5,415	25	25	216.06	216.06
2013	SC	Construction and Mining	27	Surfacing Equipment	500	5.11	5.11	0.00		0.16	0.25	5.11	0.16	0.25	10,366	10,366	42	42	362.36	362.36
2013	SC	Construction and Mining	27	Surfacing Equipment	750	3.98	3.97	-0.01		0.13	0.17	3.98	0.13	0.17	5,625	5,625	21	21	615.08	615.08
2013	SC	Construction and Mining	27	Surfacing Equipment	1000	1.07	1.12	0.06		0.03	0.05	1.07	0.03	0.05	689	689	3	3	814.29	814.29
2013	SC	Construction and Mining	27	Surfacing Equipment	9999	0.25	0.27	0.01		0.01	0.01	0.25	0.01	0.01	176	176	1	1	1,141.00	1,141.00
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	50	49.35	50.81	1.46		4.68	10.71	49.24	4.65	10.62	574,671	574,671	1,253	1,253	38.31	38.31
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	120	918.11	918.61	0.50		73.17	79.94	916.42	72.99	79.73	4,640,848	4,640,848	8,505	8,505	82.65	82.65
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	175	146.06	143.48	-2.58		7.39	10.27	145.97	7.38	10.26	468,724	468,724	951	951	143.93	143.93
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	250	82.91	82.73	-0.18		2.68	4.46	82.71	2.66	4.45	190,948	190,948	381	381	204.22	204.22
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	500	101.61	100.83	-0.78		3.45	5.71	101.38	3.44	5.70	163,319	163,319	343	343	320.14	320.14
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	750	13.12	13.55	0.44		0.47	0.75	13.12	0.47	0.75	13,022	13,022	24	24	574.62	574.62
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	1000	2.20	2.00	-0.19		0.04	0.08	2.20	0.04	0.08	1,420	1,420	2	2	871.40	871.40
2013	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	9999	41.44	40.24	-1.20		1.29	2.07	40.78	1.27	2.06	8,732	8,732	16	16	2,005.62	2,005.62
2013	SC	Construction and Mining	29	Trenchers	50	17.05	17.77	0.72		1.58	3.31	17.05	1.58	3.31	140,459	140,459	411	411	39.78	39.78
2013	SC	Construction and Mining	29	Trenchers	120	18.54	19.10	0.56		1.45	1.75	18.54	1.45	1.75	54,736	54,736	190	190	82.06	82.06
2013	SC	Construction and Mining	29	Trenchers	175	4.38	4.29	-0.09		0.23	0.33	4.38	0.23	0.33	6,475	6,475	25	25	143.87	143.87
2013	SC	Construction and Mining	29	Trenchers	250	7.06	6.84	-0.22		0.28	0.44	7.04	0.28	0.44	8,265	8,265	30	30	218.42	218.42
2013	SC	Construction and Mining	29	Trenchers	500	7.79	7.78	-0.02		0.29	0.44	7.79	0.29	0.44	8,528	8,528	27	27	358.52	358.52
2013	SC	Construction and Mining	29	Trenchers	750	1.56	1.46	-0.10		0.05	0.08	1.56	0.05	0.08	2,213	2,213	6	6	619.25	619.25
2013	SC	Construction and Mining	29	Trenchers	1000	0.59	0.62	0.03		0.03	0.04	0.59	0.03	0.04	95	95	0	0	860.00	860.00
2013	SC	Construction and Mining	36	Sweepers/Scrubbers	50	15.68	16.41	0.73		1.65	4.01	15.65	1.64	3.99	151,286	151,286	241	241	35.59	35.59
2013	SC	Construction and Mining	36	Sweepers/Scrubbers	120	33.10	34.39	1.30		2.90	3.28	33.09	2.90	3.28	118,919	118,919	196	196	77.53	77.53
2013	SC	Construction and Mining	36	Sweepers/Scrubbers	175	11.30	11.50	0.20		0.63	0.90	11.30	0.63	0.90	14,451	14,451	23	23	159.47	159.47
2013	SC	Construction and Mining	36	Sweepers/Scrubbers	250	4.14	4.37	0.24		0.16	0.25	4.14	0.16	0.25	6,047	6,047	9	9	204.41	204.41
2013	SC	Construction and Mining	36	Sweepers/Scrubbers	500	1.03	1.09	0.06		0.04	0.06	1.03	0.04	0.06	1,135	1,135	2	2	302.50	302.50
2013	SC	Construction and Mining	36	Sweepers/Scrubbers	1000	0.48	0.51	0.03		0.01	0.01	0.48	0.01	0.01	284	284	0	0	848.00	848.00
2014	SC	Construction and Mining	11	Bore/Drill Rigs	50	1.43				0.10	0.18	1.43	0.10	0.18	12,305	12,305	38	38	39.27	39.27
2014	SC	Construction and Mining	11	Bore/Drill Rigs	120	8.17				0.49	0.52	8.09	0.48	0.51	42,266	42,266	118	118	82.33	82.33
2014	SC	Construction and Mining	11	Bore/Drill Rigs	175	8.80				0.40	0.55	8.80	0.40	0.55	26,297	26,297	92	92	148.54	148.54
2014	SC	Construction and Mining	11	Bore/Drill Rigs	250	11.29				0.34	0.58	11.00	0.33	0.56	27,128	27,128	92	92	207.75	207.75
2014	SC	Construction and Mining	11	Bore/Drill Rigs	500	11.57				0.37	0.61	11.24	0.36	0.59	18,232	18,232	64	64	349.18	349.18
2014	SC	Construction and Mining	11	Bore/Drill Rigs	750	11.27				0.38	0.62	11.10	0.38	0.61	13,795	13,795	32	32	611.96	611.96
2014	SC	Construction and Mining	11	Bore/Drill Rigs	1000	1.12				0.02	0.03	1.12	0.02	0.03	735	735	1	1	919.00	919.00
2014	SC	Construction and Mining	11	Bore/Drill Rigs	9999	5.38				0.13	0.18	5.38	0.13	0.18	858	858	1	1	2,666.67	2,666.67
2014	SC	Construction and Mining	12	Cranes	50	0.55				0.06	0.16	0.55	0.06	0.16	7,055	7,055	18	18	40.63	40.63
2014	SC	Construction and Mining	12	Cranes	120	25.08				1.86	2.51	24.67	1.83	2.46	84,778	84,778	214	214	88.95	88.95
2014	SC	Construction and Mining	12	Cranes	175	53.22				2.88	4.12	52.97	2.86	4.10	133,158	133,158	322	322	147.88	147.88
2014	SC	Construction and Mining	12	Cranes	250	84.23				3.88	5.86	83.33	3.82	5.79	153,829	153,829	361	361	217.00	217.00
2014	SC	Construction and Mining	12	Cranes	500	103.26				4.29	6.59	101.93	4.22	6.49	152,450	152,450	346	346	336.11	336.11
2014	SC	Construction and Mining	12	Cranes	750	18.60				0.65	0.99	18.60	0.65	0.99	23,856	23,856	51	51	567.19	567.19
2014	SC	Construction and Mining	12	Cranes	1000	11.73				0.58	0.87	11.73	0.58	0.87	3,391	3,391	8	8	937.60	937.60
2014	SC	Construction and Mining	12	Cranes	9999	0.18				0.00	0.01	0.18	0.00	0.01	236	236	1	1	1,030.00	1,030.00
2014	SC	Construction and Mining	13	Crawler Tractors	50	1.79				0.21	0.59	1.78	0.21	0.58	13,865	13,865	45	45	42.51	42.51
2014	SC	Construction and Mining	13	Crawler Tractors	120	100.92				8.44	9.81	100.47	8.39	9.75	325,227	325,227	776	776	86.86	86.86
2014	SC	Construction and Mining	13	Crawler Tractors	175	102.08				5.57	7.73	100.95	5.49	7.63	207,718	207,718	508	508	149.54	149.54
2014	SC	Construction and Mining	13	Crawler Tractors	250	93.26				3.63	5.63	92.10	3.56	5.54	154,007	154,007	371	371	202.85	202.85
2014	SC	Construction and Mining	13	Crawler Tractors	500	224.81				8.74	13.68	221.24	8.56	13.42	244,636	244,636	596	596	340.69	340.69
2014	SC	Construction and Mining	13	Crawler Tractors	750	75.63				2.76	4.43	75.43	2.75	4.42	57,189	57,189	122	122	570.11	570.11

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CalendarYear	AirBasin	Equipment Class	EquipmentTypeID	Equipment Type	HorsepowerBin	BaseNOx				BasePM	BaseHC	ScenNOx	ScenPM	ScenHC	BaseActivity	ScenActivity	BasePopulation	ScenPopulation	BaseAvgHP	ScenAvgHP
2014	SC	Construction and Mining	13	Crawler Tractors	1000	15.08				0.44	0.80	15.08	0.44	0.80	5,188	5,188	11	11	828.17	828.17
2014	SC	Construction and Mining	13	Crawler Tractors	9999	6.78				0.18	0.31	6.78	0.18	0.31	1,558	1,558	3	3	1,526.50	1,526.50
2014	SC	Construction and Mining	14	Excavators	50	54.37				4.17	7.47	54.35	4.16	7.46	727,548	727,548	1,104	1,104	35.74	35.74
2014	SC	Construction and Mining	14	Excavators	120	82.45				6.16	6.83	82.07	6.12	6.78	464,602	464,602	799	799	81.78	81.78
2014	SC	Construction and Mining	14	Excavators	175	156.47				7.72	10.86	155.19	7.63	10.74	542,031	542,031	1,015	1,015	146.04	146.04
2014	SC	Construction and Mining	14	Excavators	250	189.21				6.12	10.62	185.27	5.88	10.30	460,572	460,572	872	872	218.47	218.47
2014	SC	Construction and Mining	14	Excavators	500	242.63				7.95	14.01	236.60	7.62	13.57	510,069	510,069	887	887	328.64	328.64
2014	SC	Construction and Mining	14	Excavators	750	22.60				0.72	1.25	22.75	0.73	1.27	26,405	26,405	45	45	577.94	577.94
2014	SC	Construction and Mining	14	Excavators	1000	4.68				0.15	0.25	3.96	0.11	0.18	2,019	2,019	4	4	842.88	842.88
2014	SC	Construction and Mining	14	Excavators	9999	5.05				0.13	0.23	5.05	0.13	0.23	2,128	2,128	3	3	1,569.14	1,569.14
2014	SC	Construction and Mining	15	Graders	50	0.51				0.07	0.20	0.51	0.07	0.20	4,372	4,372	14	14	39.16	39.16
2014	SC	Construction and Mining	15	Graders	120	22.08				1.84	2.32	21.76	1.81	2.29	53,149	53,149	150	150	91.00	91.00
2014	SC	Construction and Mining	15	Graders	175	173.04				9.73	13.93	171.99	9.65	13.83	296,533	296,533	701	701	147.95	147.95
2014	SC	Construction and Mining	15	Graders	250	199.22				6.44	11.18	199.08	6.43	11.17	376,728	376,728	557	557	204.35	204.35
2014	SC	Construction and Mining	15	Graders	500	37.28				1.43	2.61	37.08	1.42	2.59	75,600	75,600	104	104	293.17	293.17
2014	SC	Construction and Mining	15	Graders	1000	0.90				0.03	0.06	0.90	0.03	0.06	270	270	0	0	796.00	796.00
2014	SC	Construction and Mining	15	Graders	9999	8.94				0.27	0.49	8.94	0.27	0.49	1,520	1,520	2	2	1,992.80	1,992.80
2014	SC	Construction and Mining	16	Off-Highway Tractors	50	26.13				2.64	6.43	25.59	2.53	6.09	251,152	251,152	423	423	37.66	37.66
2014	SC	Construction and Mining	16	Off-Highway Tractors	120	41.62				3.43	3.87	40.12	3.28	3.69	178,558	178,558	308	308	74.53	74.53
2014	SC	Construction and Mining	16	Off-Highway Tractors	175	27.81				1.43	1.95	27.52	1.41	1.92	72,176	72,176	117	117	158.08	158.08
2014	SC	Construction and Mining	16	Off-Highway Tractors	250	26.17				0.94	1.55	26.13	0.94	1.54	44,971	44,971	76	76	213.84	213.84
2014	SC	Construction and Mining	16	Off-Highway Tractors	500	52.50				1.88	3.10	51.23	1.81	3.01	80,966	80,966	131	131	334.44	334.44
2014	SC	Construction and Mining	16	Off-Highway Tractors	750	13.20				0.44	0.73	13.07	0.43	0.72	11,850	11,850	19	19	573.53	573.53
2014	SC	Construction and Mining	16	Off-Highway Tractors	1000	1.14				0.06	0.08	0.21	0.01	0.01	193	193	0	0	1,000.00	1,000.00
2014	SC	Construction and Mining	16	Off-Highway Tractors	9999	7.24				0.27	0.48	4.31	0.14	0.24	895	895	2	2	1,726.25	1,726.25
2014	SC	Construction and Mining	17	Off-Highway Trucks	50	2.60				0.27	0.61	2.60	0.27	0.61	36,487	36,487	25	25	29.14	29.14
2014	SC	Construction and Mining	17	Off-Highway Trucks	120	3.58				0.29	0.35	3.39	0.27	0.33	16,376	16,376	14	14	87.06	87.06
2014	SC	Construction and Mining	17	Off-Highway Trucks	175	60.28				3.38	4.90	60.01	3.36	4.87	171,909	171,909	135	135	158.89	158.89
2014	SC	Construction and Mining	17	Off-Highway Trucks	250	136.04				6.01	10.03	128.61	5.57	9.43	266,094	266,094	231	231	211.02	211.02
2014	SC	Construction and Mining	17	Off-Highway Trucks	500	476.87				18.51	33.13	463.87	17.77	32.19	631,437	631,437	514	514	372.42	372.42
2014	SC	Construction and Mining	17	Off-Highway Trucks	750	217.39				9.30	15.70	197.81	8.18	14.21	128,428	128,428	117	117	655.92	655.92
2014	SC	Construction and Mining	17	Off-Highway Trucks	1000	159.75				4.71	8.64	157.55	4.63	8.48	65,531	65,531	54	54	897.23	897.23
2014	SC	Construction and Mining	17	Off-Highway Trucks	9999	209.30				6.56	12.37	207.69	6.50	12.22	47,604	47,604	35	35	1,764.19	1,764.19
2014	SC	Construction and Mining	18	Other Construction Equipment	50	13.56				1.22	2.62	13.56	1.22	2.62	139,974	139,974	327	327	38.01	38.01
2014	SC	Construction and Mining	18	Other Construction Equipment	120	56.96				4.45	5.18	56.74	4.43	5.15	229,034	229,034	576	576	81.56	81.56
2014	SC	Construction and Mining	18	Other Construction Equipment	175	30.39				1.61	2.25	29.76	1.56	2.19	66,898	66,898	179	179	152.49	152.49
2014	SC	Construction and Mining	18	Other Construction Equipment	250	34.69				1.29	2.02	34.20	1.26	1.99	59,661	59,661	161	161	216.90	216.90
2014	SC	Construction and Mining	18	Other Construction Equipment	500	95.84				3.61	5.78	92.19	3.40	5.51	123,703	123,703	313	313	356.86	356.86
2014	SC	Construction and Mining	18	Other Construction Equipment	750	33.78				1.15	1.85	30.66	0.98	1.61	28,963	28,963	65	65	597.67	597.67
2014	SC	Construction and Mining	18	Other Construction Equipment	1000	4.12				0.11	0.17	4.12	0.11	0.17	2,440	2,440	6	6	830.15	830.15
2014	SC	Construction and Mining	18	Other Construction Equipment	9999	3.13				0.09	0.14	2.90	0.08	0.14	1,143	1,143	3	3	1,126.67	1,126.67
2014	SC	Construction and Mining	19	Pavers	50	1.71				0.18	0.47	1.71	0.18	0.47	16,924	16,924	53	53	38.63	38.63
2014	SC	Construction and Mining	19	Pavers	120	20.24				1.58	1.85	20.15	1.57	1.83	89,184	89,184	257	257	79.58	79.58
2014	SC	Construction and Mining	19	Pavers	175	25.31				1.27	1.83	25.19	1.26	1.82	60,635	60,635	174	174	158.13	158.13
2014	SC	Construction and Mining	19	Pavers	250	12.24				0.31	0.51	12.23	0.31	0.51	30,261	30,261	75	75	213.21	213.21
2014	SC	Construction and Mining	19	Pavers	500	3.44				0.11	0.17	3.44	0.11	0.17	7,532	7,532	19	19	327.38	327.38
2014	SC	Construction and Mining	19	Pavers	750	0.31				0.01	0.02	0.31	0.01	0.02	376	376	1	1	750.00	750.00
2014	SC	Construction and Mining	20	Paving Equipment	50	1.97				0.17	0.34	1.96	0.16	0.33	27,673	27,673	65	65	34.82	34.82
2014	SC	Construction and Mining	20	Paving Equipment	120	12.12				0.93	1.07	12.00	0.91	1.05	54,311	54,311	133	133	88.60	88.60
2014	SC	Construction and Mining	20	Paving Equipment	175	9.36				0.45	0.62	9.31	0.44	0.61	30,730	30,730	73	73	148.41	148.41
2014	SC	Construction and Mining	20	Paving Equipment	250	4.98				0.18	0.28	4.46	0.15	0.24	11,053	11,053	26	26	215.67	215.67
2014	SC	Construction and Mining	20	Paving Equipment	500	6.14				0.22	0.34	6.12	0.22	0.34	9,992	9,992	24	24	338.76	338.76
2014	SC	Construction and Mining	20	Paving Equipment	750	2.46				0.06	0.11	2.46	0.06	0.11	2,635	2,635	6	6	605.00	605.00
2014	SC	Construction and Mining	20	Paving Equipment	1000	0.56				0.01	0.02	0.56	0.01	0.02	370	370	1	1	842.00	842.00
2014	SC	Construction and Mining	21	Rollers	50	33.30				3.00	6.71	33.20	2.98	6.65	417,161	417,161	1,338	1,338	35.68	35.68
2014	SC	Construction and Mining	21	Rollers	120	68.96				5.15	6.22	68.21	5.08	6.13	297,111	297,111	997	997	86.86	86.86
2014	SC	Construction and Mining	21	Rollers	175	53.21				2.49	3.45	52.35	2.43	3.37	186,363	186,363	577	577	143.78	143.78
2014	SC	Construction and Mining	21	Rollers	250	9.21				0.33	0.53	9.43	0.33	0.55	19,784	19,784	71	71	213.25	213.25
2014	SC	Construction and Mining	21	Rollers	500	6.41				0.26	0.40	5.65	0.22	0.34	7,873	7,873	29	29	334.88	334.88
2014	SC	Construction and Mining	21	Rollers	750	0.46				0.02	0.03	0.46	0.02	0.03	250	250	1	1	520.50	520.50
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	50	1.64				0.14	0.31	1.64	0.14	0.31	14,975	14,975	61	61	47.28	47.28
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	120	126.39				7.41	8.25	125.39	7.32	8.14	657,545	657,545	2,603	2,603	96.33	96.33
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	175	19.24				0.76	1.00	18.59	0.72	0.95	90,078	90,078	348	348	129.59	129.59
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	250	2.59				0.11	0.18	1.27	0.04	0.07	4,594	4,594	20	20	208.31	208.31
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	500	0.84				0.03	0.04	0.64	0.01	0.03	1,098	1,098	5	5	373.89	373.89
2014	SC	Construction and Mining	22	Rough Terrain Forklifts	750	0.42				0.02	0.03	0.04	0.00	0.00	102	102	1	1	625.00	625.00
2014	SC	Construction and Mining	23	Rubber Tired Dozers	50	1.83				0.24	0.67	1.83	0.24	0.67	15,146	15,146	18	18	41.59	41.59
2014	SC	Construction and Mining	23	Rubber Tired Dozers	120	13.62				1.22	1.45	13.62	1.22	1.45	40,024	40,024	53	53	81.59	81.59
2014	SC	Construction and Mining	23	Rubber Tired Dozers	175	11.78				0.67	0.95	11.78	0.67	0.95	18,366	18,366	27	27	149.68	149.68
2014	SC	Construction and Mining	23	Rubber Tired Dozers	250	9.93				0.49	0.74	9.93	0.49	0.74	13,549	13,549	21	21	210.98	210.98
2014	SC	Construction and Mining	23	Rubber Tired Dozers	500	114.94				5.36	8.34	113.92	5.31	8.26	91,635	91,635	141	141	354.05	354.05
2014	SC	Construction and Mining	23	Rubber Tired Dozers	750	12.64				0.46	0.76	12.04	0.43	0.71	6,619	6,619	9	9	584.10	584.10
2014	SC	Construction and Mining	24	Rubber Tired Loaders	50	5.28				0.59	1.52	5.23	0.58	1.50	51,565	51,565	67	67	41.70	41.70
2014	SC	Construction and Mining	24	Rubber Tired Loaders	120	169.74				14.77	17.12	167.40	14.53	16.84	683,442	683,442	828	828	86.15	86.15
2014	SC	Construction and Mining	24	Rubber Tired Loaders	175	348.24				19.54	27.81	345.85	19.32	27.58	921,784	921,784	1,085	1,085	150.00	150.00
2014	SC	Construction and Mining	24	Rubber Tired Loaders	250	420.60				14.32	25.75	418.83	14.24	25.61	928,112	928,112	964	964	205.91	205.91
2014	SC	Construction and Mining	24	Rubber Tired Loaders	500	531.94				20.24	35.71	518.14	19.53	34.72	782,366	782,366	896	896	319.69	319.69
2014	SC	Construction and Mining	24	Rubber Tired Loaders	750	86.45				3.42	6.04	86.81	3.43	6.06	75,352	75,352	79	79	600.48	600.48
2014	SC	Construction and Mining	24	Rubber Tired Loaders	1000	34.15				1.00	1.75	34.15	0.99	1.74	15,288	15,288	14	14	836.81	836.81
2014	SC	Construction and Mining	24	Rubber Tired Loaders	9999	12.96				0.37	0.70	12.96	0.37	0.70	3,358	3,358	3	3	1,521.00	1,521.00
2014	SC	Construction and Mining	25	Scrapers	50	0.13				0.02	0.05	0.13	0.02	0.05	1,026	1,026	3	3	36.14	36.14
2014	SC	Construction and Mining	25	Scrapers	120	6.87				0.51	0.58	6.87	0.51	0.58	21,671	21,671	45	45	84.33	84.33
2014	SC	Construction and Mining	25	Scrapers	175	82.86				4.40	6.23	81.98	4.34	6.15	117,342	117,342	289	289	166.16	166.16
2014	SC	Construction and Mining	25	Scrapers	250	109.57				5.02	7.64	107.28	4.90	7.46	101,732	101,732	280	280	224.97	224.97
2014	SC	Construction and Mining	25	Scrapers	500	675.41				27.45	43.06	658.95	26.58	41.83	521,338	521,338	1,232	1,232	381.35	381.35

EMISSIONS INVENTORY

CalendarYear	AirBasin	Equipment Class	EquipmentTypeID	Equipment Type	HorsepowerBin	BaseNOx				BasePM	BaseHC	ScenNOx	ScenPM	ScenHC	BaseActivity	ScenActivity	BasePopulation	ScenPopulation	BaseAvgHP	ScenAvgHP
2014	SC	Construction and Mining	25	Scrapers	750	248.68				9.53	15.20	242.54	9.17	14.75	161,069	161,069	351	351	564.95	564.95
2014	SC	Construction and Mining	25	Scrapers	1000	10.15				0.47	0.73	10.15	0.47	0.73	1,500	1,500	6	6	950.00	950.00
2014	SC	Construction and Mining	25	Scrapers	9999	19.71				0.74	1.13	19.71	0.74	1.13	2,635	2,635	6	6	1,923.31	1,923.31
2014	SC	Construction and Mining	26	Skid Steer Loaders	50	21.19				1.34	2.59	21.08	1.33	2.55	262,908	262,908	927	927	43.47	43.47
2014	SC	Construction and Mining	26	Skid Steer Loaders	120	110.84				6.49	6.96	110.50	6.46	6.92	960,974	960,974	2,990	2,990	70.54	70.54
2014	SC	Construction and Mining	26	Skid Steer Loaders	175	0.78				0.04	0.05	0.78	0.04	0.05	3,020	3,020	12	12	152.93	152.93
2014	SC	Construction and Mining	26	Skid Steer Loaders	250	0.51				0.02	0.03	0.53	0.02	0.03	1,786	1,786	7	7	200.53	200.53
2014	SC	Construction and Mining	26	Skid Steer Loaders	500	0.12				0.00	0.01	0.12	0.00	0.01	359	359	1	1	276.67	276.67
2014	SC	Construction and Mining	26	Skid Steer Loaders	750	0.10				0.00	0.00	0.10	0.00	0.00	193	193	0	0	530.00	530.00
2014	SC	Construction and Mining	26	Skid Steer Loaders	1000	0.56				0.02	0.04	0.26	0.01	0.01	167	167	1	1	1,000.00	1,000.00
2014	SC	Construction and Mining	27	Surfacing Equipment	50	0.23				0.02	0.04	0.23	0.02	0.04	3,572	3,572	16	16	35.67	35.67
2014	SC	Construction and Mining	27	Surfacing Equipment	120	2.07				0.15	0.17	2.07	0.15	0.17	12,743	12,743	52	52	88.68	88.68
2014	SC	Construction and Mining	27	Surfacing Equipment	175	1.11				0.05	0.08	1.11	0.05	0.08	3,881	3,881	18	18	150.98	150.98
2014	SC	Construction and Mining	27	Surfacing Equipment	250	2.15				0.06	0.11	2.08	0.06	0.10	5,690	5,690	26	26	216.06	216.06
2014	SC	Construction and Mining	27	Surfacing Equipment	500	5.11				0.16	0.26	5.11	0.16	0.26	10,893	10,893	43	43	362.36	362.36
2014	SC	Construction and Mining	27	Surfacing Equipment	750	3.97				0.12	0.17	3.97	0.12	0.17	5,911	5,911	22	22	615.08	615.08
2014	SC	Construction and Mining	27	Surfacing Equipment	1000	1.12				0.03	0.05	1.12	0.03	0.05	724	724	3	3	814.29	814.29
2014	SC	Construction and Mining	27	Surfacing Equipment	9999	0.27				0.01	0.01	0.27	0.01	0.01	185	185	1	1	1,141.00	1,141.00
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	50	50.81				4.66	10.58	50.45	4.59	10.37	603,894	603,894	1,297	1,297	38.31	38.31
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	120	918.61				72.32	79.38	913.74	71.78	78.77	4,876,841	4,876,841	8,805	8,805	82.65	82.65
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	175	143.48				7.24	10.18	142.20	7.15	10.07	492,559	492,559	985	985	143.93	143.93
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	250	82.73				2.69	4.55	81.92	2.64	4.50	200,658	200,658	394	394	204.22	204.22
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	500	100.83				3.42	5.82	100.17	3.39	5.76	171,624	171,624	356	356	320.14	320.14
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	750	13.55				0.49	0.80	13.55	0.49	0.80	13,685	13,685	25	25	574.62	574.62
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	1000	2.00				0.04	0.07	2.00	0.04	0.07	1,492	1,492	2	2	871.40	871.40
2014	SC	Construction and Mining	28	Tractors/Loaders/Backhoes	9999	40.24				1.21	2.00	41.24	1.27	2.09	9,176	9,176	17	17	2,005.62	2,005.62
2014	SC	Construction and Mining	29	Trenchers	50	17.77				1.63	3.43	17.74	1.63	3.41	147,602	147,602	425	425	39.78	39.78
2014	SC	Construction and Mining	29	Trenchers	120	19.10				1.49	1.80	18.87	1.47	1.77	57,519	57,519	197	197	82.06	82.06
2014	SC	Construction and Mining	29	Trenchers	175	4.29				0.22	0.32	4.18	0.21	0.31	6,805	6,805	26	26	143.87	143.87
2014	SC	Construction and Mining	29	Trenchers	250	6.84				0.27	0.43	6.81	0.27	0.43	8,686	8,686	31	31	218.42	218.42
2014	SC	Construction and Mining	29	Trenchers	500	7.78				0.29	0.45	7.78	0.29	0.45	8,962	8,962	28	28	358.52	358.52
2014	SC	Construction and Mining	29	Trenchers	750	1.46				0.05	0.08	1.46	0.05	0.08	2,325	2,325	6	6	619.25	619.25
2014	SC	Construction and Mining	29	Trenchers	1000	0.62				0.03	0.04	0.62	0.03	0.04	99	99	0	0	860.00	860.00
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	50	16.41				1.72	4.18	16.34	1.71	4.15	158,979	158,979	250	250	35.59	35.59
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	120	34.39				3.04	3.43	33.74	2.97	3.35	124,966	124,966	203	203	77.53	77.53
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	175	11.50				0.64	0.92	11.08	0.61	0.88	15,186	15,186	23	23	159.47	159.47
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	250	4.37				0.17	0.27	4.37	0.17	0.27	6,354	6,354	10	10	204.41	204.41
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	500	1.09				0.05	0.07	1.09	0.05	0.07	1,193	1,193	2	2	302.50	302.50
2014	SC	Construction and Mining	36	Sweepers/Scrubbers	1000	0.51				0.01	0.02	0.51	0.01	0.02	298	298	0	0	848.00	848.00

APPENDIX C

NOISE APPENDIX

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NOISE APPENDIX

PROPOSED RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) AND ASSOCIATED IMPROVEMENTS PROJECT

(RUNWAY SAFETY IMPROVEMENTS AND PAVEMENT RECONSTRUCTION OF PORTIONS OF RUNWAY 7L/25R AND TAXIWAY B)

Los Angeles International Airport
Los Angeles, Los Angeles County, California

Prepared for:

LOS ANGELES WORLD AIRPORTS

Prepared by:

URS Corporation and Ricondo and Associates, Inc.
Los Angeles, CA

September 2013

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1.0 INTRODUCTION

The City of Los Angeles, through its aviation department, Los Angeles World Airports (LAWA), is proposing the Runway 7L/25R Runway Safety Area Project and Associated Improvements (proposed Project) at the Los Angeles International Airport (LAX or the Airport). This appendix contains four sections. The first section presents a brief description of the proposed Project. The second provides background information on aircraft noise and the metrics used to evaluate noise in the airport setting. The third section provides a summary of the effects of environmental noise. The methodology used to estimate operational and construction noise exposure from the proposed Project are presented in the fourth section.

2.0 PROJECT DESCRIPTION

The proposed Project site is located on the South Airfield of LAX in the City of Los Angeles. LAX is located south of Westchester Parkway, west of Interstate 405, north of Imperial Highway, and east of Pershing Drive. The project site is bordered to the north, south, and east by Airport facilities. To the west of the project site is vacant, open land that serves as a buffer area between LAX and Dockweiler State Beach.

LAWA proposes to construct improvements to the Runway Safety Area (RSA) for Runway 7L/25R and reconstruct pavement on the eastern sections of Runway 7L/25R and Taxiway B (collectively, the proposed Project). The RSA improvements are being undertaken by LAWA in response to the *Transportation, Treasury, Housing and Urban Development, the Judiciary, the District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law 109-115), November 30, 2005. This Act requires completion of RSA improvements by airport sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR), Part 139, *Certification and Operations: Land Airports Serving Certain Air Carriers*, to meet Federal Aviation Administration (FAA) design standards by December 31, 2015.

The elements of the proposed Runway 7L/25R RSA improvements include:

- Extend the Runway 7L/25R pavement, 832 feet to the west. The Runway 7L threshold will remain at its current location for landings, resulting in an 832-foot displaced threshold;
- Implement declared distances to maintain existing take-off run available and take-off distance available;
- Grade and compact the RSA, approximately 500 feet wide by 168 feet long, beyond the new Runway 7L runway end;
- Grade but not pave an additional area approximately 500 feet wide by 957 feet long to RSA standards beyond the Runway 7L safety area to maintain the option of shifting operations to the west on the runway at a future date;
- Construct a blast pad west of the Runway 7L extension;
- Extend parallel Taxiway H 832 feet to the west;
- Construct a new taxiway connector (B17) from Taxiway H to Taxiway C;
- Decommission Taxiway B16 from Taxiway H to Taxiway B;

- Reconstruct a portion of Taxiway B at the intersection with new Taxiway B17;
- Reconstruct a portion of Taxiway U from Taxiway B to Runway 7L/25R;
- Relocate the existing Runway 25R Localizer Antenna and shelter to the west of the graded, unpaved area;
- Relocate other FAA equipment shelters west of Taxiway B17;
- Relocate existing service road west, beyond the proposed 957-foot grading extension and provide access roads to navaids and equipment shelters;
- Replace existing Approach Lighting System (ALS) towers where the new runway pavement will be constructed with in-pavement lights; and
- Modify the existing Runway and Taxiway lighting and markings in the newly constructed pavements.

The proposed Project would also replace areas of pavement that are in poor condition. Pavement reconstruction activities may include, but not be limited to, demolition and removal of existing pavement and base materials, placement of new sub-base and/or base materials, installation of new Portland Cement Concrete (PCC) pavement, and application of runway and taxiway markings on the new pavement sections.

3.0 FUNDAMENTALS OF AIRCRAFT NOISE

Noise here is defined as “Sound or a sound that is loud, unpleasant, unexpected, or undesired” (American Heritage Dictionary 2011). Simply put, noise is unwanted sound. A variety of noise metrics are used to assess aircraft noise impacts in different ways. Noise metrics are used to describe individual noise events (such as a single operation of an aircraft taking off overhead) or groups of events (such as the cumulative effect of numerous aircraft operations, the collection of which creates a general noise environment or overall exposure level). Both types of descriptors are helpful in explaining how people tend to respond to a given noise condition. Descriptions of these metrics are provided below.

Decibel, dB – Sound is a complex physical phenomenon consisting of complex minute vibrations traveling through a medium, such as air. These vibrations are sensed by the human ear as sound pressure. Because of the vast range of sound pressure or intensity detectable by the human ear, sound pressure level (SPL) is represented on a logarithmic scale known as decibels (dB). A sound level of 0 dB is approximately the threshold of human hearing and is barely audible under extremely quiet (laboratory-type) listening conditions. A SPL of 120 dB begins to be felt inside the ear as discomfort and pain at approximately 140 dB. Most environmental sounds have SPLs ranging from 30 to 100 dB.

Because decibels are logarithmic, they cannot be added or subtracted directly like other (linear) numbers. For example, if two sound sources each produce 100 dB, when they are operated together they will produce 103 dB, not 200 dB. Four 100 dB sources operating together again double the sound energy, resulting in a total SPL of 106 dB, and so on. In addition, if one source is much louder than another, the two sources operating together will produce the same SPL as if the louder source were operating alone. For example, a 100 dB source plus an 80 dB source produce 100 dB when operating together. Two useful rules to remember when comparing SPLs are: (1) most people perceive a 6 to 10 dB increase in SPL between two noise

events to be about a doubling of loudness, and (2) changes in SPL of less than about 3 dB between two events are not easily detected outside of a laboratory.[1]

A-Weighted Decibel, dBA – Frequency, or pitch, is a basic physical characteristic of sound and is expressed in units of cycles per second or hertz (Hz). The normal frequency range of hearing for most people extends from about 20 to 20,000 Hz. Because the human ear is more sensitive to middle and high frequencies (i.e., 1,000 to 4,000 Hz), as compared to low frequencies, a frequency weighting called “A” weighting is applied. The internationally standardized "A" filter approximates the sensitivity of the human ear and helps in assessing the perceived loudness of various sounds. In this document all sound levels are A-weighted sound levels and the adjective "A-weighted" has been omitted.

Figure 1 charts common indoor and outdoor sound levels. A quiet rural area during the nighttime may be 30 dBA or lower while the operator of a typical gas lawn mower may experience a level of 90 dBA. Similarly, the level in a library may be 30 dBA or lower while the listener at a rock band concert may experience levels near 110 dBA.

Maximum A-Weighted Noise Level, L_{max} – Sound levels vary with time. For example, the sound increases as an aircraft approaches, then falls and blends into the ambient or background as the aircraft recedes into the distance. Because of this variation, it is often convenient to describe a particular noise "event" by its highest or maximum sound level (L_{max}). Note that L_{max} describes only one dimension of an event; it provides no information on the cumulative noise exposure generated by a sound source. In fact, two events with identical L_{max} may produce very different total exposures as one may be of very short duration, while the other may be much longer.

Sound Exposure Level, SEL – The most common measure of noise exposure for a single aircraft flyover is the SEL. SEL is a summation of the A-weighted sound energy at a particular location over the true duration of a noise event normalized to a fictional duration of one second. The true duration is defined as the amount of time the noise event exceeds background levels. For events lasting more than one second, SEL does not directly represent the sound level heard at any given time, but rather provides a measure of the net impact of the entire acoustic event.

The normalization to the fictional duration of one second enables the comparison of noise events with differing true duration and/or maximum level. Because the SEL is normalized to one second, it will almost always be larger in magnitude than the L_{max} for the event. In fact, for most aircraft events, the SEL is about 7 to 12 dB higher than the L_{max}. Additionally, since it is a cumulative measure, a higher SEL can result from either a louder or longer event, or some combination.

As SEL combines an event’s overall sound level along with its duration, SEL provides a comprehensive way to describe noise events for use in modeling and comparing noise environments. Computer noise models, such as the one employed for this document, base their computations on these SELs.

[1] ICF Jones & Stokes. *Technical Noise Supplement*. Prepared for California Department of Transportation, Sacramento, CA. 2009.

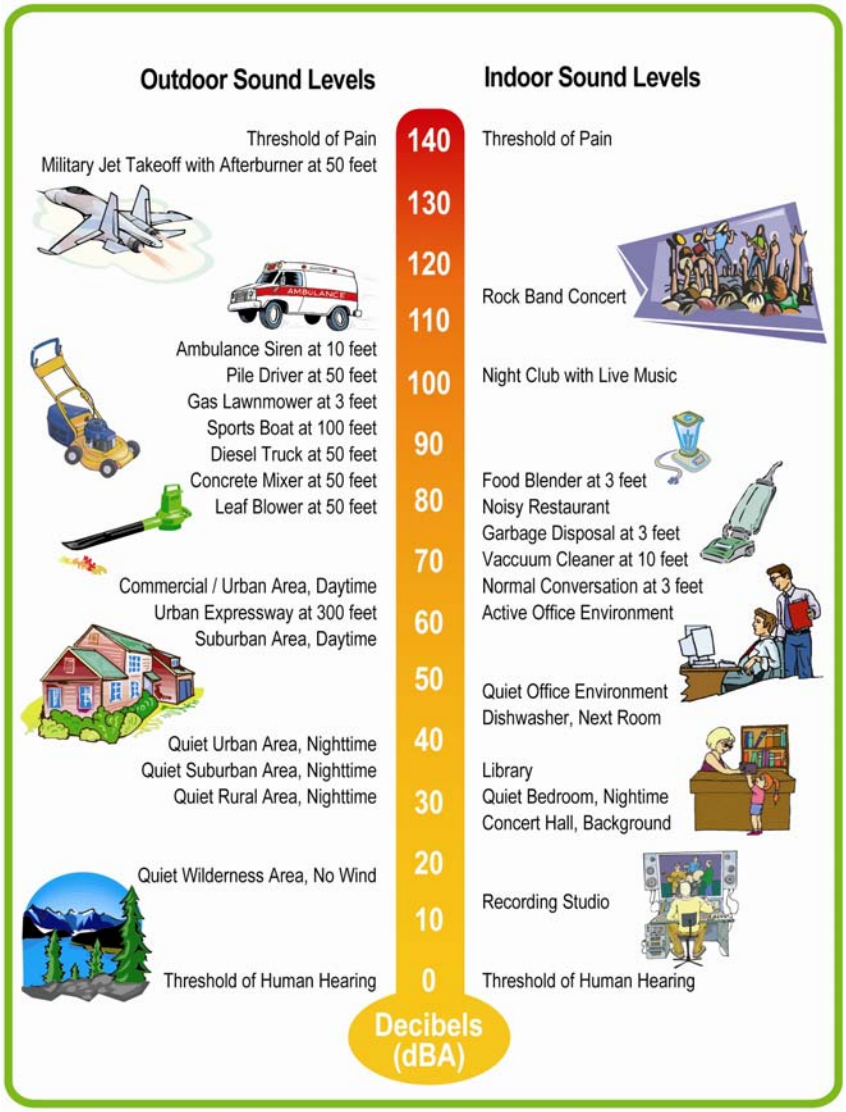


Figure 1
Common Outdoor and Indoor Sound Levels

Source: URS Corporation, 2008.

Figure 2 shows an event's "time history," the variation of sound level with time. For typical sound events experienced by a fixed listener, like a person experiencing an aircraft flying by, the sound level rises as the source (or aircraft) approaches the listener, peaks and then diminishes as the aircraft flies away from the listener. The area under the time history curve represents the overall sound energy of the noise event. The L_{max} for the event shown in the figure was 93.5 dBA. Compressing the event's total sound energy into one second to compute its SEL yields 102.7 dBA.

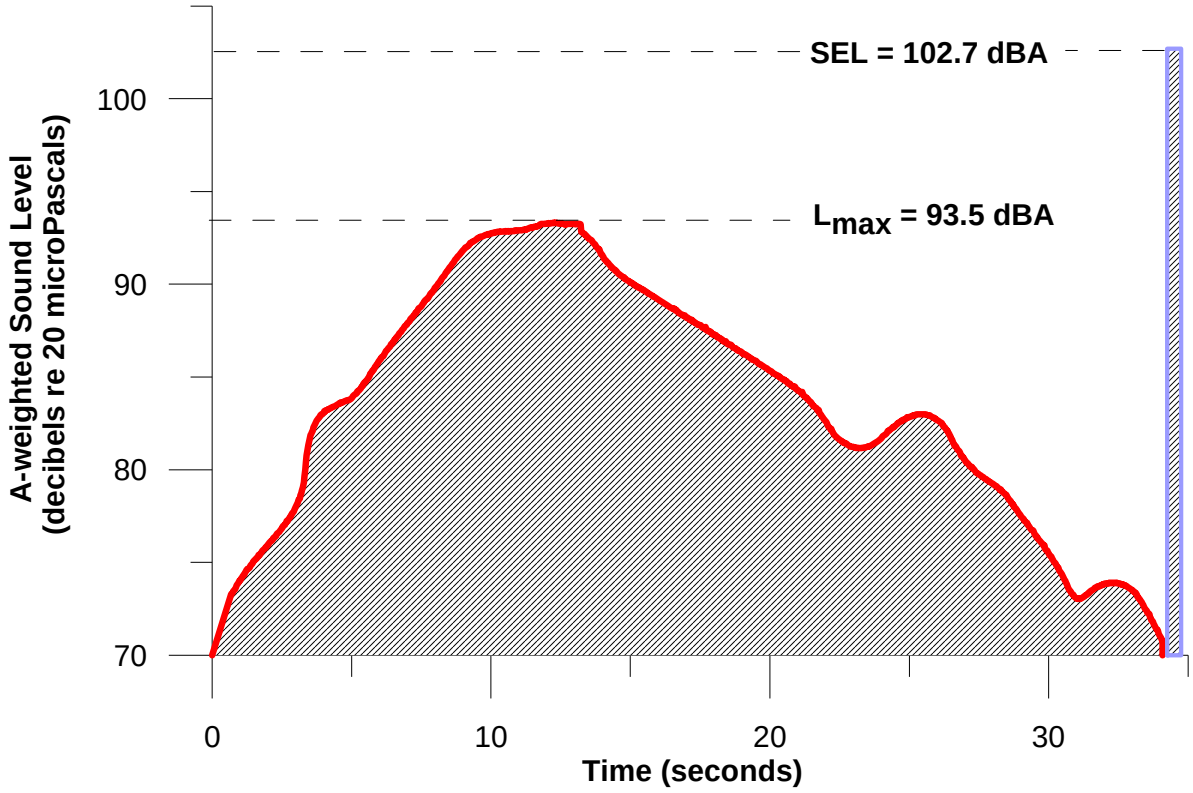


Figure 2
Comparison of Maximum Sound Level (Lmax) and Sound Exposure Level (SEL)
Source: URS Corporation, 2007.

Equivalent Sound Level, L_{eq} -- Equivalent sound level (abbreviated L_{eq}) is a measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular period of interest (e.g., an hour, an 8-hour school day, nighttime, or a full 24-hour day). However, because the length of the period can be different depending on the time frame of interest, the applicable period should always be identified or clearly understood when discussing the metric. Such durations are often identified through a subscript, for example $L_{eq(8)}$ or $L_{eq(24)}$.

Conceptually, L_{eq} may be thought of as a constant sound level over the period of interest that contains as much sound energy as the actual time-varying sound level with its normal "peaks" and "dips." In the context of noise from typical aircraft flight events and as noted earlier for SEL, L_{eq} does not represent the sound level heard at any particular time, but rather represents the total sound exposure for the period of interest. Also, it should be noted that the "average" sound level suggested by L_{eq} is not an arithmetic value, but a logarithmic, or "energy-averaged," sound level. Thus, loud events tend to dominate the noise environment described by the L_{eq} metric.

Day-Night Average Sound Level, DNL, and Community Noise Equivalent Level, CNEL - Time-averaged sound levels are measurements of sound levels averaged over a specified length of time. These levels provide a measure of the average sound energy during the measurement period. For the evaluation of community noise effects, and particularly aircraft noise effects, the Day-Night Average Sound Level (DNL) or the Community Noise Equivalent Level (CNEL) is used. Both metrics are similar to the Equivalent Sound Level (Leq) except that they compensate for the widely assumed increase in people's sensitivity to noise during nighttime hours. Each aircraft operation occurring between 10:00 p.m. and 7:00 a.m. is treated as if it were 10 operations. Similarly, CNEL (but not DNL) includes a penalty weighting for operations taking place between 7:00 and 10:00 p.m. in the evening. Each aircraft operation during these hours is counted as if it were three operations. Logarithmically, these multipliers are the equivalent of adding 10 dB to the noise level of each nighttime operation and 4.77 dB to the noise level of each evening operation. These noise level penalties are intended to correspond to the drop in background noise level which studies have found takes place from daytime to evening and nighttime in a typical community. The evening and nighttime decrease in ambient sound levels—from both outdoor and indoor sources—is commonly considered to be the principal explanation for people's heightened sensitivity to noises during these periods. (Caltrans, 2002)

CNEL is the primary noise descriptor of this study. CNEL is a 24-hour time-weighted-average noise metric expressed in A-weighted decibels (dBA) which accounts for the noise levels (in terms of SEL) of all individual aircraft events, the number of times those events occur, and the time of day at which they occur. Values of CNEL can be measured with standard monitoring equipment or predicted with computer models. This document utilizes estimates of CNEL with an FAA-approved computer-based noise model.

Typical DNL values for a variety of noise environments are shown in Figure 3. DNL values can be approximately 85 dBA outdoors under a flight path within a mile of a major airport and 40 dBA or less outdoors in a rural residential area. CNEL values would be similar.

Due to the CNEL and DNL descriptor's close correlation with the degree of community annoyance from aircraft noise, CNEL and DNL have been formally adopted by most Federal agencies for measuring and evaluating aircraft noise for land use planning and noise impact assessment. CNEL has been adopted by the State of California. Federal committees such as the Federal Interagency Committee on Urban Noise (FICUN) and the Federal Interagency Committee on Noise (FICON) which include the Environmental Protection Agency (EPA), Federal Aviation Administration (FAA), Department of Defense (DOD), Department of Housing and Urban Development (HUD), and Veterans Administration (VA), found DNL to be the best metric for land use planning. They also found no new cumulative sound descriptors or metrics of sufficient scientific standing to substitute for DNL. Other cumulative metrics could be used only to supplement, not replace DNL.

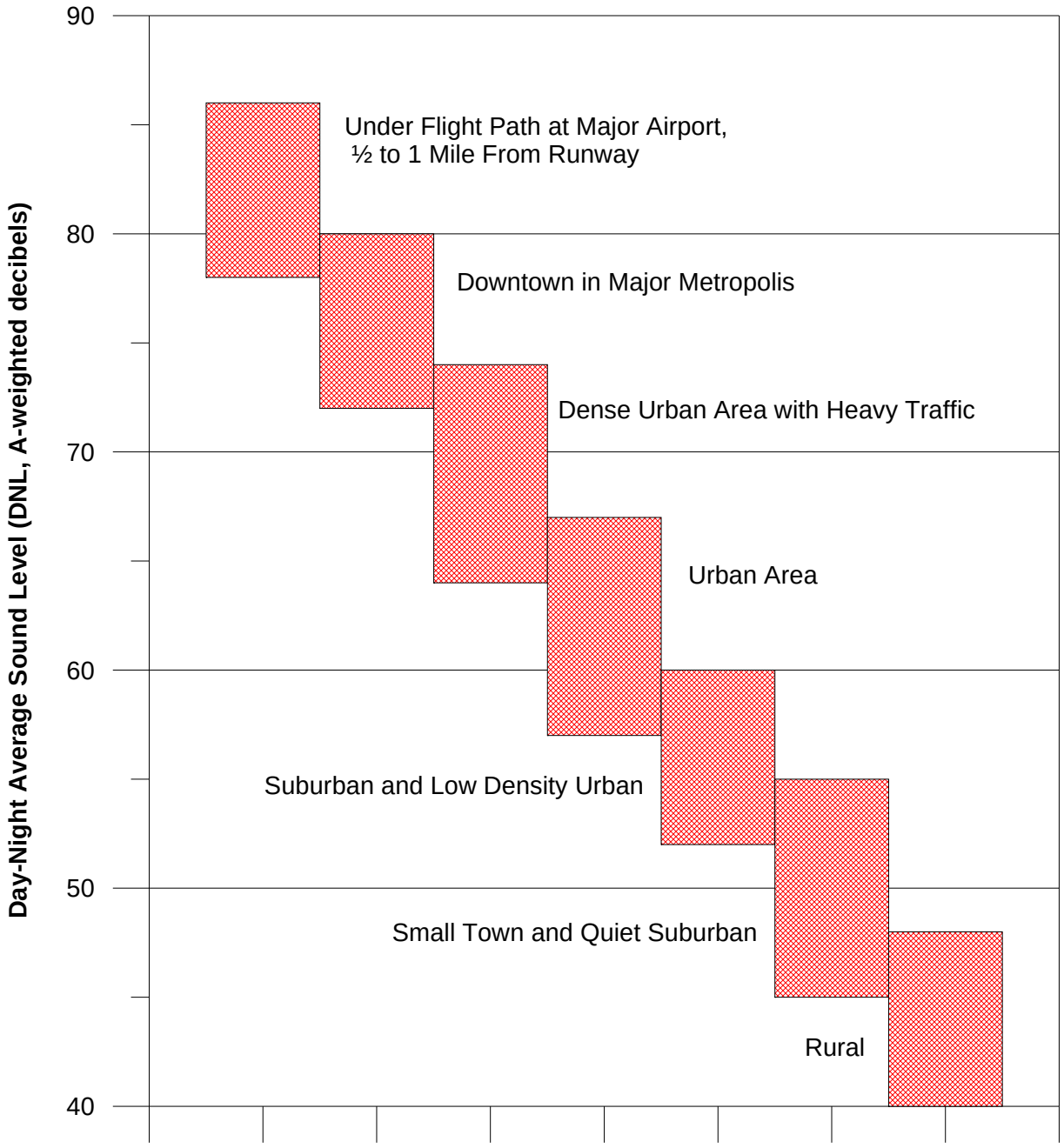


Figure 3
Typical Range of Outdoor Community Day-Night Average Sound Levels

Source: DOD, 1978.

4.0 EFFECTS OF AIRCRAFT NOISE

This section addresses three ways humans can be affected by aircraft noise: annoyance, speech interference and sleep disturbance.

Annoyance – The primary potential effect of aircraft noise on exposed communities is one of annoyance. Noise annoyance is defined by the Environmental Protection Agency as any negative subjective reaction on the part of an individual or group (EPA, 1974). Scientific studies and a large number of social/attitudinal surveys have been conducted to appraise people's annoyance to all types of environmental noise, especially aircraft events. These studies and surveys have found the DNL to be the best measure of this annoyance (EPA, 1974; FICUN, 1980; FICON, 1992; ANSI, 2007; ANSI, 2003; Schultz, 1978; Fidell, et. al., 1991).

The relationship between annoyance and DNL determined by the scientific community and endorsed by many Federal agencies, including the FAA, is shown in **Figure 4**. For a DNL of 65 dBA, approximately 13% of the exposed population would be highly-annoyed. The figure also shows at very low values of DNL, such as 45 dB or less, 1% or less of the exposed population would be highly annoyed. At very high values of DNL, such as 90 dBA, more than 80% of the exposed population would be highly annoyed.

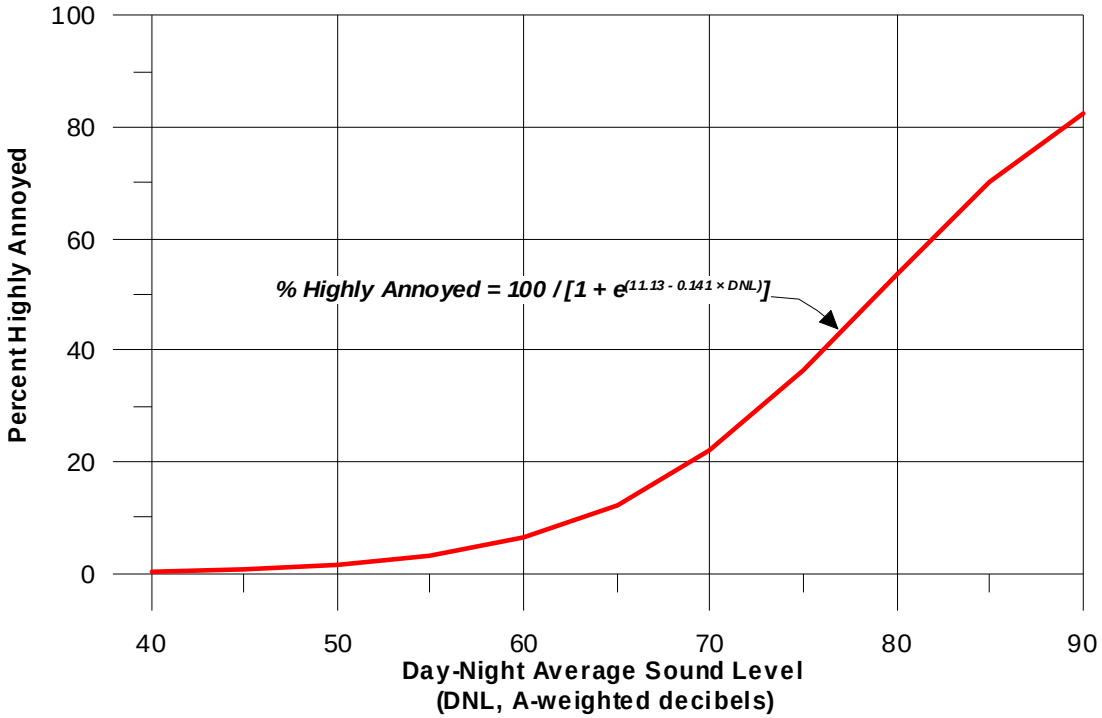


Figure 4
Relationship Between Annoyance and Day-Night Average Sound Level
Source: FICON, 1992.

Speech Interference – A primary effect of aircraft noise is its tendency to drown out or "mask" speech, making it difficult to carry on a normal conversation. As an aircraft approaches and its sound level increases, speech becomes harder to hear. As the ambient level increases, the talker must raise his/her voice, or the individuals must get closer together to continue talking.

The intelligibility of speech in the presence of noise is dependent on the interrelationship of complex variables. These include acoustical factors, non-acoustic factors and random factors. Acoustic factors include speech signal (at the listener's ear), the level of the interfering noise, the frequency spectrum of the speech, the frequency spectrum of the noise, the temporal pattern of the speech and noise, differences in the spatial relationship of the speech and noise sources, and reverberation effects. Non-acoustic factors include variables such as the listener's motivation and familiarity with the speech topic, visual cues, and the talker's speaking habits. Random factors include individual differences (such as age) between talkers and listeners, the talker's effectiveness or clarity of speech and the listener's effectiveness.

For typical communication distances of 3 or 4 feet (1 to 1.5 meters), acceptable outdoor conversations can be carried on in a normal voice as long as the ambient noise outdoors is less than about 65 dBA (FICON, 1992). If the noise exceeds this level, intelligibility would be lost unless vocal effort was increased or communication distance was decreased.

Indoor speech interference can be expressed as a percentage of sentence intelligibility between two average adults with normal hearing speaking fluently in relaxed conversation approximately one meter apart in a typical living room or bedroom (EPA, 1974). As shown in **Figure 5**, the percentage of sentence intelligibility is a non-linear function of the (steady) indoor ambient or background sound level (24-hour energy-average equivalent sound level ($L_{eq(24)}$). Steady ambient indoor sound levels of up to 45 dBA $L_{eq(24)}$ are expected to allow 100% intelligibility of sentences. The curve shows 99 percent sentence intelligibility for $L_{eq(24)}$ at or below 54 dBA and less than 10 percent intelligibility for $L_{eq(24)}$ greater than 73 dBA. In the same document from which **Figure 5** was taken, the EPA established an indoor criterion of 45 dBA DNL as requisite to protect against speech interference indoors (EPA, 1974).

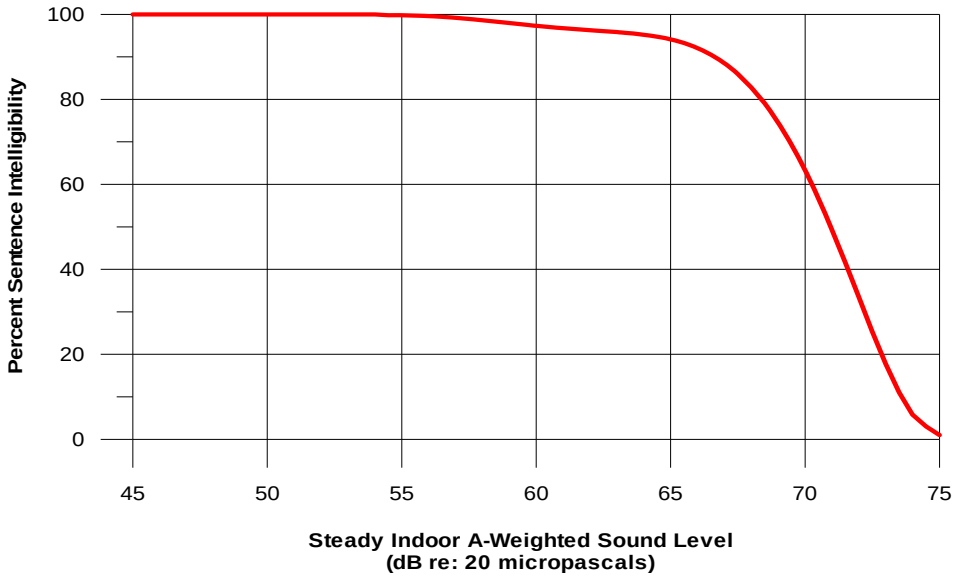


Figure 5
Percent Sentence Intelligibility for Indoor Speech
Source: EPA, 1974.

Sleep Disturbance – Sleep disturbance is a major noise concern in noise assessment and, of course, is most critical during nighttime hours. Sleep disturbance is one of the major causes of annoyance due to community noise. Noise can make it difficult to fall asleep, create momentary disturbances of natural sleep patterns by causing shifts from deep to lighter stages and cause awakening. Noise may even cause awakening which a person may or may not be able to recall.

Extensive research has been conducted on the effect of noise on sleep disturbance. Early research was conducted in laboratory settings and indicated relatively high levels of sleep disturbance in response to noise stimuli as compared to recent studies. More recently, the miniaturization of electronics has enabled the use of sophisticated and more precise measurement techniques in the home environment. The most recent guidance regarding sleep disturbance is published in ANSI/ASA S12.9-2008/Part 6 *Quantities and Procedures for Description and Measurement of Environmental Sound – Part 6: Methods for Estimation of Awakenings Associated with Outdoor Noise Events Heard in Homes*. SEL is commonly used to assess sleep disturbance in airport environs. **Figure 6** is reproduced from S12.9-2008 and indicates the predicted prevalence of awakening in terms of interior SEL.

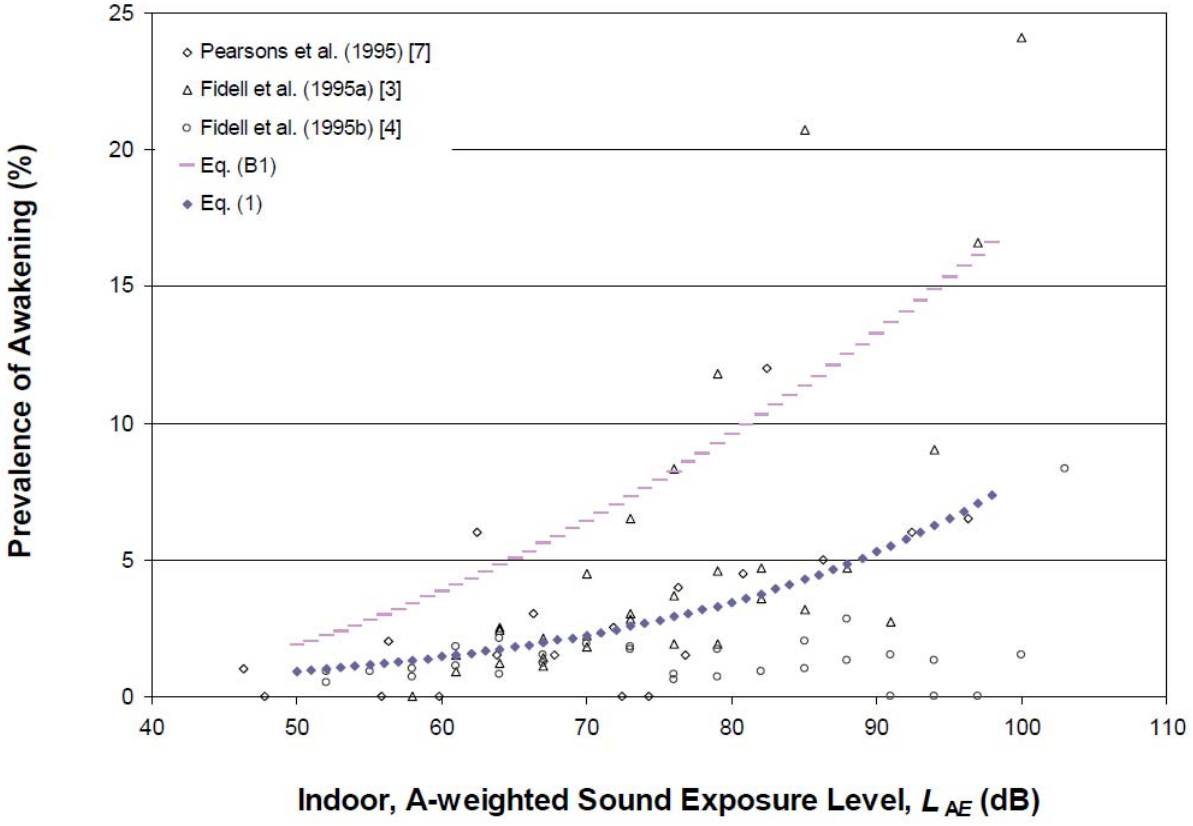


Figure 6
Plot of Sleep Awakening Data
Source: ANSI, 2008.

ANSI/ASA S12.9-2008/Part 6 suggests that the upper curve shown in **Figure 6** is applicable to individuals that are not habituated to aircraft noise and the lower curve is applicable to those individuals who are habituated to aircraft noise.

In addition to noise level, the number of nighttime events is also important when evaluating awakenings. For example, based on the lower curve, if 5 % of the population exposed to an interior SEL of 88 dBA is expected to be awakened, this indicates that 95% of the population is expected to remain asleep. From this information, the probability of remaining asleep through multiple events can be calculated. For example, the probability of remaining asleep through two events is 95% x 95 % or 90.2%. The probability of remaining asleep through three events is 95% x 95% x 95% or 86%, and so forth. The probability of awakening in the case of three events at an interior noise level of 88 dBA is 100% - 86% = 14%. Because of this compounding effect, even relatively low SEL values and correspondingly low values in terms of percent awakening from single aircraft events may be significant. With respect to the environs of LAX, this type of analysis must be taken in context. For example, the supporting research is limited and it is not known if the values for the probability of awakening from a single event are necessarily valid in the case of a quiet aircraft following a loud aircraft.

5.0 METHODOLOGY

This section outlines the methodology used for the operational noise analysis and the noise analysis during the construction period, as well as the modeling inputs.

5.1 Construction

Potential construction noise impacts under the proposed Project were evaluated in three ways. The first method is an analysis of potential traffic noise increases due to increased truck traffic along designated haul routes. The second method entails evaluation of noise exposure due to construction activities and equipment utilized in constructing the various components of any action alternative. The third methodology is an analysis of the potential aircraft noise increases on neighboring communities due to operations shifted to other runways during the construction period.

Potential construction traffic noise impacts were evaluated by estimating potential changes in traffic noise exposure due to addition of construction trucks and employee traffic for each action alternative to existing traffic volumes on area roadways, for roadway segments in the vicinity of noise-sensitive areas adjoining the Airport.

Since some of the construction activities would occur proximate to noise-sensitive areas, construction noise associated with construction activities and use of construction equipment in these activities was evaluated. Construction noise was evaluated using reference construction equipment noise level data and applying a “point” source distance attenuation of 6 dB per doubling of distance from the sources to noise-sensitive receivers. Construction noise levels are quantified at predetermined distances from the site using the maximum noise level (L_{max}) metric.

As part of the proposed Project, Runway 7L/25R must be closed for a period of time (estimated at 3.5 months) to allow for pavement rehabilitation. During this time, the operations from this runway must be accommodated through the use of other runways at LAX. This shift in

operations may cause an increase in noise impacts to neighboring communities during the construction period.

5.1.1 Construction Traffic and Activities

Potential traffic noise level changes during the construction phase were estimated by comparing the traffic noise exposure without the proposed Project alternatives to traffic noise levels after addition of construction trucks and employee traffic to existing traffic volumes. This analysis was performed for roadway segments in the vicinity of noise-sensitive areas adjoining the Airport. The traffic noise estimations were conducted using the Federal Highway Administration Traffic Noise Model (FHWATNM) version 2.5. Construction trucks would only be able to use designated haul routes in accordance with the LAX Master Plan Mitigation commitments. These routes are selected to 1) ensure that trucks use the area freeway systems (I-405 and I-105) as much as possible, and 2) use only major arterial routes to travel as short a distance as possible from the freeways to the airport construction sites. All of the designated haul routes accommodate relatively high traffic volumes today.

Construction equipment noise levels under the proposed Project were estimated using the construction data, including number and type of equipment, to be utilized for each phase or component of construction and distances to the nearest noise-sensitive areas. Construction equipment noise is evaluated using data in the Roadway Construction Noise Model (RCNM) version 1.1, the FHWA standard model for the prediction of construction noise (U.S. Department of Transportation [USDOT], 2006). RCNM has the capability to model types of construction equipment that would be expected to be the dominant construction-related noise sources associated with a proposed Project. Construction noise levels are quantified at predetermined distances from the site using the maximum noise level (Lmax) metric. Under construction activities, grading and scraping operations are the noisiest, with associated equipment generating noise levels as high as 70 dBA to 95 dBA within 50 feet of their operation.

5.1.2 Aircraft Operations during Construction

Runway 7L/25R would be closed for approximately 3.5 months during rehabilitation of the Runway 7L/25R pavement; operations that would normally occur on this runway must be shifted to other runways at LAX. This shift in operations may cause a temporary, 1.5 dB CNEL increase in noise impacts to neighboring communities during this period. The noise modeling inputs for the aircraft noise analysis during construction (year 2015) are based off of the 2015 Without Project INM model. As the INM model produces noise contours representing average annual noise exposure, the 3.5 month construction period had to be annualized. By combining the Without Project operations for 8.5 months and the runway closure for 3.5 months, annual operations were established based on the following inputs:

- Aircraft operations. The 2015 FAA TAF for LAX was used as the number of aircraft operations for future construction year 2014.

- Aircraft fleet mix. The aircraft fleet mix for the 2011 and 2015 analyses was maintained for the impacts during construction analysis.

- Time of day. The time of day aircraft operations occur for the construction period are assumed equal to those used for the 2011 and 2015 analyses. These values are shown in Table 4.

- Runway utilization. Runway utilization for the without Project 8.5 months was established from the 2015 Without Project conditions. Runway utilization for the 3.5 month construction period was calculated based on real-time ASDE-X data from a period of seven days in 2013 (January 26, 2013 – February 2, 2013) for which Runway 7L/25R was closed due to the installation of runway status lights. Based on conversations with ATC, this historical data would be a reasonable indicator of operations at LAX during the runway closure.

A generalized summary of the combined annual data is presented in **Table 1**. **Table 1** indicates the runway utilization by time period for arrival and departure operations during the construction year (8.5 months normal operations, 3.5 months Runway 7L-25R closed). Flight tracks for the construction period, with the exception of those to/from Runway 7L-25R, are the same as those depicted in Figures 7 and 8.

Table 1

LAX Runway Utilization during Construction Year

	Arrivals				Departures			
Runway	**Day**	**Evening**	**Night**	**Total**	**Day**	**Evening**	**Night**	**Total**
06L	0.4%	0.2%	1.8%	0.6%	0.0%	0.0%	0.0%	0.0%
06R	0.0%	0.0%	13.3%	1.8%	0.3%	0.2%	0.1%	0.3%
07L	0.0%	0.0%	7.1%	1.0%	0.5%	0.3%	0.4%	0.5%
07R	0.4%	0.2%	3.9%	0.9%	0.0%	0.1%	0.3%	0.1%
24L	1.9%	3.2%	1.5%	2.1%	51.4%	51.6%	24.9%	46.5%
24R	51.1%	49.6%	30.5%	48.0%	1.5%	1.1%	0.9%	1.3%
25L	45.3%	45.3%	41.2%	44.7%	12.3%	16.0%	22.7%	14.7%

Source: Ricondo & Associates, Inc., 2013

5.2 Operations

The potential operational noise effects of the proposed Project would be due to potential changes in aircraft noise exposure arising from the extension of Runway 7L and the implementation of declared distances that would change the points of aircraft arrivals and departures.

The Integrated Noise Model (INM) has been FAA's standard tool since 1978 for determining the predicted aircraft noise impact in the vicinity of airports. The INM currently has over 1,000 licensed users and is used in over 30 countries. Within the U.S., statutory requirements for INM use are defined in FAA Order 1050.1E, *Environmental Impacts: Policies and Procedures, Change 1*; Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*; and Title 14 CFR Part 150, *Airport Noise Compatibility Planning*.

INM Version 7.0c, released January 3, 2012, was the most recent version of the INM at the time of the analysis and subsequently was used for the study. The INM uses the number of daily daytime, evening and nighttime flight operations; flight paths; and flight profiles of the aircraft along with its extensive internal database of aircraft noise and performance information, to calculate the noise levels in airport environs. From a grid of points, the INM contouring program calculates contours of equal noise levels that can be superimposed onto land use maps for analysis. For this document, CNEL contours of 65, 70, and 75 dBA were developed. CNEL contours present a graphical representation of how the noise from the airport's average annual daily aircraft operations is distributed over the surrounding area. The INM can calculate sound levels at any specified point so that noise exposure at representative locations around an airport can be obtained.

The INM aircraft profile and noise calculation algorithms are based on several guidance documents published by the Society of Automotive Engineers (SAE) Aviation Noise Committee (A-21). A-21 is an internationally represented committee that includes research institutions, engineering firms, government and regulatory agencies, and aircraft and engine manufacturers. The core computational modules of the INM are based on five internationally recognized standards documents as follows:

- SAE-AIR-1845 "Procedure for the Calculation of Airplane Noise in the Vicinity of Airports"
- SAE-AIR-5662 "Method for Predicting Lateral Attenuation of Airplane Noise"
- SAE-ARP-866A "Standard Values of Atmospheric Absorption as a Function of Temperature and Humidity"
- ECAC Doc 29 "Report on Standard Method of Computing Noise Contours Around Civil Airports"
- ICAO Circular 205 "Recommended Method for Computing Noise Contours Around Airports"

The INM is an average-value-model and is designed to estimate long-term average effects using average annual input conditions. Because of this, differences between predicted and measured values can occur because certain local acoustical variables are not averaged, or because they may not be explicitly modeled in INM. Differences may also occur due to errors or improper procedures employed during the collection of the measured data. Examples of detailed local acoustical variables include:

- Temperature profiles
- Wind gradients
- Humidity effects
- Ground absorption
- Individual aircraft directivity patterns
- Sound diffraction caused by water, buildings, barriers, etc.

The results of the INM analysis provide a relative measure of noise levels around airfield facilities. When detailed aircraft operational data is accurately analyzed and input into the model, the INM is the best tool available for comparing before and after noise effects resulting from forecast changes or alternative noise control actions. It allows noise levels to be predicted for the proposed Project without the actual implementation and noise monitoring of those actions. The INM inputs for both the existing conditions and for 2015 are outlined in the following sections.

5.2.1 Existing (2011) Noise Modeling Inputs

LAWA maintains a sophisticated aircraft operations and noise monitoring system. The system utilizes airport surveillance radar (ASR) to track aircraft arriving and departing LAX. Aircraft noise levels are monitored via a system of thirty-nine microphones located at key areas around the airport. These microphones provide continuous surveillance and enable LAWA staff to analyze noise levels in critical noise-sensitive areas. Data from this system were used to provide the INM inputs.

5.2.1.1 Aircraft Operations

Individual daily aircraft operations at LAX for the entire calendar year 2011 were obtained from LAWA. These data are the most comprehensive data available regarding aircraft operational activity at LAX and are used as the basis of the noise analysis. The total annual flight operations data are shown in **Table 2**.

Table 2

LAX 2011 Operations

Category	Operations
Air Carrier (AC)	466,718
Air Taxi (AT)	106,007
General Aviation (GA)	18,468
Military (MIL)	2,400
Total Operations	**593,593**

Source: Los Angeles World Airports, 2012.

As shown in **Table 2**, the majority of operations at LAX are conducted by air carrier aircraft. Air carrier aircraft are predominantly jet aircraft operated by national and international airlines. These operations account for approximately eighty percent of total operations at the airport. Air Taxi operations are operations conducted by small regional airlines and air charter services using predominantly turboprop aircraft. These operations account for approximately seventeen percent of total operations. General Aviation operations are operations conducted by privately owned aircraft. At LAX, General Aviation operations are predominantly business jet operations and comprise approximately three percent of total operations. Military operations at LAX consist predominantly of military transport operations. These operations account for less than one percent of total operations.

5.2.1.2 Aircraft Fleet Mix

Aircraft noise levels can vary greatly based on the aircraft type. This is due to differences in the noise emissions of the various airframe/engine combinations and aircraft performance characteristics. For this reason, it is very important to determine the precise mix of aircraft operating from the airport. ASR data were used to determine the existing INM fleet mix at LAX. These data are shown in **Table 3**.

Table 3

LAX 2011 Fleet Mix

INM Representative Aircraft	Aircraft Category[1]	Total Operations	% of Category	% of Total
737700	AC	67,655	14%	11%
757PW	AC	59,887	13%	10%
737800	AC	55,741	12%	9%
A320-211	AC	53,703	12%	9%
EMB120	AT	34,483	33%	6%
EMB145	AT	30,621	29%	5%
A319-131	AC	33,413	7%	6%
CL601	AT	28,974	27%	5%
CRJ9-ER	AC	31,923	7%	5%
737300	AC	27,032	6%	5%
747400	AC	19,276	4%	3%
767300	AC	17,096	4%	3%
777300	AC	13,466	3%	2%
777200	AC	12,303	3%	2%
A321-232	AC	9,568	2%	2%
767CF6	AC	9,239	2%	2%
DHC8	AT	6,910	7%	1%
MD83	AC	7,328	2%	1%
757300	AC	6,925	1%	1%
737400	AC	6,335	1%	1%
A330-301	AC	5,144	1%	1%
MD82	AC	5,068	1%	1%
737500	AC	5,064	1%	1%
1900D	AT	4,379	4%	1%
MD11PW	AC	3,967	1%	1%

Table 3

LAX 2011 Fleet Mix

INM Representative Aircraft	Aircraft Category[1]	Total Operations	% of Category	% of Total
A340-642	AC	3,804	1%	1%
CL600	AC	3,013	1%	1%
GIV	GA	3,467	19%	1%
DC1030	AC	2,154	90%	>1%
LEAR35	GA	3,358	18%	1%
A340-211	AC	2,724	1%	>1%
A300-622R	AC	2,084	>1%	>1%
CNA55B	GA	2,462	13%	>1%
GV	GA	2,419	13%	>1%
A380-841	AC	1,525	>1%	>1%
CNA750	GA	1,842	10%	>1%
A300B4-203	AC	1,324	>1%	>1%
F10062	GA	1,214	7%	>1%
CNA500	GA	836	5%	>1%
DC870	AC	614	>1%	>1%
747200	AC	563	>1%	>1%
CNA441	GA	665	4%	>1%
MU3001	GA	663	4%	>1%
SD330	AT	485	>1%	>1%
GIIB	AC	245	10%	>1%
A330-343	AC	248	>1%	>1%
IA1125	GA	282	2%	>1%
CNA208	GA	266	1%	>1%
BEC58P	GA	242	1%	>1%
74710Q	AC	196	>1%	>1%
DHC6	AT	149	>1%	>1%
GII	GA	184	1%	>1%
GASEPV	GA	178	1%	>1%
727200	AC	128	0%	>1%
CIT3	GA	151	1%	>1%
A310-304	AC	94	>1%	>1%

Table 3

LAX 2011 Fleet Mix

INM Representative Aircraft	Aircraft Category[1]	Total Operations	% of Category	% of Total
767400	AC	87	>1%	>1%
LEAR25	GA	97	1%	>1%
MD9028	AC	62	>1%	>1%
727EM1	AC	39	>1%	>1%
PA31	GA	37	>1%	>1%
CNA172	GA	28	>1%	>1%
PA28	GA	26	>1%	>1%
737N17	AC	17	>1%	>1%
CNA182	GA	19	>1%	>1%
DC93LW	AC	15	>1%	>1%
CNA206	GA	18	>1%	>1%
MD81	AC	12	>1%	>1%
DC910	AC	12	>1%	>1%
GASEPF	GA	14	>1%	>1%
707QN	AC	8	>1%	>1%
727EM2	AC	8	>1%	>1%
DC95HW	AC	4	>1%	>1%
DC3	AT	4	>1%	>1%
DHC830	AT	2	>1%	>1%
DC1040	AC	2	>1%	>1%
PA30	GA	1	>1%	>1%

Notes: Calendar Year 2011.
[1] Representative Aircraft: EMB= Embraer; CRJ= Canadian Regional Jet; MD= McDonnell Douglas; A=Airbus;
[2] Aircraft Category: AC-Aircraft Carrier; AT-Air Taxi; GA-General Aviation; MIL-Military
Source: Los Angeles World Airports, 2012; URS Corp., 2012.

5.2.1.3 Runway Utilization

Runway utilization refers to the percentage of operations that utilize a given runway. Aircraft generally take off and land into the wind. As a result, runway utilization is largely determined by prevailing wind conditions. At LAX, prevailing winds are westerly. For operational efficiency, aircraft departures generally occur from the inboard runways, Runway 24L and Runway 25R, and arrivals are to the outboard runways, Runway 24R and Runway 25L. ASR data via the ANOMS were used to determine the existing baseline runway utilization at LAX. These data were compiled for each INM aircraft type. A generalized summary of these data is presented in **Table 4**. **Table 4** indicates the runway utilization by time period for arrival and departure

operations. Runway utilization will not change as a result of the proposed Project and is expected to remain the same in future years, both with and without the Project.

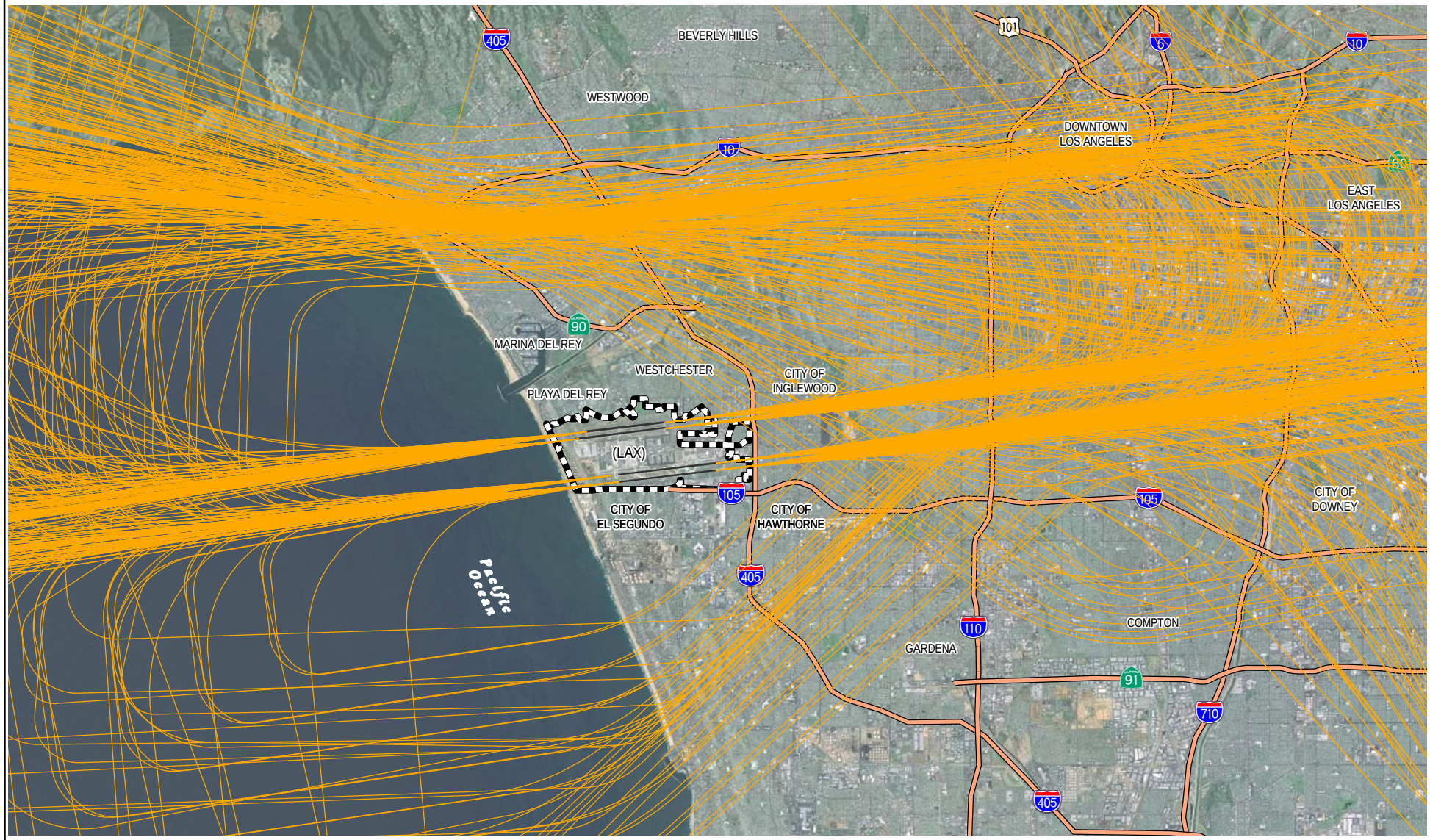
The location of flight tracks (flight path over the ground) is another key component for determining noise exposure. Generalized flight tracks (the geographical spread of aircraft operations in terms of overflight density) for LAX for arrivals and departures are shown in **Figures 7** and **8**, respectively.

Table 4

LAX Runway Utilization (2011)

	Arrivals				Departures			
Runway	**Day**	**Evening**	**Night**	**Total**	**Day**	**Evening**	**Night**	**Total**
06L	0.6%	0.3%	2.6%	0.8%	0.0%	0.0%	0.0%	0.0%
06R	0.0%	0.0%	12.3%	1.6%	0.4%	0.3%	0.2%	0.4%
07L	0.0%	0.0%	10.2%	1.3%	0.7%	0.4%	0.9%	0.7%
07R	0.6%	0.3%	1.8%	0.7%	0.0%	0.0%	0.1%	0.0%
24L	1.0%	1.4%	0.5%	1.0%	46.4%	49.9%	22.5%	42.3%
24R	47.5%	47.3%	25.4%	44.6%	1.6%	0.9%	1.1%	1.4%
25L	49.0%	48.5%	46.1%	48.5%	3.0%	5.4%	3.6%	3.4%
25R	1.3%	2.2%	1.1%	1.4%	47.8%	43.2%	71.5%	51.8%

Note: Calendar Year 2011
Source: Los Angeles International Airport, 2012; Ricondo and Associates INM Input File, URS Corp. analysis (2012).



Sources: LAWA, 2012; ESRI Maps and Data, April 2012; Prepared by: URS Corporation.

FIGURE 7

Generalized Flight Tracks at LAX - Arrivals

Noise Appendix
Runway 7L/25R RSA and
Associated Improvements Project

Legend

Project Study Area/Airport Property Boundary

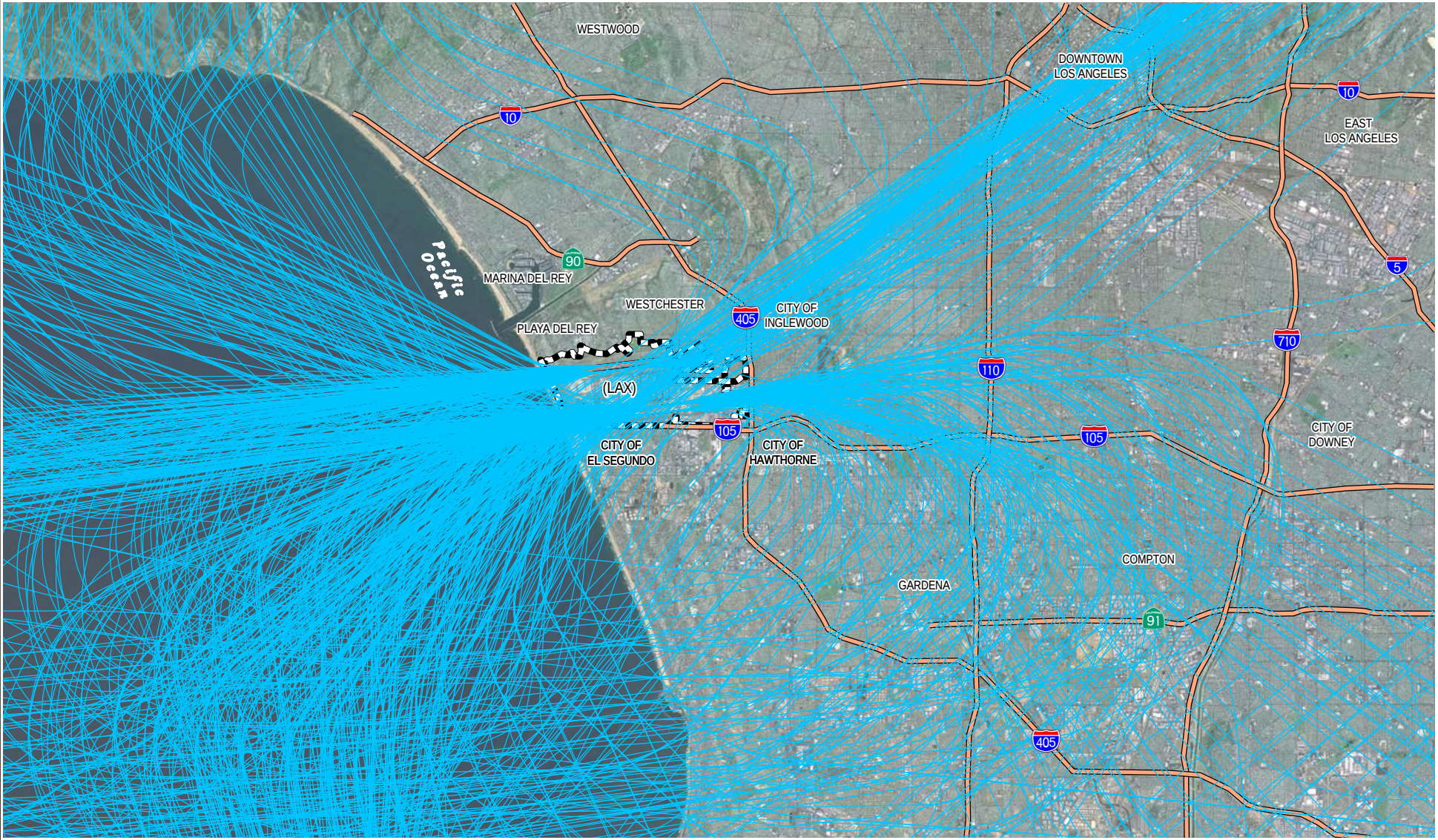
Generalized Departure Tracks

Los Angeles International Airport

0 2.5 mi.

1" = 2.5 miles

north



Sources: LAWA, 2012; ESRI Maps and Data, April 2012; Prepared by: URS Corporation.

FIGURE 8

Generalized Flight Tracks at LAX - Departures

Noise Appendix
Runway 7L/25R RSA and Associated Improvements Project

5.2.2 Time of Day

The Time of Day aircraft operations occur is important for determining cumulative noise exposure. In the CNEL metric, aircraft noise levels are weighted based on the time of day they occur. In determining CNEL, each aircraft operation occurring during the nighttime, between the hours of 10:00 p.m. and 7:00 a.m., is treated as if it were 10 operations in terms of noise exposure. Similarly, operations taking place during the evening period, between the hours of 7:00 and 10:00 p.m., are treated as if they were three operations. Logarithmically, these multipliers are the equivalent of adding 10 dB to the noise level of each nighttime operation and 4.77 dB to the noise level of each evening operation. These noise level penalties are intended to correspond to the drop in background noise level which studies have found takes place naturally from daytime to evening and nighttime in a typical community. The evening and nighttime decrease in ambient sound levels—from both outdoor and indoor sources—is commonly considered to be the principal explanation for people's heightened sensitivity to noises during these periods (**Table 5**). CNEL is designed to account for this increased sensitivity.

Table 5

Summary of Operations by Time of Day

	Annual Operations		
Aircraft Category	**Day (7 a.m. – 7 p.m.)**	**Evening (7 p.m. – 10 p.m.)**	**Night (10 p.m. – 7 a.m.)**
Air Carrier (AC)	67%	15%	18%
Air Taxi (AT)	76%	16%	9%
General Aviation (GA)	72%	15%	13%
Military (MIL)	57%	15%	28%

Note: Calendar Year 2011
Source: Los Angeles International Airport, 2012; Ricondo and Associates INM Input File, URS Corp. analysis (2012).

5.2.3 2015 Noise Modeling Inputs

Noise modeling inputs for the future with and without Project scenarios of 2015 were based on the detailed data obtained during the analysis of 2011 aircraft operations. The proposed Project would not change the operational conditions at the Airport. Data regarding fleet mix, runway utilization, flight tracks, and time of day were carried forward from the 2011 baseline. These operational data were applied to the 2015 operational levels. All other operational assumptions remain the same as those defined for the 2011 existing baseline conditions, except the location of the takeoff and landing points on Runway 7L-25R as defined in the project description.

The FAA Terminal Area Forecast (TAF) for LAX was used to determine the number of aircraft operations for future year 2015. These data are shown in **Table 6**. For purposes of comparison, operational data for 2011 is included in this table. The aircraft fleet mix for 2011 was maintained for the 2015 analysis. Given the high capital cost of aircraft, airframes are well maintained and typically serve in the fleet for many years. This practice maintains the initial investment by extending the useful aircraft life and serves to stabilize the fleet mix. In terms of analyzing noise exposure, this approach is somewhat conservative in that future aircraft will

likely be quieter than existing aircraft. As older aircraft are retired, they will likely be replaced by quieter aircraft.

Table 6

LAX Existing and Forecast Aircraft Operations

	Annual Operations	
Aircraft Category	**Existing 2011**	**TAF 2015**
Air Carrier (AC)	466,718	510,765
Air Taxi (AT)	106,007	104,488
General Aviation (GA)	18,468	20,279
Military (MIL)	2,400	2,371
Total Operations	**593,593**	**637,903**

Source: Existing (2011) data is based on data provided by Los Angeles World Airports, 2012; URS Corp. Analysis, 2012. TAF data is from FAA TAF sourced from http://aspm.faa.gov/main/taf.asp accessed 3/9/12.

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APPENDIX D

TRAFFIC ANALYSIS

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Appendix D

Traffic Analysis

Runway 7L/25R Runway Safety Area (RSA) and
Associated Improvements Project

Draft EIR

Prepared for:

Los Angeles World Airports
One World Way
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September 2013

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Appendix D1

Study Area Intersection Geometries

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D1.1 Intersection Geometry C1-1

List of Tables

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Table C1-3 TRAFFIX Lane Geometry Report (2014 plus Other plus RSA Conditions) C1-3
Table C1-4 TRAFFIX Lane Geometry Report (Baseline 2013 plus RSA Conditions) C1-4

D1.1 INTERSECTION GEOMETRY

Tables D1-1 through D1-4 provide the geometry for each of the 29 intersections included in the Traffic Analysis.

Table D1-1

TRAFFIX Lane Geometry Report (Baseline 2013)

--- RSA EIR

--- Lane Geometry Report

--- Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
14	AVIATION BLVD. @ CENTURY BLVD.	201100	202010	103100	103100
16	IMPERIAL HWY. @ AVIATION BL.	202010	201110	202100	203010
19	AVIATION BLVD. @ 111TH	101100	101100	100100	101100
36	La CIENEGA BLVD. @ CENTURY BLVD	102020	102020	103010	103100
38	CENTURY BLVD. @ SEPULVEDA BLVD.	004010	004010	000000	110020
39	CENTURY BLVD. @ 405 N/B RAMP	200010	000010	102110	002100
47	IMPERIAL HWY. @ DOUGLAS ST.	101020	100011	102100	202100
65	SEPULVEDA @ H. HUGHES PARKWAY	004010	203000	000000	300010
67	IMPERIAL HWY. @ La CIENEGA BLVD.	201110	201110	203020	203020
68	IMPERIAL HWY @MAIN STREET	110010	000001	102010	202010
69	IMPERIAL HWY @ PERSHING DR.	000001	200010	202000	102020
71	IMPERIAL HWY @ SEPULVEDA BL.	103010	203100	203010	203010
73	IMPERIAL HWY @ NASH ST.	100020	110110	002100	203000
74	IMPERIAL HWY. @ 105 RAMP	200020	000000	002110	202000
75	IMPERIAL HWY. @ 405 NORTH RAMP	100001	000000	002110	002110
89	La CIENEGA BLVD. @ LENNOX BLVD	001100	102100	000000	110010
94	La CIENEGA BLVD. @ 111TH STREET	102000	002100	200010	000000
96	La CIENEGA BLVD. @ 405 S/B RAPM	001110	102000	000000	100001
97	La CIENEGA BLVD. @ 405 S/B RAMP	001100	201100	000001	000020
98	La CIENEGA BLVD. @ 405 S/B RAMP	102010	102100	000001	200010
101	SEPULVEDA BLVD. @ LA TIJERA BLVD.	103010	103010	102010	101100
108	SEPULVEDA BLVD. @ LINCOLN BLVD.	402100	003100	000040	000001
114	SEPULVEDA BLVD. @ MANCHESTER AVE.	103010	103010	202010	101100
123	WESTCHESTER PARKWAY @ PERSHING DRIV	002010	102000	000000	200010
135	SEPULVEDA BLVD. @ WESTCHESTER PARKW	103010	103010	101100	101100
136	SEPULVEDA @ 76th/77th STREET	103010	103010	201010	101010
137	SEPULVEDA BLVD. @ 79th/80th STREET	102100	103010	101010	100100
138	SEPULVEDA BLVD. @ 83rd STREET	102100	102100	000001	100100
1000	La CIENEGA BLVD. @ 104 TH STREET	101100	102100	101010	000001

Table D1-2

TRAFFIX Lane Geometry Report (2014 plus Other)

--- RSA EIR

--- Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
14	AVIATION BLVD. @ CENTURY BLVD.	201100	202010	103100	103100
16	IMPERIAL HWY. @ AVIATION BL.	202010	201110	202100	203010
19	AVIATION BLVD. @ 111TH	101100	101100	100100	101100
36	La CIENEGA BLVD. @ CENTURY BLVD	102020	102020	103010	103100
38	CENTURY BLVD. @ SEPULVEDA BLVD.	004010	004010	000000	110020
39	CENTURY BLVD. @ 405 N/B RAMP	200010	000010	102110	002100
47	IMPERIAL HWY. @ DOUGLAS ST.	101020	100011	102100	202100
65	SEPULVEDA @ H. HUGHES PARKWAY	004010	203000	000000	300010
67	IMPERIAL HWY. @ La CIENEGA BLVD.	201110	201110	203020	203020
68	IMPERIAL HWY @MAIN STREET	110010	000001	102010	202010
69	IMPERIAL HWY @ PERSHING DR.	000001	200010	202000	102020
71	IMPERIAL HWY @ SEPULVEDA BL.	103010	203100	203010	203010
73	IMPERIAL HWY @ NASH ST.	100020	110110	002100	203000
74	IMPERIAL HWY. @ 105 RAMP	200020	000000	002110	202000
75	IMPERIAL HWY. @ 405 NORTH RAMP	100001	000000	002110	002110
89	La CIENEGA BLVD. @ LENNOX BLVD	001100	102100	000000	110010
94	La CIENEGA BLVD. @ 111TH STREET	102000	002100	200010	000000
96	La CIENEGA BLVD. @ 405 S/B RAPM	001110	102000	000000	100001
97	La CIENEGA BLVD. @ 405 S/B RAMP	001100	201100	000001	000020
98	La CIENEGA BLVD. @ 405 S/B RAMP	102010	102100	000001	200010
101	SEPULVEDA BLVD. @ LA TIJERA BLVD.	103010	103010	102010	101100
108	SEPULVEDA BLVD. @ LINCOLN BLVD.	402100	003100	000040	000001
114	SEPULVEDA BLVD. @ MANCHESTER AVE.	103010	103010	202010	101100
123	WESTCHESTER PARKWAY @ PERSHING DRIV	002010	102000	000000	200010
135	SEPULVEDA BLVD. @ WESTCHESTER PARKW	103010	103010	101100	101100
136	SEPULVEDA @ 76th/77th STREET	103010	103010	201010	101010
137	SEPULVEDA BLVD. @ 79th/80th STREET	102100	103010	101010	100100
138	SEPULVEDA BLVD. @ 83rd STREET	102100	102100	000001	100100
1000	La CIENEGA BLVD. @ 104 TH STREET	101100	102100	101010	000001

Table D1-3

TRAFFIX Lane Geometry Report (2014 plus Other plus RSA)

--- RSA EIR

--- Lane Geometry Report

--

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
14	AVIATION BLVD. @ CENTURY BLVD.	201100	202010	103100	103100
16	IMPERIAL HWY. @ AVIATION BL.	202010	201110	202100	203010
19	AVIATION BLVD. @ 111TH	101100	101100	100100	101100
36	La CIENEGA BLVD. @ CENTURY BLVD	102020	102020	103010	103100
38	CENTURY BLVD. @ SEPULVEDA BLVD.	004010	004010	000000	110020
39	CENTURY BLVD. @ 405 N/B RAMP	200010	000010	102110	002100
47	IMPERIAL HWY. @ DOUGLAS ST.	101020	100011	102100	202100
65	SEPULVEDA @ H. HUGHES PARKWAY	004010	203000	000000	300010
67	IMPERIAL HWY. @ La CIENEGA BLVD.	201110	201110	203020	203020
68	IMPERIAL HWY @MAIN STREET	110010	000001	102010	202010
69	IMPERIAL HWY @ PERSHING DR.	000001	200010	202000	102020
71	IMPERIAL HWY @ SEPULVEDA BL.	103010	203100	203010	203010
73	IMPERIAL HWY @ NASH ST.	100020	110110	002100	203000
74	IMPERIAL HWY. @ 105 RAMP	200020	000000	002110	202000
75	IMPERIAL HWY. @ 405 NORTH RAMP	100001	000000	002110	002110
89	La CIENEGA BLVD. @ LENNOX BLVD	001100	102100	000000	110010
94	La CIENEGA BLVD. @ 111TH STREET	102000	002100	200010	000000
96	La CIENEGA BLVD. @ 405 S/B RAPM	001110	102000	000000	100001
97	La CIENEGA BLVD. @ 405 S/B RAMP	001100	201100	000001	000020
98	La CIENEGA BLVD. @ 405 S/B RAMP	102010	102100	000001	200010
101	SEPULVEDA BLVD. @ LA TIJERA BLVD.	103010	103010	102010	101100
108	SEPULVEDA BLVD. @ LINCOLN BLVD.	402100	003100	000040	000001
114	SEPULVEDA BLVD. @ MANCHESTER AVE.	103010	103010	202010	101100
123	WESTCHESTER PARKWAY @ PERSHING DRIV	002010	102000	000000	200010
135	SEPULVEDA BLVD. @ WESTCHESTER PARKW	103010	103010	101100	101100
136	SEPULVEDA @ 76th/77th STREET	103010	103010	201010	101010
137	SEPULVEDA BLVD. @ 79th/80th STREET	102100	103010	101010	100100
138	SEPULVEDA BLVD. @ 83rd STREET	102100	102100	000001	100100
1000	La CIENEGA BLVD. @ 104 TH STREET	101100	102100	101010	000001

Table D1-4

TRAFFIX Lane Geometry Report (Baseline 2013 plus RSA)

--- RSA EIR

--- Lane Geometry Report

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Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
14	AVIATION BLVD. @ CENTURY BLVD.	201100	202010	103100	103100
16	IMPERIAL HWY. @ AVIATION BL.	202010	201110	202100	203010
19	AVIATION BLVD. @ 111TH	101100	101100	100100	101100
36	La CIENEGA BLVD. @ CENTURY BLVD	102020	102020	103010	103100
38	CENTURY BLVD. @ SEPULVEDA BLVD.	004010	004010	000000	110020
39	CENTURY BLVD. @ 405 N/B RAMP	200010	000010	102110	002100
47	IMPERIAL HWY. @ DOUGLAS ST.	101020	100011	102100	202100
65	SEPULVEDA @ H. HUGHES PARKWAY	004010	203000	000000	300010
67	IMPERIAL HWY. @ La CIENEGA BLVD.	201110	201110	203020	203020
68	IMPERIAL HWY @MAIN STREET	110010	000001	102010	202010
69	IMPERIAL HWY @ PERSHING DR.	000001	200010	202000	102020
71	IMPERIAL HWY @ SEPULVEDA BL.	103010	203100	203010	203010
73	IMPERIAL HWY @ NASH ST.	100020	110110	002100	203000
74	IMPERIAL HWY. @ 105 RAMP	200020	000000	002110	202000
75	IMPERIAL HWY. @ 405 NORTH RAMP	100001	000000	002110	002110
89	La CIENEGA BLVD. @ LENNOX BLVD	001100	102100	000000	110010
94	La CIENEGA BLVD. @ 111TH STREET	102000	002100	200010	000000
96	La CIENEGA BLVD. @ 405 S/B RAPM	001110	102000	000000	100001
97	La CIENEGA BLVD. @ 405 S/B RAMP	001100	201100	000001	000020
98	La CIENEGA BLVD. @ 405 S/B RAMP	102010	102100	000001	200010
101	SEPULVEDA BLVD. @ LA TIJERA BLVD.	103010	103010	102010	101100
108	SEPULVEDA BLVD. @ LINCOLN BLVD.	402100	003100	000040	000001
114	SEPULVEDA BLVD. @ MANCHESTER AVE.	103010	103010	202010	101100
123	WESTCHESTER PARKWAY @ PERSHING DRIV	002010	102000	000000	200010
135	SEPULVEDA BLVD. @ WESTCHESTER PARKW	103010	103010	101100	101100
136	SEPULVEDA @ 76th/77th STREET	103010	103010	201010	101010
137	SEPULVEDA BLVD. @ 79th/80th STREET	102100	103010	101010	100100
138	SEPULVEDA BLVD. @ 83rd STREET	102100	102100	000001	100100
1000	La CIENEGA BLVD. @ 104 TH STREET	101100	102100	101010	000001

Appendix D2

Study Area Intersection Volumes

Table of Contents

D2.1 Intersection Volumes.....D2-1

TRAFFIX Intersection Volume Reports

Baseline (2013) AM Peak D2-1

Baseline (2013) PM Peak D2-2

2014 plus Other (Without Project) AM Peak D2-3

2014 plus Other (Without Project) PM Peak D2-4

2014 plus Other plus RSA (With Project) AM Peak D2-5

2014 plus Other plus RSA (With Project) PM Peak D2-6

Baseline (2013) plus RSA AM Peak D2-7

Baseline (2013) plus RSA PM Peak D2-8

D2.1 INTERSECTION VOLUMES

The following are the Traffix Intersection volume reports used in the traffic analysis summary tables for the different scenarios.

Baseline 2013-AM Peak

Runway 7L/25R Runway Safety Area

Scenario Report

Scenario: Baseline 2013-AM Peak

Command: Employee AM
Volume: Employee AM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: AM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Base Volume Alternative

		Northbound			Southbound			Eastbound			Westbound		
Node	Intersection	L	T	R	L	T	R	L	T	R	L	T	R
14	AVIATION BLVD	434	343	33	67	149	72	74	781	230	66	1297	108
16	IMPERIAL HWY.	137	254	81	208	126	50	45	152	48	187	524	632
19	AVIATION BLVD	15	771	50	41	356	39	23	18	12	24	27	75
36	La CIENEGA BL	88	153	109	53	145	573	58	517	263	244	1897	319
38	CENTURY BLVD.	0	2397	19	0	805	43	0	0	0	191	73	176
39	CENTURY BLVD.	561	0	71	0	0	0	5	309	381	0	1913	0
47	IMPERIAL HWY.	20	8	32	50	44	5	19	239	163	149	376	79
65	SEPULVEDA @ H	0	844	696	45	276	0	0	0	0	540	0	164
67	IMPERIAL HWY.	31	103	93	40	57	168	154	298	64	27	410	299
68	IMPERIAL HWY	199	0	357	3	1	1	0	467	51	271	925	1
69	IMPERIAL HWY	1	0	1	298	0	40	64	219	1	9	322	795
71	IMPERIAL HWY	61	995	443	162	1114	12	108	123	52	72	97	187
73	IMPERIAL HWY	15	0	13	248	734	516	0	264	54	43	345	0
74	IMPERIAL HWY.	836	0	361	0	0	0	0	208	307	82	533	0
75	IMPERIAL HWY.	200	0	25	0	0	0	0	233	193	0	534	572
89	La CIENEGA BL	0	343	31	17	190	34	0	0	0	70	0	129
94	La CIENEGA BL	137	354	0	0	180	93	38	0	52	0	0	0
96	La CIENEGA BL	2	354	71	91	160	0	0	0	0	654	0	44
97	La CIENEGA BL	0	298	27	216	224	12	0	0	1	0	0	58
98	La CIENEGA BL	6	446	92	29	210	0	0	0	1	74	0	54
101	SEPULVEDA BLV	20	984	66	22	740	30	40	54	41	168	73	16
108	SEPULVEDA BLV	1202	1214	100	0	961	8	0	0	647	0	0	4
114	SEPULVEDA BLV	60	965	32	59	787	28	77	157	42	41	293	139
123	WESTCHESTER P	0	339	184	45	261	0	0	0	0	155	0	16
135	SEPULVEDA BLV	128	1064	24	62	863	56	13	51	41	59	94	79
136	SEPULVEDA @ 7	17	1207	8	13	768	37	239	13	24	10	4	64
137	SEPULVEDA BLV	24	1085	4	5	735	42	64	14	40	13	17	36
138	SEPULVEDA BLV	11	1036	4	5	744	12	39	6	11	8	7	24
1000	La CIENEGA BL	123	309	6	7	189	43	9	1	57	1	0	6

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Baseline 2013-PM Peak

Runway 7L/25R Safety Area

Scenario Report

Scenario: Baseline 2013-PM Peak

Command: Employee PM
Volume: Employee PM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: PM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Base Volume Alternative

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
14	AVIATION BLVD	337	387	106	89	428	97	143	1416	364	69	842	105
16	IMPERIAL HWY.	110	325	254	427	457	126	137	792	147	164	359	421
19	AVIATION BLVD	26	703	90	71	868	74	66	55	29	71	26	103
36	La CIENEGA BL	98	269	418	404	554	335	120	1061	608	80	1135	132
38	CENTURY BLVD.	0	2776	24	0	2315	61	0	0	0	473	73	188
39	CENTURY BLVD.	380	0	244	0	0	4	5	1286	573	0	966	0
47	IMPERIAL HWY.	124	17	240	88	33	30	42	755	99	77	348	59
65	SEPULVEDA @ H	0	1206	449	358	1389	0	0	0	0	641	0	203
67	IMPERIAL HWY.	95	160	498	273	328	274	168	817	114	41	291	187
68	IMPERIAL HWY	146	1	385	4	0	0	0	782	248	454	500	0
69	IMPERIAL HWY	2	0	8	669	0	151	108	355	0	0	225	438
71	IMPERIAL HWY	116	1297	907	318	1934	19	124	229	142	133	152	326
73	IMPERIAL HWY	70	0	130	94	171	129	0	686	49	36	541	0
74	IMPERIAL HWY.	387	0	200	0	0	0	0	959	621	267	493	0
75	IMPERIAL HWY.	194	0	213	0	0	0	0	1411	188	0	332	211
89	La CIENEGA BL	1	448	179	147	617	8	0	0	0	73	0	75
94	La CIENEGA BL	122	432	0	0	602	107	166	0	185	0	0	0
96	La CIENEGA BL	1	517	74	171	565	0	0	0	0	589	0	154
97	La CIENEGA BL	0	492	40	392	669	7	0	0	5	0	0	244
98	La CIENEGA BL	8	468	41	69	720	0	0	0	0	170	0	107
101	SEPULVEDA BLV	127	1133	222	89	1250	103	87	308	104	242	204	91
108	SEPULVEDA BLV	1258	1494	241	0	1710	28	0	0	1413	0	0	22
114	SEPULVEDA BLV	125	1157	91	242	1187	175	194	675	112	85	479	200
123	WESTCHESTER P	0	382	248	55	395	0	0	0	0	182	0	78
135	SEPULVEDA BLV	180	1276	60	187	1416	57	62	227	89	179	228	145
136	SEPULVEDA @ 7	39	1417	34	115	1722	259	194	63	74	36	45	47
137	SEPULVEDA BLV	97	1279	21	37	1761	169	116	92	105	26	42	32
138	SEPULVEDA BLV	39	1333	14	42	1790	59	49	44	37	6	35	22
1000	La CIENEGA BL	91	436	7	41	599	57	74	1	173	11	2	8

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Future 2014 Without Project-AM Peak

Runway 7L/25R Runway Safety Area

Scenario Report

Scenario: Future 2014-AM Peak

Command: Employee AM
Volume: Employee AM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: AM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
14	AVIATION BLVD	482	350	34	68	157	74	75	803	235	67	1380	110
16	IMPERIAL HWY.	152	261	83	212	129	56	47	155	49	191	573	681
19	AVIATION BLVD	15	825	51	42	368	40	23	18	12	24	28	77
36	La CIENEGA BL	96	156	111	54	151	585	59	527	274	249	1985	325
38	CENTURY BLVD.	0	2564	19	0	825	74	0	0	0	204	149	193
39	CENTURY BLVD.	598	0	72	0	0	0	5	315	389	0	1976	0
47	IMPERIAL HWY.	22	8	33	51	45	5	19	244	166	152	440	81
65	SEPULVEDA @ H	0	861	717	46	325	0	0	0	0	702	0	167
67	IMPERIAL HWY.	33	105	95	41	58	174	157	304	65	28	448	311
68	IMPERIAL HWY	203	0	364	3	1	1	0	598	52	276	1384	1
69	IMPERIAL HWY	1	0	1	426	0	41	65	223	1	9	328	1251
71	IMPERIAL HWY	77	1036	452	165	1136	12	110	125	53	73	142	207
73	IMPERIAL HWY	17	0	13	253	749	526	0	269	55	44	409	0
74	IMPERIAL HWY.	893	0	368	0	0	0	0	212	313	84	578	0
75	IMPERIAL HWY.	204	0	26	0	0	0	0	238	197	0	581	583
89	La CIENEGA BL	0	356	32	17	197	35	0	0	0	71	0	132
94	La CIENEGA BL	140	367	0	0	187	95	39	0	53	0	0	0
96	La CIENEGA BL	2	361	72	93	167	0	0	0	0	667	0	45
97	La CIENEGA BL	0	310	28	226	231	12	0	0	1	0	0	59
98	La CIENEGA BL	6	461	94	30	217	0	0	0	1	75	0	55
101	SEPULVEDA BLV	20	1009	67	22	949	31	43	55	46	174	76	16
108	SEPULVEDA BLV	1239	1259	102	0	1056	8	0	0	660	0	0	4
114	SEPULVEDA BLV	61	991	33	60	997	29	79	160	43	42	299	142
123	WESTCHESTER P	0	346	323	46	266	0	0	0	0	274	0	16
135	SEPULVEDA BLV	147	1090	24	63	954	184	13	52	42	61	96	81
136	SEPULVEDA @ 7	17	1238	8	13	977	38	244	13	24	10	4	65
137	SEPULVEDA BLV	24	1114	4	5	944	43	65	14	41	13	17	37
138	SEPULVEDA BLV	11	1064	4	5	953	12	40	6	11	8	7	24
1000	La CIENEGA BL	125	321	6	7	196	44	9	1	58	1	0	6

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Future 2014 Without Project-PM Peak

Runway 7L/25R Runway Safety Area

Scenario Report

Scenario: Future 2014-PM Peak

Command: Employee PM
Volume: Employee PM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: PM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
14	AVIATION BLVD	344	400	108	91	437	99	147	1536	415	70	859	107
16	IMPERIAL HWY.	112	332	259	477	468	130	145	844	162	167	366	429
19	AVIATION BLVD	27	722	92	72	929	75	67	56	30	72	27	105
36	La CIENEGA BL	100	274	426	412	565	342	123	1107	687	82	1158	135
38	CENTURY BLVD.	0	2873	24	0	2504	62	0	0	0	482	74	192
39	CENTURY BLVD.	388	0	249	0	0	4	5	1337	584	0	985	0
47	IMPERIAL HWY.	126	17	245	90	34	31	43	823	103	79	355	60
65	SEPULVEDA @ H	0	1273	616	365	1417	0	0	0	0	654	0	207
67	IMPERIAL HWY.	97	163	508	278	335	279	171	869	117	42	297	191
68	IMPERIAL HWY	149	1	393	4	0	0	0	1220	253	463	632	0
69	IMPERIAL HWY	2	0	8	1104	0	154	110	362	0	0	230	569
71	IMPERIAL HWY	118	1323	925	340	2009	19	135	274	145	136	155	333
73	IMPERIAL HWY	71	0	133	96	174	132	0	754	52	37	552	0
74	IMPERIAL HWY.	395	0	204	0	0	0	0	1015	673	272	503	0
75	IMPERIAL HWY.	198	0	217	0	0	0	0	1475	192	0	339	215
89	La CIENEGA BL	1	457	183	150	629	8	0	0	0	74	0	77
94	La CIENEGA BL	124	441	0	0	614	109	169	0	189	0	0	0
96	La CIENEGA BL	1	528	75	174	576	0	0	0	0	601	0	157
97	La CIENEGA BL	0	502	41	466	682	7	0	0	5	0	0	249
98	La CIENEGA BL	8	477	42	70	734	0	0	0	0	173	0	109
101	SEPULVEDA BLV	130	1355	232	91	1275	105	91	319	110	247	208	93
108	SEPULVEDA BLV	1283	1608	246	0	1761	29	0	0	1469	0	0	22
114	SEPULVEDA BLV	128	1381	93	247	1211	179	198	689	114	87	489	204
123	WESTCHESTER P	0	390	387	56	403	0	0	0	0	321	0	80
135	SEPULVEDA BLV	190	1380	61	191	1448	58	190	232	104	183	233	148
136	SEPULVEDA @ 7	40	1646	35	117	1756	264	198	64	75	37	46	48
137	SEPULVEDA BLV	99	1506	21	38	1796	172	118	94	107	27	43	33
138	SEPULVEDA BLV	40	1561	14	43	1826	60	50	45	38	6	36	22
1000	La CIENEGA BL	93	445	7	42	611	58	75	1	176	11	2	8

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Future 2014 With Project-AM Peak

Runway 7L/25R Runway Safety Area

Scenario Report

Scenario: Future 2014-AM Peak

Command: Employee AM
Volume: Employee AM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: AM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
14	AVIATION BLVD	482	350	34	69	157	74	75	811	235	67	1380	110
16	IMPERIAL HWY.	152	264	83	262	129	56	54	155	49	191	573	780
19	AVIATION BLVD	15	934	51	42	368	40	35	38	62	24	28	136
36	La CIENEGA BL	96	156	111	54	152	585	59	527	283	283	1985	325
38	CENTURY BLVD.	0	2564	19	0	833	74	0	0	0	204	149	193
39	CENTURY BLVD.	628	0	72	0	0	0	5	315	389	0	1980	0
47	IMPERIAL HWY.	22	8	34	51	45	5	19	252	166	152	440	81
65	SEPULVEDA @ H	0	861	717	46	333	0	0	0	0	702	0	167
67	IMPERIAL HWY.	33	105	95	41	58	174	157	325	65	28	476	311
68	IMPERIAL HWY	203	0	364	3	1	1	0	598	52	276	1384	1
69	IMPERIAL HWY	1	0	1	426	0	41	65	223	1	9	328	1251
71	IMPERIAL HWY	77	1036	459	165	1136	12	110	125	53	73	142	207
73	IMPERIAL HWY	17	0	14	253	749	526	0	276	55	44	409	0
74	IMPERIAL HWY.	964	0	368	0	0	0	0	233	342	84	606	0
75	IMPERIAL HWY.	225	0	26	0	0	0	0	238	218	0	588	583
89	La CIENEGA BL	0	356	32	17	209	35	0	0	0	72	0	132
94	La CIENEGA BL	187	367	0	0	187	107	39	0	73	0	0	0
96	La CIENEGA BL	2	361	72	93	168	0	0	0	0	667	0	45
97	La CIENEGA BL	0	310	28	226	276	12	0	0	1	0	0	59
98	La CIENEGA BL	6	461	94	50	217	0	0	0	1	75	0	102
101	SEPULVEDA BLV	20	1009	67	22	957	31	43	55	46	174	76	16
108	SEPULVEDA BLV	1239	1259	102	0	1064	8	0	0	660	0	0	4
114	SEPULVEDA BLV	61	991	33	60	1005	29	79	160	43	42	299	142
123	WESTCHESTER P	0	346	323	46	266	0	0	0	0	274	0	16
135	SEPULVEDA BLV	147	1090	24	63	962	184	13	52	42	61	96	81
136	SEPULVEDA @ 7	17	1238	8	13	985	38	244	13	24	10	4	65
137	SEPULVEDA BLV	24	1114	4	5	952	43	65	14	41	13	17	37
138	SEPULVEDA BLV	11	1064	4	5	961	12	40	6	11	8	7	24
1000	La CIENEGA BL	125	321	6	7	241	44	9	1	156	1	0	6

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Future 2014 With Project-PM Peak

Runway 7L/25R Runway Safety Area

Scenario Report

Scenario: Future 2014-PM Peak

Command: Employee PM
Volume: Employee PM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: PM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Future Volume Alternative

Node	Intersection	Northbound L	Northbound T	Northbound R	Southbound L	Southbound T	Southbound R	Eastbound L	Eastbound T	Eastbound R	Westbound L	Westbound T	Westbound R
14	AVIATION BLVD	352	401	113	91	437	99	147	1536	415	70	859	107
16	IMPERIAL HWY.	112	332	259	527	468	130	145	844	162	170	373	479
19	AVIATION BLVD	27	772	92	72	929	75	79	76	80	72	27	151
36	La CIENEGA BL	100	274	426	412	565	342	124	1111	687	82	1158	135
38	CENTURY BLVD.	0	2873	24	0	2504	62	0	0	0	482	74	200
39	CENTURY BLVD.	388	0	249	0	0	4	5	1341	584	0	985	0
47	IMPERIAL HWY.	126	17	245	90	34	31	43	823	103	80	363	60
65	SEPULVEDA @ H	0	1281	616	365	1417	0	0	0	0	654	0	207
67	IMPERIAL HWY.	97	163	508	312	335	331	171	890	117	42	318	191
68	IMPERIAL HWY	149	1	393	4	0	0	0	1220	253	463	632	0
69	IMPERIAL HWY	2	0	8	1104	0	154	110	362	0	0	230	569
71	IMPERIAL HWY	118	1323	925	340	2009	19	135	274	145	143	155	333
73	IMPERIAL HWY	71	0	133	96	174	132	0	754	52	38	559	0
74	IMPERIAL HWY.	424	0	204	0	0	0	0	1036	702	314	534	0
75	IMPERIAL HWY.	219	0	217	0	0	0	0	1482	241	0	339	215
89	La CIENEGA BL	1	457	183	150	769	8	0	0	0	74	0	77
94	La CIENEGA BL	144	441	0	0	728	135	169	0	209	0	0	0
96	La CIENEGA BL	1	529	75	174	576	0	0	0	0	601	0	157
97	La CIENEGA BL	0	502	41	466	682	7	0	0	5	0	0	249
98	La CIENEGA BL	8	477	42	117	820	0	0	0	0	173	0	129
101	SEPULVEDA BLV	130	1363	232	91	1275	105	91	319	110	247	208	93
108	SEPULVEDA BLV	1283	1616	246	0	1761	29	0	0	1469	0	0	22
114	SEPULVEDA BLV	128	1389	93	247	1211	179	198	689	114	87	489	204
123	WESTCHESTER P	0	390	387	56	403	0	0	0	0	321	0	80
135	SEPULVEDA BLV	190	1388	61	191	1448	58	190	232	104	183	233	148
136	SEPULVEDA @ 7	40	1654	35	117	1756	264	198	64	75	37	46	48
137	SEPULVEDA BLV	99	1514	21	38	1796	172	118	94	107	27	43	33
138	SEPULVEDA BLV	40	1569	14	43	1826	60	50	45	38	6	36	22
1000	La CIENEGA BL	93	445	7	42	611	58	75	1	188	11	2	8

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Baseline 2013 plus Project-AM Peak

Runway 7L/25R Runway Safety Area

Scenario Report

Scenario: Baseline 2013-AM Peak

Command: Employee AM
Volume: Employee AM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: AM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Future Volume Alternative

		Northbound			Southbound			Eastbound			Westbound		
Node	Intersection	L	T	R	L	T	R	L	T	R	L	T	R
14	AVIATION BLVD	434	343	33	69	149	72	74	792	230	66	1297	108
16	IMPERIAL HWY.	137	258	81	323	126	50	56	152	48	187	524	817
19	AVIATION BLVD	15	970	50	41	356	39	35	63	127	24	27	171
36	La CIENEGA BL	88	153	109	53	147	573	58	517	276	293	1897	319
38	CENTURY BLVD.	0	2397	19	0	816	43	0	0	0	191	73	176
39	CENTURY BLVD.	604	0	71	0	0	0	5	309	381	0	1919	0
47	IMPERIAL HWY.	20	8	33	50	44	5	19	249	163	149	376	79
65	SEPULVEDA @ H	0	844	696	45	287	0	0	0	0	540	0	164
67	IMPERIAL HWY.	31	103	93	40	57	168	154	346	64	27	467	299
68	IMPERIAL HWY	199	0	357	3	1	1	0	467	51	271	925	1
69	IMPERIAL HWY	1	0	1	298	0	40	64	219	1	9	322	795
71	IMPERIAL HWY	61	995	452	162	1114	12	108	123	52	72	97	187
73	IMPERIAL HWY	15	0	14	248	734	516	0	274	54	43	345	0
74	IMPERIAL HWY.	963	0	361	0	0	0	0	256	374	82	591	0
75	IMPERIAL HWY.	248	0	25	0	0	0	0	233	241	0	543	572
89	La CIENEGA BL	0	343	31	17	202	34	0	0	0	70	0	129
94	La CIENEGA BL	221	354	0	0	180	105	38	0	97	0	0	0
96	La CIENEGA BL	2	354	71	91	162	0	0	0	0	654	0	44
97	La CIENEGA BL	0	298	27	216	288	12	0	0	1	0	0	58
98	La CIENEGA BL	6	446	92	74	210	0	0	0	1	74	0	138
101	SEPULVEDA BLV	20	984	66	22	751	30	40	54	41	168	73	16
108	SEPULVEDA BLV	1202	1214	100	0	972	8	0	0	647	0	0	4
114	SEPULVEDA BLV	60	965	32	59	798	28	77	157	42	41	293	139
123	WESTCHESTER P	0	339	184	45	261	0	0	0	0	155	0	16
135	SEPULVEDA BLV	128	1064	24	62	874	56	13	51	41	59	94	79
136	SEPULVEDA @ 7	17	1207	8	13	779	37	239	13	24	10	4	64
137	SEPULVEDA BLV	24	1085	4	5	746	42	64	14	40	13	17	36
138	SEPULVEDA BLV	11	1036	4	5	755	12	39	6	11	8	7	24
1000	La CIENEGA BL	123	309	6	7	253	43	9	1	192	1	0	6

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Baseline 2013 plus Project-PM Peak

Runway 7L/25R Runway Safety Area

Scenario Report

Scenario: Baseline 2013-PM Peak

Command: Employee PM
Volume: Employee PM
Geometry: Existing geometry
Impact Fee: Default Impact Fee
Trip Generation: PM Peak
Trip Distribution: Trip_am_pm
Paths: Default Paths
Routes: Default Routes
Configuration: Default Configuration

Intersection Volume Report
Future Volume Alternative

		Northbound			Southbound			Eastbound			Westbound		
Node	Intersection	L	T	R	L	T	R	L	T	R	L	T	R
14	AVIATION BLVD	348	389	113	89	428	97	143	1416	364	69	842	105
16	IMPERIAL HWY.	110	325	254	542	457	126	137	792	147	168	370	536
19	AVIATION BLVD	26	818	90	71	868	74	78	100	144	71	26	180
36	La CIENEGA BL	98	269	418	404	554	335	122	1067	608	80	1135	132
38	CENTURY BLVD.	0	2776	24	0	2315	61	0	0	0	473	73	199
39	CENTURY BLVD.	380	0	244	0	0	4	5	1292	573	0	966	0
47	IMPERIAL HWY.	124	17	240	88	33	30	42	755	99	78	358	59
65	SEPULVEDA @ H	0	1217	449	358	1389	0	0	0	0	641	0	203
67	IMPERIAL HWY.	95	160	498	322	328	348	168	865	114	41	339	187
68	IMPERIAL HWY	146	1	385	4	0	0	0	782	248	454	500	0
69	IMPERIAL HWY	2	0	8	669	0	151	108	355	0	0	225	438
71	IMPERIAL HWY	116	1297	907	318	1934	19	124	229	142	142	152	326
73	IMPERIAL HWY	70	0	130	94	171	129	0	686	49	37	551	0
74	IMPERIAL HWY.	454	0	200	0	0	0	0	1007	688	327	555	0
75	IMPERIAL HWY.	242	0	213	0	0	0	0	1420	275	0	332	211
89	La CIENEGA BL	1	448	179	147	812	8	0	0	0	73	0	75
94	La CIENEGA BL	167	432	0	0	764	140	166	0	230	0	0	0
96	La CIENEGA BL	1	519	74	171	565	0	0	0	0	589	0	154
97	La CIENEGA BL	0	492	40	392	669	7	0	0	5	0	0	244
98	La CIENEGA BL	8	468	41	153	843	0	0	0	0	170	0	152
101	SEPULVEDA BLV	127	1144	222	89	1250	103	87	308	104	242	204	91
108	SEPULVEDA BLV	1258	1505	241	0	1710	28	0	0	1413	0	0	22
114	SEPULVEDA BLV	125	1168	91	242	1187	175	194	675	112	85	479	200
123	WESTCHESTER P	0	382	248	55	395	0	0	0	0	182	0	78
135	SEPULVEDA BLV	180	1287	60	187	1416	57	62	227	89	179	228	145
136	SEPULVEDA @ 7	39	1428	34	115	1722	259	194	63	74	36	45	47
137	SEPULVEDA BLV	97	1290	21	37	1761	169	116	92	105	26	42	32
138	SEPULVEDA BLV	39	1344	14	42	1790	59	49	44	37	6	35	22
1000	La CIENEGA BL	91	436	7	41	599	57	74	1	185	11	2	8

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Appendix D3

Study Area Intersection Capacity Analysis

Table of Contents

D3.1 Capacity Analysis Results D3-1

TRAFFIX Analysis Reports

Baseline (2013) AM Peak D3-1

Baseline (2013) PM Peak D3-30

2014 plus Other (Without Project) AM Peak D3-59

2014 plus Other (Without Project) PM Peak D3-88

2014 plus Other plus RSA (With Project) AM Peak D3-117

2014 plus Other plus RSA (With Project) PM Peak D3-146

Baseline (2013) plus RSA AM Peak D3-175

Baseline (2013) plus RSA PM Peak D3-204

D3.1 CAPACITY ANALYSIS RESULTS

Appendix D3 provides the capacity analysis results for each condition and scenario evaluated in the traffic study. The tables included summarize the V/C ratios and level of service results for the two analysis peak hours, construction a.m. peak hour, and construction p.m. peak hour, for the Baseline With and Without Project (2013), and the Cumulative Traffic With and Without Project (December 2014).

```
                                    Baseline 2013-AM Peak
--------------------------------------------------------------------------------
Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
Scenario Report
Scenario:             Baseline 2013-AM Peak

Command:              Employee AM Volume:   Employee AM Geometry:  Existing geometry Impact Fee:
                      Default Impact Fee Trip Generation:  AM Peak
Trip Distribution:    Trip_am_pm Paths:     Default Paths Routes:  Default Routes
Configuration:        Default Configuration
--------------------------------------------------------------------------------
Level Of Service Computation Report
Circular 212 Planning Method (Base Volume Alternative)
********************************************************************************
Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.537
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       49               Level Of Service:                   A
********************************************************************************
*** Street Name:      AVIATION BLVD.                    CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|--------------||--------------||--------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|--------------||--------------||--------------||-------------
--| Volume Module:
Base Vol:     434  343    33    67  149    72    74  781   230    66 1297   108
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  434  343    33    67  149    72    74  781   230    66 1297   108
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   434  343    33    67  149    72    74  781   230    66 1297   108
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  434  343    33    67  149    72    74  781   230    66 1297   108
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   477  343    33    74  149    72    74  781   230    66 1297   108
------------|--------------||--------------||--------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.82  0.18  2.00 2.00  1.00  1.00 3.09  0.91  1.00 3.69  0.31
Final Sat.:  2750 2509   241  2750 2750  1375  1375 4249  1251  1375 5077   423
------------|--------------||--------------||--------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.17 0.14  0.14  0.03 0.05  0.05  0.05 0.18  0.18  0.05 0.26  0.26
Crit Vol:     239                 75          74                  351
Crit Moves:  ****                ****        ****                ****
********************************************************************************

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```

```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.570
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       53               Level Of Service:                  A
******************************************************************************
*** Street Name:       AVIATION BL.                    IMPERIAL HWY.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:             Ovl               Ovl             Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  2  0  1    2  0  1  1  1    2  0  2  1  0    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     137  254    81   208  126    50    45  152    48   187  524   632
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  137  254    81   208  126    50    45  152    48   187  524   632
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   137  254    81   208  126    50    45  152    48   187  524   632
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  137  254    81   208  126    50    45  152    48   187  524   632
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   151  254    81   229  126    55    50  152    48   206  524   632
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.28  0.72  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3135   990  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.05 0.09  0.06  0.08 0.05  0.04  0.02 0.05  0.05  0.07 0.13  0.46
Crit Vol:          127            0              25                        632
Crit Moves:       ****           ****           ****                      ****
******************************************************************************

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```



```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.365
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36               Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                  111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:             Ovl               Ovl             Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      15  771    50    41  356    39    23   18    12    24   27    75
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15  771    50    41  356    39    23   18    12    24   27    75
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    15  771    50    41  356    39    23   18    12    24   27    75
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   15  771    50    41  356    39    23   18    12    24   27    75
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    15  771    50    41  356    39    23   18    12    24   27    75
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.88  0.12  1.00 1.80  0.20  1.00 0.60  0.40  1.00 1.00  1.00
Final Sat.:  1375 2583   167  1375 2478   272  1375  825   550  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.30  0.30  0.03 0.14  0.14  0.02 0.02  0.02  0.02 0.02  0.05
Crit Vol:          410            41              23                        27
Crit Moves:       ****           ****            ****                      ****
******************************************************************************

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```

```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.696
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       75                Level Of Service:                  B
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:            Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      88  153   109    53  145   573    58  517   263   244 1897   319
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   88  153   109    53  145   573    58  517   263   244 1897   319
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    88  153   109    53  145   573    58  517   263   244 1897   319
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   88  153   109    53  145   573    58  517   263   244 1897   319
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    88  153   120    53  145   630    58  517   263   244 1897   319
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.42  0.58
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4708   792
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.06  0.04  0.04 0.05  0.23  0.04 0.13  0.19  0.18 0.40  0.40
Crit Vol:      88                      315    0                   554
Crit Moves:  ****                    ****  ****                  ****
******************************************************************************

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```



```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.494
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       28                Level Of Service:                  A
******************************************************************************
*** Street Name:     SEPULVEDA BLVD.                   CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 2397    19     0  805    43     0    0     0   191   73   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 2397    19     0  805    43     0    0     0   191   73   176
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 2397     0     0  805    43     0    0     0   191   73   176
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 2397     0     0  805    43     0    0     0   191   73   176
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:     0 2397     0     0  805    43     0    0     0   210   73   194
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.48 0.52  2.00
Final Sat.:     0 6000  1500     0 6000  1500     0    0     0  2226  774  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.40  0.00  0.00 0.13  0.03  0.00 0.00  0.00  0.09 0.09  0.06
Crit Vol:             599                 0                   0          142
Crit Moves:          ****                ****                           ****
******************************************************************************

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```

```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.634
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       39                Level Of Service:                   B
******************************************************************************
*** Street Name:    405 NORTH OFF RAMP                CENTURY BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      561    0    71     0    0     0     5  309   381     0 1913     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   561    0    71     0    0     0     5  309   381     0 1913     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    561    0    71     0    0     0     5  309   381     0 1913     0
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   561    0    71     0    0     0     5  309   381     0 1913     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:    617    0    71     0    0     0     5  309   419     0 1913     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.00  2.00  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 3000  3000     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.21 0.00  0.05  0.00 0.00  0.00  0.00 0.10  0.14  0.00 0.43  0.00
Crit Vol:     309                    0                5                  638
Crit Moves:  ****                                  ****                 ****
******************************************************************************

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```



```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.269
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       31                Level Of Service:                   A
******************************************************************************
*** Street Name:      DOUGLAS STREET                  IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase      Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      20    8    32    50   44     5    19  239   163   149  376    79
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   20    8    32    50   44     5    19  239   163   149  376    79
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    20    8    32    50   44     5    19  239   163   149  376    79
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   20    8    32    50   44     5    19  239   163   149  376    79
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    20    8    35    55   44     6    19  239   163   164  376    79
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.58 0.42  1.00  1.00 2.00  1.00  2.00 2.48  0.52
Final Sat.:  1375 1375  2750  2171  579  1375  1375 2750  1375  2750 3409   716
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.01  0.01  0.03 0.08  0.00  0.01 0.09  0.12  0.06 0.11  0.11
Crit Vol:      20                  104                  163   82
Crit Moves:  ****                ****                 ****  ****
******************************************************************************

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```

```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.289
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       20                Level Of Service:                 A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  844   696    45  276     0     0    0     0   540    0   164
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  844   696    45  276     0     0    0     0   540    0   164
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  844     0    45  276     0     0    0     0   540    0   164
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  844     0    45  276     0     0    0     0   540    0   164
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  844     0    50  276     0     0    0     0   594    0   164
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0    0     0  4500    0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.00  0.02 0.06  0.00  0.00 0.00  0.00  0.13 0.00  0.11
Crit Vol:          211         25                    0         198
Crit Moves:      ****        ****                  ****        ****
******************************************************************************

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```



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Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.261
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                 IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      31  103    93    40   57   168   154  298    64    27  410   299
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   31  103    93    40   57   168   154  298    64    27  410   299
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    31  103    93    40   57   168   154  298    64    27  410   299
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   31  103    93    40   57   168   154  298    64    27  410   299
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:    34  103   102    44   57   185   169  298    70    30  410   329
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.51  1.49  2.00 1.00  2.00  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 2070  2055  2750 1375  2750  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.05  0.05  0.02 0.04  0.07  0.06 0.07  0.03  0.01 0.10  0.12
Crit Vol:      17                        92    85                        164
Crit Moves:  ****                      ****  ****                      ****
******************************************************************************

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```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.569
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       43                Level Of Service:                    A
******************************************************************************
*** Street Name:       MAIN STREET                    IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase         Permitted        Protected
Rights:           Ignore           Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    0  0  1! 0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     199    0   357     3    1     1     0  467    51   271  925     1
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  199    0   357     3    1     1     0  467    51   271  925     1
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   199    0     0     3    1     1     0  467    51   271  925     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  199    0     0     3    1     1     0  467    51   271  925     1
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   219    0     0     3    1     1     0  467    51   298  925     1
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.60 0.20  0.20  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2850    0  1425   855  285   285  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.08 0.00  0.00  0.00 0.00  0.00  0.00 0.16  0.04  0.10 0.32  0.00
Crit Vol:     109                  5              234              463
Crit Moves:  ****                 ****            ****            ****
******************************************************************************

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Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.254
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       25                Level Of Service:                    A
******************************************************************************
*** Street Name:                                        PERSHING
DR./HYPERION DWY.                                      IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase         Protected         Permitted
Rights:           Include          Include           Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  1  1  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1    0     1   298    0    40    64  219     1     9  322   795
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     1   298    0    40    64  219     1     9  322   795
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0     1   298    0    40    64  219     1     9  322   795
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1    0     1   298    0    40    64  219     1     9  322   795
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     1    0     1   328    0    40    70  219     1     9  322   874
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.50 0.00  0.50  2.00 0.00  1.00  2.00 1.99  0.01  1.00 2.00  2.00
Final Sat.:   713    0   713  2850    0  1425  2850 2837    13  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.12 0.00  0.03  0.02 0.08  0.08  0.01 0.11  0.31
Crit Vol:                2   164              35                161
Crit Moves:             ****  ****            ****            ****
******************************************************************************

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Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.566
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       53               Level Of Service:                  A
********************************************************************************
*** Street Name:      SEPULVEDA BL.                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      61  995   443   162 1114    12   108  123    52    72   97   187
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   61  995   443   162 1114    12   108  123    52    72   97   187
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    61  995   443   162 1114    12   108  123    52    72   97   187
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   61  995   443   162 1114    12   108  123    52    72   97   187
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:    61  995   443   178 1114    12   119  123    52    79   97   187
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5441    59  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.24  0.32  0.06 0.20  0.20  0.04 0.03  0.04  0.03 0.02  0.14
Crit Vol:                443    89              59                        187
Crit Moves:             ****  ****            ****                      ****
********************************************************************************

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```



```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.432
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       33               Level Of Service:                  A
********************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      15    0    13   248  734   516     0  264    54    43  345     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15    0    13   248  734   516     0  264    54    43  345     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    15    0    13   248  734   516     0  264    54    43  345     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   15    0    13   248  734   516     0  264    54    43  345     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    15    0    14   273  734   568     0  264    54    47  345     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.56  1.44  0.00 2.49  0.51  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2222  2053     0 3549   726  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.19 0.33  0.28  0.00 0.07  0.07  0.02 0.08  0.00
Crit Vol:      15                  471              106          24
Crit Moves:  ****                ****             ****         ****
********************************************************************************

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```

```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.583
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       45               Level Of Service:                  A
********************************************************************************
*** Street Name:        / 105 RAMP                    IMPERIAL HWY.
Approach:      North Bound       South Bound       East Bound       West Bound
Movement:    L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase       Split Phase         Permitted        Protected
Rights:             Ovl              Ovl               Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     836    0   361     0    0     0     0  208   307    82  533     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  836    0   361     0    0     0     0  208   307    82  533     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   836    0   361     0    0     0     0  208   307    82  533     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  836    0   361     0    0     0     0  208   307    82  533     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:   920    0   397     0    0     0     0  208   338    90  533     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.00  2.00  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 2850  2850  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.32 0.00  0.14  0.00 0.00  0.00  0.00 0.07  0.12  0.03 0.19  0.00
Crit Vol:     460                   0              104              267
Crit Moves:  ****                                ****             ****
********************************************************************************

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```



```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.211
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24               Level Of Service:                  A
********************************************************************************
*** Street Name:      405 NORTH RAMP                    IMPERIAL HWY
Approach:      North Bound       South Bound       East Bound       West Bound
Movement:    L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase       Split Phase         Permitted        Permitted
Rights:           Include          Include           Ignore           Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     200    0    25     0    0     0     0  233   193     0  534   572
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  200    0    25     0    0     0     0  233   193     0  534   572
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   200    0    25     0    0     0     0  233     0     0  534     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  200    0    25     0    0     0     0  233     0     0  534     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   220    0    25     0    0     0     0  233     0     0  534     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.80 0.00  0.20  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  2559    0   291     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.00  0.09  0.00 0.00  0.00  0.00 0.05  0.00  0.00 0.12  0.00
Crit Vol:     123                   0              0                178
Crit Moves:  ****                                ****             ****
********************************************************************************

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```

```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.234
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24               Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                   LENNOX BLVD
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permit+Prot      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  343    31    17  190    34     0    0     0    70    0   129
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  343    31    17  190    34     0    0     0    70    0   129
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  343    31    17  190    34     0    0     0    70    0   129
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  343    31    17  190    34     0    0     0    70    0   129
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  343    31    17  190    34     0    0     0    77    0   129
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.83  0.17  1.00 2.54  0.46  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2614   236  1425 3626   649     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.13  0.13  0.01 0.05  0.05  0.00 0.00  0.00  0.03 0.00  0.09
Crit Vol:          187          17                     0                    129
Crit Moves:       ****         ****                                      ****
********************************************************************************

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```



```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.198
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       23               Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                   / 111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     137  354     0     0  180    93    38    0    52     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  137  354     0     0  180    93    38    0    52     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   137  354     0     0  180    93    38    0    52     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  137  354     0     0  180    93    38    0    52     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   137  354     0     0  180    93    42    0    52     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.00  1.00  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 2850  1425  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.12  0.00  0.00 0.06  0.07  0.01 0.00  0.04  0.00 0.00  0.00
Crit Vol:     137                      93                52           0
Crit Moves:  ****                     ****              ****
********************************************************************************

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```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
********************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.457
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       34               Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 N/B RAPM
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Ovl              Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2  354    71    91  160     0     0    0     0   654    0    44
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2  354    71    91  160     0     0    0     0   654    0    44
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2  354    71    91  160     0     0    0     0   654    0    44
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2  354    71    91  160     0     0    0     0   654    0    44
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  354    78    91  160     0     0    0     0   719    0    44
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.88 0.00  0.12
Final Sat.:    20 2830  1425  1425 2850     0     0    0     0  2686    0   164
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.13  0.05  0.06 0.06  0.00  0.00 0.00  0.00  0.27 0.00  0.27
Crit Vol:          178           91                     0          382
Crit Moves:       ****          ****                            ****
********************************************************************************

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```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
********************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.205
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29               Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected      Split Phase      Split Phase
Rights:          Include          Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  298    27   216  224    12     0    0     1     0    0    58
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  298    27   216  224    12     0    0     1     0    0    58
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  298    27   216  224    12     0    0     1     0    0    58
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  298    27   216  224    12     0    0     1     0    0    58
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  298    27   238  224    12     0    0     1     0    0    64
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.83  0.17  2.00 1.90  0.10  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2522   228  2750 2610   140     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.12  0.09 0.09  0.09  0.00 0.00  0.00  0.00 0.00  0.02
Crit Vol:          163          119                            1          0
Crit Moves:       ****         ****                          ****       ****
********************************************************************************

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```

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Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
********************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.206
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       23               Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  0  0  1    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       6  446    92    29  210     0     0    0     1    74    0    54
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6  446    92    29  210     0     0    0     1    74    0    54
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     6  446    92    29  210     0     0    0     1    74    0    54
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    6  446    92    29  210     0     0    0     1    74    0    54
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     6  446    92    29  210     0     0    0     1    81    0    54
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 0.00  1.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0    0  1425  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.16  0.06  0.02 0.05  0.00  0.00 0.00  0.00  0.03 0.00  0.04
Crit Vol:          223           29                      1    41
Crit Moves:       ****          ****                   ****  ****
********************************************************************************

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```



```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
********************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.407
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       38               Level Of Service:                  A
********************************************************************************
*** Street Name:              Sepulveda Boulevard               La Tijera
Boulevard Approach:            North Bound      South Bound      East Bound
              West Bound Movement:        L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      20  984    66    22  740    30    40   54    41   168   73    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   20  984    66    22  740    30    40   54    41   168   73    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    20  984    66    22  740    30    40   54    41   168   73    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   20  984    66    22  740    30    40   54    41   168   73    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    20  984    66    22  740    30    40   54    41   168   73    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.64  0.36
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 2256   494
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.24  0.05  0.02 0.18  0.02  0.03 0.02  0.03  0.12 0.03  0.03
Crit Vol:          328           22                      41   168
Crit Moves:       ****          ****                   ****  ****
********************************************************************************

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```

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Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.527
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       39               Level Of Service:                  A
********************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD               LINCOLN BOULEVARD
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Permitted        Permitted        Permitted
Rights:           Include           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    1202 1214   100     0  961     8     0    0   647     0    0     4
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1202 1214   100     0  961     8     0    0   647     0    0     4
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1202 1214   100     0  961     8     0    0   647     0    0     4
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1202 1214   100     0  961     8     0    0   647     0    0     4
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1322 1214   100     0  961     8     0    0   712     0    0     4
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.77  0.23  0.00 3.97  0.03  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3950   325     0 5653    47     0    0  5700     0    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.23 0.31  0.31  0.00 0.17  0.17  0.00 0.00  0.12  0.00 0.00  0.00
Crit Vol:     331                242                 178     0
Crit Moves:  ****                ****                ****  ****
********************************************************************************

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Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.465
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43               Level Of Service:                  A
********************************************************************************
*** Street Name:   Sepulveda Boulevard               Manchester Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit       Protected        Prot+Permit
Rights:           Ovl               Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      60  965    32    59  787    28    77  157    42    41  293   139
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   60  965    32    59  787    28    77  157    42    41  293   139
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    60  965    32    59  787    28    77  157    42    41  293   139
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   60  965    32    59  787    28    77  157    42    41  293   139
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    60  965    32    59  787    28    85  157    42    41  293   139
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.36  0.64
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1865   885
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.23  0.02  0.04 0.19  0.02  0.03 0.06  0.03  0.03 0.16  0.16
Crit Vol:           322               59                42                216
Crit Moves:        ****              ****              ****              ****
********************************************************************************

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Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.221
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24               Level Of Service:                  A
******************************************************************************
*** Street Name:               Pershing Drive        Westchester Parkway
Approach:      North Bound       South Bound       East Bound       West Bound
Movement:     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected         Permitted        Permitted
Rights:            Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  339   184    45  261     0     0    0     0   155    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  339   184    45  261     0     0    0     0   155    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  339   184    45  261     0     0    0     0   155    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  339   184    45  261     0     0    0     0   155    0    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  339   184    45  261     0     0    0     0   171    0    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.13  0.03 0.09  0.00  0.00 0.00  0.00  0.06 0.00  0.01
Crit Vol:             184    45                    0              85
Crit Moves:           ****  ****                                ****
******************************************************************************

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Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.379
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       37               Level Of Service:                  A
******************************************************************************
*** Street Name:              Sepulveda Boulevard               Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R     L  -  T  -  R     L  -  T  -  R     L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:            Include         Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     128 1064    24    62  863    56    13   51    41    59   94    79
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  128 1064    24    62  863    56    13   51    41    59   94    79
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   128 1064    24    62  863    56    13   51    41    59   94    79
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  128 1064    24    62  863    56    13   51    41    59   94    79
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   128 1064    24    62  863    56    13   51    41    59   94    79
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.11  0.89  1.00 1.09  0.91
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1524  1226  1375 1494  1256
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.26  0.02  0.05 0.21  0.04  0.01 0.03  0.03  0.04 0.06  0.06
Crit Vol:           355             62                    46              59
Crit Moves:         ****            ****                  ****            ****
******************************************************************************

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```

```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.407
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                76th/77th Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      17 1207     8    13  768    37   239   13    24    10    4    64
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   17 1207     8    13  768    37   239   13    24    10    4    64
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17 1207     8    13  768    37   239   13    24    10    4    64
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   17 1207     8    13  768    37   239   13    24    10    4    64
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    17 1207     8    13  768    37   263   13    24    10    4    64
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.27  0.01  0.01 0.17  0.02  0.09 0.01  0.02  0.01 0.00  0.04
Crit Vol:          402           13           131                          64
Crit Moves:       ****         ****          ****                        ****
******************************************************************************

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```



```
Baseline 2013-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.323
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       21               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                79th/80th Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      24 1085     4     5  735    42    64   14    40    13   17    36
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   24 1085     4     5  735    42    64   14    40    13   17    36
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    24 1085     4     5  735    42    64   14    40    13   17    36
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   24 1085     4     5  735    42    64   14    40    13   17    36
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    24 1085     4     5  735    42    64   14    40    13   17    36
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.32  0.68
Final Sat.:  1500 4483    17  1500 4500  1500  1500 1500  1500  1500  481  1019
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.24  0.24  0.00 0.16  0.03  0.04 0.01  0.03  0.01 0.04  0.04
Crit Vol:          363           5                64                    53
Crit Moves:       ****         ****              ****                  ****
******************************************************************************

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```

```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                  Alternative)
********************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.281
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       20               Level Of Service:                 A
********************************************************************************
*** Street Name:   Sepulveda Boulevard                  83rd Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      11 1036     4     5  744    12    39    6    11     8    7    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   11 1036     4     5  744    12    39    6    11     8    7    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    11 1036     4     5  744    12    39    6    11     8    7    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   11 1036     4     5  744    12    39    6    11     8    7    24
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    11 1036     4     5  744    12    39    6    11     8    7    24
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 2.95  0.05  0.69 0.11  0.20  1.00 0.23  0.77
Final Sat.:  1500 4483    17  1500 4429    71  1045  161   295  1500  339  1161
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.23  0.23  0.00 0.17  0.17  0.04 0.04  0.04  0.01 0.02  0.02
Crit Vol:          347           5            39                   31
Crit Moves:       ****          ****          ****                 ****
********************************************************************************

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```



```
Baseline 2013-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume Alternative)
********************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.181
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       23               Level Of Service:                 A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  104 TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     123  309     6     7  189    43     9    1    57     1    0     6
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  123  309     6     7  189    43     9    1    57     1    0     6
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   123  309     6     7  189    43     9    1    57     1    0     6
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  123  309     6     7  189    43     9    1    57     1    0     6
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   123  309     6     7  189    43     9    1    57     1    0     6
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.96  0.04  1.00 2.44  0.56  1.00 1.00  1.00  0.14 0.00  0.86
Final Sat.:  1425 2796    54  1425 3483   792  1425 1425  1425   204    0  1221
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.11  0.11  0.00 0.05  0.05  0.01 0.00  0.04  0.00 0.00  0.00
Crit Vol:     123                77                   57     1
Crit Moves:  ****                ****                 ****  ****
********************************************************************************

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```

```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                              --- Scenario Report
Scenario:             Baseline 2013-PM Peak

Command:              Employee PM
Volume:               Employee PM
Geometry:             Existing
geometry Impact Fee:  Default Impact
Fee Trip Generation:  PM Peak
Trip Distribution:    Trip_am_pm
Paths:                Default
Paths Routes:         Default
Routes
Configuration:        Default Configuration

------------------------------------------------------------------------------
                --- Level Of Service Computation Report
              Circular 212 Planning Method (Base Volume Alternative)
******************************************************************************
*** Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.664
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       68                Level Of Service:                    B
******************************************************************************
*** Street Name:      AVIATION BLVD.                   CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:           Include           Include           Include           Include
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     337  387   106    89  428    97   143 1416   364    69  842   105
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  337  387   106    89  428    97   143 1416   364    69  842   105
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   337  387   106    89  428    97   143 1416   364    69  842   105
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  337  387   106    89  428    97   143 1416   364    69  842   105
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   371  387   106    98  428    97   143 1416   364    69  842   105
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.57  0.43  2.00 2.00  1.00  1.00 3.18  0.82  1.00 3.56  0.44
Final Sat.:  2750 2159   591  2750 2750  1375  1375 4375  1125  1375 4890   610
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.13 0.18  0.18  0.04 0.16  0.07  0.10 0.32  0.32  0.05 0.17  0.17
Crit Vol:     185                214               445          69
Crit Moves:  ****               ****              ****         ****
******************************************************************************

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```



```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                --- Level Of Service Computation Report
              Circular 212 Planning Method (Base Volume
                          Alternative)
******************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.582
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       55                Level Of Service:                    A
******************************************************************************
*** Street Name:       AVIATION BL.                     IMPERIAL HWY.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:           Ovl               Ovl               Include           Ovl
Min. Green:     0     0     0     0     0     0     0     0     0     0     0     0
Lanes:        2  0  2  0  1    2  0  1  1  1    2  0  2  1  0    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     110  325   254   427  457   126   137  792   147   164  359   421
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  110  325   254   427  457   126   137  792   147   164  359   421
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   110  325   254   427  457   126   137  792   147   164  359   421
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  110  325   254   427  457   126   137  792   147   164  359   421
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   121  325   254   470  457   139   151  792   147   180  359   421
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.53  0.47  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3479   646  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.18  0.17 0.17  0.10  0.05 0.23  0.23  0.07 0.09  0.31
Crit Vol:     163          235                313          90
Crit Moves:  ****         ****               ****         ****
******************************************************************************

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```

```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.474
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43               Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                    111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:             Ovl               Include           Include           Ovl
Min. Green:       0    0     0      0    0     0      0    0     0      0    0     0
Lanes:         1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       26  703    90    71  868    74    66   55    29    71   26   103
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    26  703    90    71  868    74    66   55    29    71   26   103
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     26  703    90    71  868    74    66   55    29    71   26   103
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    26  703    90    71  868    74    66   55    29    71   26   103
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:     26  703    90    71  868    74    66   55    29    71   26   103
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.77  0.23  1.00 1.84  0.16  1.00 0.65  0.35  1.00 1.00  1.00
Final Sat.:  1375 2438   312  1375 2534   216  1375  900   475  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.29  0.29  0.05 0.34  0.34  0.05 0.06  0.06  0.05 0.02  0.07
Crit Vol:       26                471               84           71
Crit Moves:  ****                ****              ****         ****
******************************************************************************

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```



```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.832
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      136               Level Of Service:                  D
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:             Ovl               Ovl               Ovl               Ovl
Min. Green:       0    0     0      0    0     0      0    0     0      0    0     0
Lanes:         1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       98  269   418   404  554   335   120 1061   608    80 1135   132
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    98  269   418   404  554   335   120 1061   608    80 1135   132
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     98  269   418   404  554   335   120 1061   608    80 1135   132
Reduct Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    98  269   418   404  554   335   120 1061   608    80 1135   132
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:     98  269   460   404  554   369   120 1061   608    80 1135   132
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.58  0.42
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4927   573
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.10  0.17  0.29 0.20  0.13  0.09 0.26  0.44  0.06 0.23  0.23
Crit Vol:             230   404                          608     0
Crit Moves:           ****  ****                         ****  ****
******************************************************************************

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```

```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                     -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.660
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       42               Level Of Service:                B
******************************************************************************
*** Street Name:     SEPULVEDA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 2776    24     0 2315    61     0    0     0   473   73   188
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 2776    24     0 2315    61     0    0     0   473   73   188
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 2776     0     0 2315    61     0    0     0   473   73   188
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 2776     0     0 2315    61     0    0     0   473   73   188
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:     0 2776     0     0 2315    61     0    0     0   520   73   207
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.75 0.25  2.00
Final Sat.:     0 6000  1500     0 6000  1500     0    0     0  2631  369  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.46  0.00  0.00 0.39  0.04  0.00 0.00  0.00  0.20 0.20  0.07
Crit Vol:          694           0                  0          297
Crit Moves:       ****          ****                ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                     -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.459
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       27               Level Of Service:                A
******************************************************************************
*** Street Name:    405 NORTH OFF RAMP                CENTURY BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     380    0   244     0    0     4     5 1286   573     0  966     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  380    0   244     0    0     4     5 1286   573     0  966     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   380    0   244     0    0     4     5 1286   573     0  966     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  380    0   244     0    0     4     5 1286   573     0  966     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:   418    0   244     0    0     4     5 1286   630     0  966     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.68  1.32  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 4027  1973     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.00  0.16  0.00 0.00  0.00  0.00 0.32  0.32  0.00 0.21  0.00
Crit Vol:     209           0                  479           0
Crit Moves:  ****          ****                ****          ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.445
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       41                Level Of Service:                   A
******************************************************************************
*** Street Name:      DOUGLAS STREET                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     124   17   240    88   33    30    42  755    99    77  348    59
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  124   17   240    88   33    30    42  755    99    77  348    59
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   124   17   240    88   33    30    42  755    99    77  348    59
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  124   17   240    88   33    30    42  755    99    77  348    59
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   124   17   264    97   33    33    42  755    99    85  348    59
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.78 0.22  1.00  1.00 2.65  0.35  2.00 2.57  0.43
Final Sat.:  1375 1375  2750  2453  297  1375  1375 3647   478  2750 3527   598
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.01  0.10  0.04 0.11  0.02  0.03 0.21  0.21  0.03 0.10  0.10
Crit Vol:                132        153              285         42
Crit Moves:             ****       ****             ****        ****
******************************************************************************
```



```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.489
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       28                Level Of Service:                   A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 1206   449   358 1389     0     0    0     0   641    0   203
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1206   449   358 1389     0     0    0     0   641    0   203
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 1206     0   358 1389     0     0    0     0   641    0   203
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 1206     0   358 1389     0     0    0     0   641    0   203
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0 1206     0   394 1389     0     0    0     0   705    0   203
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0    0     0  4500    0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.20  0.00  0.13 0.31  0.00  0.00 0.00  0.00  0.16 0.00  0.14
Crit Vol:         302        197                    0         235
Crit Moves:      ****       ****                           ****
******************************************************************************
```

```
Baseline 2013-PM Peak
------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
********************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.523
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       48                Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                 IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      95  160   498   273  328   274   168  817   114    41  291   187
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   95  160   498   273  328   274   168  817   114    41  291   187
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    95  160   498   273  328   274   168  817   114    41  291   187
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   95  160   498   273  328   274   168  817   114    41  291   187
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:   104  160   548   300  328   301   185  817   125    45  291   206
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.00  2.00  2.00 1.56  1.44  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 1375  2750  2750 2150  1975  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.20  0.11 0.15  0.15  0.07 0.20  0.05  0.02 0.07  0.07
Crit Vol:                274   150                272          23
Crit Moves:             ****  ****               ****         ****
********************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
********************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.509
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       38                Level Of Service:                  A
********************************************************************************
*** Street Name:      MAIN STREET                      IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Protected
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    1  0  0  0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     146    1   385     4    0     0     0  782   248   454  500     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  146    1   385     4    0     0     0  782   248   454  500     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   146    1     0     4    0     0     0  782   248   454  500     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  146    1     0     4    0     0     0  782   248   454  500     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   161    1     0     4    0     0     0  782   248   499  500     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.99 0.01  1.00  1.00 0.00  0.00  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2832   18  1425  1425    0     0  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.06  0.00  0.00 0.00  0.00  0.00 0.27  0.17  0.18 0.18  0.00
Crit Vol:      81              4                391          250
Crit Moves:  ****            ****             ****         ****
********************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.386
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       30                Level Of Service:                    A
******************************************************************************
*** Street Name:                                    PERSHING
DR./HYPERION DWY.                                   IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected         Permitted
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  2  0  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2    0     8   669    0   151   108  355     0     0  225   438
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2    0     8   669    0   151   108  355     0     0  225   438
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2    0     8   669    0   151   108  355     0     0  225   438
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2    0     8   669    0   151   108  355     0     0  225   438
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     2    0     8   736    0   151   119  355     0     0  225   482
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.20 0.00  0.80  2.00 0.00  1.00  2.00 2.00  0.00  1.00 2.00  2.00
Final Sat.:   285    0  1140  2850    0  1425  2850 2850     0  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.26 0.00  0.11  0.04 0.12  0.00  0.00 0.08  0.17
Crit Vol:                 10   368              59                   113
Crit Moves:              ****  ****             ****                 ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        1.074
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:      180                Level Of Service:                    F
******************************************************************************
*** Street Name:      SEPULVEDA BL.                  IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected         Protected         Protected
Rights:           Include          Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     116 1297   907   318 1934    19   124  229   142   133  152   326
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  116 1297   907   318 1934    19   124  229   142   133  152   326
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   116 1297   907   318 1934    19   124  229   142   133  152   326
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  116 1297   907   318 1934    19   124  229   142   133  152   326
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   116 1297   907   350 1934    19   136  229   142   146  152   326
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5446    54  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.08 0.31  0.66  0.13 0.36  0.36  0.05 0.06  0.10  0.05 0.04  0.24
Crit Vol:               907   175              68                   326
Crit Moves:            ****  ****             ****                 ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                 Alternative)
******************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.309
Loss Time (sec):     0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      27                Level Of Service:                  A
******************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      70    0   130    94  171   129     0  686    49    36  541     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   70    0   130    94  171   129     0  686    49    36  541     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    70    0   130    94  171   129     0  686    49    36  541     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   70    0   130    94  171   129     0  686    49    36  541     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    70    0   143   103  171   142     0  686    49    40  541     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.64  1.36  0.00 2.80  0.20  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2336  1939     0 3990   285  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.05 0.00  0.05  0.07 0.07  0.07  0.00 0.17  0.17  0.01 0.13  0.00
Crit Vol:                72        104              245         20
Crit Moves:             ****      ****             ****        ****
******************************************************************************
```



```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                 Alternative)
******************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.541
Loss Time (sec):     0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      40                Level Of Service:                  A
******************************************************************************
*** Street Name:        / 105 RAMP                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:             Ovl              Ovl              Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     387    0   200     0    0     0     0  959   621   267  493     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  387    0   200     0    0     0     0  959   621   267  493     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   387    0   200     0    0     0     0  959   621   267  493     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  387    0   200     0    0     0     0  959   621   267  493     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:   426    0   220     0    0     0     0  959   683   294  493     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.34  1.66  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 3329  2371  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.15 0.00  0.08  0.00 0.00  0.00  0.00 0.29  0.29  0.10 0.17  0.00
Crit Vol:     213                     0              411         147
Crit Moves:  ****                                    ****        ****
******************************************************************************
```

```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                      -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.480
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       36                Level Of Service:                    A
******************************************************************************
*** Street Name:      405 NORTH RAMP                  IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase         Permitted        Permitted
Rights:           Include          Include           Ignore           Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     194    0   213     0    0     0     0 1411   188     0  332   211
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  194    0   213     0    0     0     0 1411   188     0  332   211
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   194    0   213     0    0     0     0 1411     0     0  332     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  194    0   213     0    0     0     0 1411     0     0  332     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   213    0   213     0    0     0     0 1411     0     0  332     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 xxxx  1.00  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  1426    0  1424     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.15 0.00  0.15  0.00 0.00  0.00  0.00 0.33  0.00  0.00 0.08  0.00
Crit Vol:     213                    0              470              0
Crit Moves:  ****                                 ****             ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                      -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.376
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):       xxxxxx
Optimal Cycle:       30                Level Of Service:                    A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  LENNOX BLVD
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Permit+Prot      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  448   179   147  617     8     0    0     0    73    0    75
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  448   179   147  617     8     0    0     0    73    0    75
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  448   179   147  617     8     0    0     0    73    0    75
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  448   179   147  617     8     0    0     0    73    0    75
PCE Adj:     4.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     4  448   179   147  617     8     0    0     0    80    0    75
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.42  0.57  1.00 2.96  0.04  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     5 2033   812  1425 4220    55     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.22 0.22  0.22  0.10 0.15  0.15  0.00 0.00  0.00  0.03 0.00  0.05
Crit Vol:           314         147                    0                    75
Crit Moves:       ****        ****                                        ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                        -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.381
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  / 111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     122  432     0     0  602   107   166    0   185     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  122  432     0     0  602   107   166    0   185     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   122  432     0     0  602   107   166    0   185     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  122  432     0     0  602   107   166    0   185     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   122  432     0     0  602   107   183    0   185     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.55  0.45  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 3630   645  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.15  0.00  0.00 0.17  0.17  0.06 0.00  0.13  0.00 0.00  0.00
Crit Vol:     122                  236                   185          0
Crit Moves:  ****                 ****                  ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                        -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.480
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 N/B RAPM
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:             Ovl            Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  517    74   171  565     0     0    0     0   589    0   154
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  517    74   171  565     0     0    0     0   589    0   154
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  517    74   171  565     0     0    0     0   589    0   154
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  517    74   171  565     0     0    0     0   589    0   154
PCE Adj:     2.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  517    81   171  565     0     0    0     0   648    0   154
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.62 0.00  0.38
Final Sat.:     7 2843  1425  1425 2850     0     0    0     0  2303    0   547
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.18  0.06  0.12 0.20  0.00  0.00 0.00  0.00  0.28 0.00  0.28
Crit Vol:       1                  283                   0                401
Crit Moves:  ****                 ****                                   ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                               Alternative)
******************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.354
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       35               Level Of Service:                A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                 405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  492    40   392  669     7     0    0     5     0    0   244
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  492    40   392  669     7     0    0     5     0    0   244
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  492    40   392  669     7     0    0     5     0    0   244
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  492    40   392  669     7     0    0     5     0    0   244
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  492    40   431  669     7     0    0     5     0    0   268
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.85  0.15  2.00 1.98  0.02  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2543   207  2750 2722    28     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.19  0.19  0.16 0.25  0.25  0.00 0.00  0.00  0.00 0.00  0.10
Crit Vol:          266         216                      5           0
Crit Moves:       ****        ****                   ****        ****
******************************************************************************

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Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                               Alternative)
******************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.288
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       26               Level Of Service:                A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                 405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  1! 0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       8  468    41    69  720     0     0    0     0   170    0   107
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    8  468    41    69  720     0     0    0     0   170    0   107
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     8  468    41    69  720     0     0    0     0   170    0   107
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    8  468    41    69  720     0     0    0     0   170    0   107
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     8  468    41    69  720     0     0    0     0   187    0   107
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 1.00  0.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0 1425     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.16  0.03  0.05 0.17  0.00  0.00 0.00  0.00  0.07 0.00  0.08
Crit Vol:          234         69                       0                  107
Crit Moves:       ****        ****                                        ****
******************************************************************************

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Baseline 2013-PM Peak
------------------------------------------------------------------------------
                      -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                       --- Level Of Service Computation Report
                   Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.683
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       72               Level Of Service:                B
******************************************************************************
*** Street Name:               Sepulveda Boulevard              La Tijera
Boulevard Approach:            North Bound       South Bound      East Bound
                    West Bound Movement:         L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     127 1133   222    89 1250   103    87  308   104   242  204    91
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  127 1133   222    89 1250   103    87  308   104   242  204    91
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   127 1133   222    89 1250   103    87  308   104   242  204    91
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  127 1133   222    89 1250   103    87  308   104   242  204    91
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   127 1133   222    89 1250   103    87  308   104   242  204    91
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.38  0.62
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 1902   848
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.27  0.16  0.06 0.30  0.07  0.06 0.11  0.08  0.18 0.11  0.11
Crit Vol:     127                417              154          242
Crit Moves:  ****               ****             ****         ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                      -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                       --- Level Of Service Computation Report
                   Circular 212 Planning Method (Base Volume
                                  Alternative)
******************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.820
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      104               Level Of Service:                D
******************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD              LINCOLN BOULEVARD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    1258 1494   241     0 1710    28     0    0  1413     0    0    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1258 1494   241     0 1710    28     0    0  1413     0    0    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1258 1494   241     0 1710    28     0    0  1413     0    0    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1258 1494   241     0 1710    28     0    0  1413     0    0    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1384 1494   241     0 1710    28     0    0  1554     0    0    22
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.58  0.42  0.00 3.94  0.06  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3681   594     0 5608    92     0    0  5700     0    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.24 0.41  0.41  0.00 0.30  0.30  0.00 0.00  0.27  0.00 0.00  0.02
Crit Vol:     346                435              389          0
Crit Moves:  ****               ****             ****  ****
******************************************************************************
```

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Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                               Alternative)
******************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.781
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      104              Level Of Service:                C
******************************************************************************
*** Street Name:   Sepulveda Boulevard              Manchester Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Protected       Prot+Permit
Rights:            Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     125 1157    91   242 1187   175   194  675   112    85  479   200
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  125 1157    91   242 1187   175   194  675   112    85  479   200
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   125 1157    91   242 1187   175   194  675   112    85  479   200
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  125 1157    91   242 1187   175   194  675   112    85  479   200
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   125 1157    91   242 1187   175   213  675   112    85  479   200
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.41  0.59
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1940   810
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.28  0.07  0.18 0.29  0.13  0.08 0.25  0.08  0.06 0.25  0.25
Crit Vol:          386         242             107                  340
Crit Moves:      ****        ****            ****                 ****
******************************************************************************
```

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Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                               Alternative)
******************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.283
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       26              Level Of Service:                A
******************************************************************************
*** Street Name:              Pershing Drive        Westchester Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected       Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  382   248    55  395     0     0    0     0   182    0    78
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  382   248    55  395     0     0    0     0   182    0    78
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  382   248    55  395     0     0    0     0   182    0    78
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  382   248    55  395     0     0    0     0   182    0    78
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  382   248    55  395     0     0    0     0   200    0    78
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.13  0.17  0.04 0.14  0.00  0.00 0.00  0.00  0.07 0.00  0.05
Crit Vol:           248    55                       0          100
Crit Moves:        ****  ****                               ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.719
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       81              Level Of Service:                C
******************************************************************************
*** Street Name:              Sepulveda Boulevard              Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|--------------||--------------||--------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|--------------||--------------||--------------||-------------
--| Volume Module:
Base Vol:     180 1276    60   187 1416    57    62  227    89   179  228   145
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  180 1276    60   187 1416    57    62  227    89   179  228   145
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   180 1276    60   187 1416    57    62  227    89   179  228   145
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  180 1276    60   187 1416    57    62  227    89   179  228   145
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   180 1276    60   187 1416    57    62  227    89   179  228   145
------------|--------------||--------------||--------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.44  0.56  1.00 1.22  0.78
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1975   775  1375 1681  1069
------------|--------------||--------------||--------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.13 0.31  0.04  0.14 0.34  0.04  0.05 0.11  0.11  0.13 0.14  0.14
Crit Vol:     180                472              158          179
Crit Moves:  ****               ****             ****         ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.510
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29              Level Of Service:                A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              76th/77th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|--------------||--------------||--------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|--------------||--------------||--------------||-------------
--| Volume Module:
Base Vol:      39 1417    34   115 1722   259   194   63    74    36   45    47
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   39 1417    34   115 1722   259   194   63    74    36   45    47
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    39 1417    34   115 1722   259   194   63    74    36   45    47
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39 1417    34   115 1722   259   194   63    74    36   45    47
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    39 1417    34   115 1722   259   213   63    74    36   45    47
------------|--------------||--------------||--------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|--------------||--------------||--------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.31  0.02  0.08 0.38  0.17  0.07 0.04  0.05  0.02 0.03  0.03
Crit Vol:      39                574              107                45
Crit Moves:  ****               ****             ****               ****
******************************************************************************
```

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```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.583
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       35               Level Of Service:                A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              79th/80th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      97 1279    21    37 1761   169   116   92   105    26   42    32
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   97 1279    21    37 1761   169   116   92   105    26   42    32
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    97 1279    21    37 1761   169   116   92   105    26   42    32
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   97 1279    21    37 1761   169   116   92   105    26   42    32
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    97 1279    21    37 1761   169   116   92   105    26   42    32
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.95  0.05  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.57  0.43
Final Sat.:  1500 4427    73  1500 4500  1500  1500 1500  1500  1500  851   649
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.29  0.29  0.02 0.39  0.11  0.08 0.06  0.07  0.02 0.05  0.05
Crit Vol:      97                587         116                  74
Crit Moves:  ****               ****        ****                 ****
******************************************************************************

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```



```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                    -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.528
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30               Level Of Service:                A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              83rd Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      39 1333    14    42 1790    59    49   44    37     6   35    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   39 1333    14    42 1790    59    49   44    37     6   35    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    39 1333    14    42 1790    59    49   44    37     6   35    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39 1333    14    42 1790    59    49   44    37     6   35    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    39 1333    14    42 1790    59    49   44    37     6   35    22
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.97  0.03  1.00 2.90  0.10  0.38 0.34  0.28  1.00 0.61  0.39
Final Sat.:  1500 4453    47  1500 4356   144   565  508   427  1500  921   579
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.30  0.30  0.03 0.41  0.41  0.09 0.09  0.09  0.00 0.04  0.04
Crit Vol:      39                616         130                  6
Crit Moves:  ****               ****        ****                 ****
******************************************************************************

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```

```
Baseline 2013-PM Peak
------------------------------------------------------------------------------
                      -- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                       --- Level Of Service Computation Report
                  Circular 212 Planning Method (Base Volume
                                Alternative)
******************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.346
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       28                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  104 TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      91  436     7    41  599    57    74    1   173    11    2     8
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   91  436     7    41  599    57    74    1   173    11    2     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    91  436     7    41  599    57    74    1   173    11    2     8
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   91  436     7    41  599    57    74    1   173    11    2     8
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    91  436     7    41  599    57    74    1   173    11    2     8
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 2.74  0.26  1.00 1.00  1.00  0.52 0.10  0.38
Final Sat.:  1425 2805    45  1425 3904   371  1425 1425  1425   746  136   543
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.16  0.16  0.03 0.15  0.15  0.05 0.00  0.12  0.01 0.01  0.01
Crit Vol:      91                  219                  173   11
Crit Moves:  ****                ****                 ****  ****
******************************************************************************
```

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```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                           --- Scenario Report
Scenario:             Future 2014 Without Project-AM Peak

Command:              Employee AM
Volume:               Employee AM
Geometry:             Existing
geometry Impact Fee:  Default Impact
Fee Trip Generation:  AM Peak
Trip Distribution:    Trip_am_pm
Paths:                Default
Paths Routes:         Default
Routes
Configuration:        Default Configuration
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                       --- Level Of Service Computation Report
                    Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
*** Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.575
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       54                Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                    CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     443  350    34    68  152    73    75  797   235    67 1323   110
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  443  350    34    68  152    73    75  797   235    67 1323   110
Added Vol:     39    0     0     0    5     1     0    6     0     0   57     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  482  350    34    68  157    74    75  803   235    67 1380   110
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   482  350    34    68  157    74    75  803   235    67 1380   110
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  482  350    34    68  157    74    75  803   235    67 1380   110
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   530  350    34    75  157    74    75  803   235    67 1380   110
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.82  0.18  2.00 2.00  1.00  1.00 3.09  0.91  1.00 3.70  0.30
Final Sat.:  2750 2507   243  2750 2750  1375  1375 4255  1245  1375 5094   406
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.19 0.14  0.14  0.03 0.06  0.05  0.05 0.19  0.19  0.05 0.27  0.27
Crit Vol:     265                  79           75                  373
Crit Moves:  ****                ****         ****                 ****
******************************************************************************
```

```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                     --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                   --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
******************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.609
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       58               Level Of Service:                  B
******************************************************************************
*** Street Name:       AVIATION BL.                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:             Ovl              Ovl            Include            Ovl
Min. Green:     0    0    0      0    0    0      0    0    0      0    0    0
Lanes:        2  0  2  0  1    2  0  1  1  1    2  0  2  1  0    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     140  259    83   212  129    51    46  155    49   191  534   645
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  140  259    83   212  129    51    46  155    49   191  534   645
Added Vol:     12    2     0     0    0     5     1    0     0     0   39    36
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  152  261    83   212  129    56    47  155    49   191  573   681
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   152  261    83   212  129    56    47  155    49   191  573   681
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  152  261    83   212  129    56    47  155    49   191  573   681
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   167  261    83   233  129    62    52  155    49   210  573   681
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.28  0.72  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3134   991  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.09  0.06  0.08 0.05  0.04  0.02 0.05  0.05  0.08 0.14  0.50
Crit Vol:          131            0              26                        681
Crit Moves:       ****           ****           ****                      ****
******************************************************************************
```

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```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                     --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                   --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
******************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.391
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       37               Level Of Service:                  A
******************************************************************************
*** Street Name:       AVIATION BLVD.                  111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:             Ovl              Include          Include            Ovl
Min. Green:     0    0    0      0    0    0      0    0    0      0    0    0
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     15  786    51    42  363    40    23   18    12    24   28    77
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  15  786    51    42  363    40    23   18    12    24   28    77
Added Vol:     0   39     0     0    5     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  15  825    51    42  368    40    23   18    12    24   28    77
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   15  825    51    42  368    40    23   18    12    24   28    77
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  15  825    51    42  368    40    23   18    12    24   28    77
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   15  825    51    42  368    40    23   18    12    24   28    77
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.88  0.12  1.00 1.80  0.20  1.00 0.60  0.40  1.00 1.00  1.00
Final Sat.:  1375 2590   160  1375 2480   270  1375  825   550  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.32  0.32  0.03 0.15  0.15  0.02 0.02  0.02  0.02 0.02  0.06
Crit Vol:          438            0              23                        77
Crit Moves:       ****           ****           ****                      ****
******************************************************************************
```

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```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.724
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       83                Level Of Service:                 C
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:             Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      90  156   111    54  148   584    59  527   268   249 1935   325
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   90  156   111    54  148   584    59  527   268   249 1935   325
Added Vol:      6    0     0     0    3     1     0    0     6     0   50     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   96  156   111    54  151   585    59  527   274   249 1985   325
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    96  156   111    54  151   585    59  527   274   249 1985   325
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   96  156   111    54  151   585    59  527   274   249 1985   325
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    96  156   122    54  151   644    59  527   274   249 1985   325
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.44  0.56
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4726   774
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.06  0.04  0.04 0.05  0.23  0.04 0.13  0.20  0.18 0.42  0.42
Crit Vol:      96                    322     0                   577
Crit Moves:  ****                  ****  ****                  ****
******************************************************************************

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                                ALEXANDRIA
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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.552
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       32                Level Of Service:                 A
******************************************************************************
*** Street Name:     SEPULVEDA BLVD.                   CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      0 2445    19     0  821    44     0    0     0   195   74   180
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0 2445    19     0  821    44     0    0     0   195   74   180
Added Vol:     0  119     0     0    4    30     0    0     0     9   75    13
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0 2564    19     0  825    74     0    0     0   204  149   193
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0 2564     0     0  825    74     0    0     0   204  149   193
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0 2564     0     0  825    74     0    0     0   204  149   193
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:    0 2564     0     0  825    74     0    0     0   224  149   212
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.20 0.80  2.00
Final Sat.:    0 6000  1500     0 6000  1500     0    0     0  1803 1197  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.43  0.00  0.00 0.14  0.05  0.00 0.00  0.00  0.12 0.12  0.07
Crit Vol:          641           0                   0         187
Crit Moves:       ****        ****                           ****
******************************************************************************

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.662
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43                Level Of Service:                  B
******************************************************************************
*** Street Name:    405 NORTH OFF RAMP                  CENTURY BLVD
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     572    0    72     0    0     0     5  315   389     0 1951     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  572    0    72     0    0     0     5  315   389     0 1951     0
Added Vol:     26    0     0     0    0     0     0    0     0     0   25     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  598    0    72     0    0     0     5  315   389     0 1976     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   598    0    72     0    0     0     5  315   389     0 1976     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  598    0    72     0    0     0     5  315   389     0 1976     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:   658    0    72     0    0     0     5  315   428     0 1976     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.00  2.00  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 3000  3000     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.22 0.00  0.05  0.00 0.00  0.00  0.00 0.11  0.14  0.00 0.44  0.00
Crit Vol:     329                    0           5                   659
Crit Moves:  ****                          ****                      ****
******************************************************************************
```

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.275
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31                Level Of Service:                  A
******************************************************************************
*** Street Name:      DOUGLAS STREET                  IMPERIAL HWY.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase      Protected        Protected
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      20    8    33    51   45     5    19  244   166   152  384    81
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   20    8    33    51   45     5    19  244   166   152  384    81
Added Vol:      2    0     0     0    0     0     0    0     0     0   56     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   22    8    33    51   45     5    19  244   166   152  440    81
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    22    8    33    51   45     5    19  244   166   152  440    81
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   22    8    33    51   45     5    19  244   166   152  440    81
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    22    8    36    56   45     6    19  244   166   167  440    81
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.58 0.42  1.00  1.00 2.00  1.00  2.00 2.53  0.47
Final Sat.:  1375 1375  2750  2171  579  1375  1375 2750  1375  2750 3484   641
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.01  0.01  0.03 0.08  0.00  0.01 0.09  0.12  0.06 0.13  0.13
Crit Vol:      22                    107                   166    84
Crit Moves:  ****                  ****                  ****  ****
******************************************************************************
```

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.332
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       22                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  861   710    46  282     0     0    0     0   551    0   167
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  861   710    46  282     0     0    0     0   551    0   167
Added Vol:      0    0     7     0   43     0     0    0     0   151    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  861   717    46  325     0     0    0     0   702    0   167
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  861     0    46  325     0     0    0     0   702    0   167
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  861     0    46  325     0     0    0     0   702    0   167
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  861     0    51  325     0     0    0     0   772    0   167
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0    0     0  4500    0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.00  0.02 0.07  0.00  0.00 0.00  0.00  0.17 0.00  0.11
Crit Vol:          215          25                   0          257
Crit Moves:       ****         ****                 ****
******************************************************************************
```



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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.270
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      32  105    95    41   58   171   157  304    65    28  418   305
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   32  105    95    41   58   171   157  304    65    28  418   305
Added Vol:      1    0     0     0    0     3     0    0     0     0   30     6
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   33  105    95    41   58   174   157  304    65    28  448   311
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    33  105    95    41   58   174   157  304    65    28  448   311
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   33  105    95    41   58   174   157  304    65    28  448   311
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:    36  105   104    45   58   191   173  304    72    31  448   342
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.50  1.50  2.00 1.00  2.00  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 2067  2058  2750 1375  2750  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.05  0.05  0.02 0.04  0.07  0.06 0.07  0.03  0.01 0.11  0.12
Crit Vol:      18                        96    86                        171
Crit Moves:  ****                      ****  ****                      ****
******************************************************************************
```

```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.777
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       84              Level Of Service:                  C
******************************************************************************
*** Street Name:       MAIN STREET                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Permitted       Protected
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    0  0  1! 0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     203    0   364     3    1     1     0  476    52   276  944     1
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  203    0   364     3    1     1     0  476    52   276  944     1
Added Vol:      0    0     0     0    0     0     0  122     0     0  440     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  203    0   364     3    1     1     0  598    52   276 1384     1
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   203    0     0     3    1     1     0  598    52   276 1384     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  203    0     0     3    1     1     0  598    52   276 1384     1
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   223    0     0     3    1     1     0  598    52   304 1384     1
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.60 0.20  0.20  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2850    0  1425   855  285   285  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.08 0.00  0.00  0.00 0.00  0.00  0.00 0.21  0.04  0.11 0.49  0.00
Crit Vol:     112                   5              299              692
Crit Moves:  ****                 ****            ****             ****
******************************************************************************

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.509
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       57              Level Of Service:                  A
******************************************************************************
*** Street Name:                                    PERSHING
DR./HYPERION DWY.                                  IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected        Permitted
Rights:           Include          Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  1  1  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1    0     1   304    0    41    65  223     1     9  328   811
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     1   304    0    41    65  223     1     9  328   811
Added Vol:      0    0     0   122    0     0     0    0     0     0    0   440
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1    0     1   426    0    41    65  223     1     9  328  1251
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0     1   426    0    41    65  223     1     9  328  1251
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1    0     1   426    0    41    65  223     1     9  328  1251
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     1    0     1   469    0    41    72  223     1     9  328  1376
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.50 0.00  0.50  2.00 0.00  1.00  2.00 1.99  0.01  1.00 2.00  2.00
Final Sat.:   713    0   713  2850    0  1425  2850 2837    13  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.16 0.00  0.03  0.03 0.08  0.08  0.01 0.12  0.48
Crit Vol:                   2     0             36                       688
Crit Moves:               ****  ****           ****                     ****
******************************************************************************

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.589
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       56               Level Of Service:                  A
******************************************************************************
*** Street Name:      SEPULVEDA BL.                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      62 1015   452   165 1136    12   110  125    53    73   99   191
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   62 1015   452   165 1136    12   110  125    53    73   99   191
Added Vol:     15   21     0     0    0     0     0    0     0     0   43    16
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   77 1036   452   165 1136    12   110  125    53    73  142   207
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    77 1036   452   165 1136    12   110  125    53    73  142   207
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   77 1036   452   165 1136    12   110  125    53    73  142   207
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:    77 1036   452   182 1136    12   121  125    53    80  142   207
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5443    57  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.25  0.33  0.07 0.21  0.21  0.04 0.03  0.04  0.03 0.03  0.15
Crit Vol:               452    91              61                       207
Crit Moves:            ****  ****            ****                     ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.442
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       33               Level Of Service:                  A
******************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      15    0    13   253  749   526     0  269    55    44  352     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15    0    13   253  749   526     0  269    55    44  352     0
Added Vol:      2    0     0     0    0     0     0    0     0     0   57     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   17    0    13   253  749   526     0  269    55    44  409     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17    0    13   253  749   526     0  269    55    44  409     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   17    0    13   253  749   526     0  269    55    44  409     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    17    0    14   278  749   579     0  269    55    48  409     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.56  1.44  0.00 2.49  0.51  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2222  2053     0 3549   726  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.20 0.34  0.28  0.00 0.08  0.08  0.02 0.10  0.00
Crit Vol:      17                480              108           24
Crit Moves:  ****                ****             ****         ****
******************************************************************************
```

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.622
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       49                Level Of Service:                  B
******************************************************************************
*** Street Name:        / 105 RAMP                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:             Ovl             Ovl             Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     853    0   368     0    0     0     0  212   313    84  544     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  853    0   368     0    0     0     0  212   313    84  544     0
Added Vol:     40    0     0     0    0     0     0    0     0     0   34     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  893    0   368     0    0     0     0  212   313    84  578     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   893    0   368     0    0     0     0  212   313    84  578     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  893    0   368     0    0     0     0  212   313    84  578     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:   982    0   405     0    0     0     0  212   344    92  578     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.00  2.00  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 2850  2850  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.34 0.00  0.14  0.00 0.00  0.00  0.00 0.07  0.12  0.03 0.20  0.00
Crit Vol:     491                   0              106              289
Crit Moves:  ****                                ****             ****
******************************************************************************

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.224
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                  A
******************************************************************************
*** Street Name:      405 NORTH RAMP                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Permitted
Rights:             Include         Include           Ignore          Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     204    0    26     0    0     0     0  238   197     0  545   583
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  204    0    26     0    0     0     0  238   197     0  545   583
Added Vol:      0    0     0     0    0     0     0    0     0     0   36     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  204    0    26     0    0     0     0  238   197     0  581   583
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   204    0    26     0    0     0     0  238     0     0  581     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  204    0    26     0    0     0     0  238     0     0  581     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   224    0    26     0    0     0     0  238     0     0  581     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.79 0.00  0.21  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  2554    0   296     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.00  0.09  0.00 0.00  0.00  0.00 0.06  0.00  0.00 0.14  0.00
Crit Vol:     125                   0               0                194
Crit Moves:  ****                                ****             ****
******************************************************************************

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.241
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24               Level Of Service:                A
************************************************************************
*** Street Name:     La CIENEGA BLVD.                LENNOX BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permit+Prot      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  350    32    17  194    35     0    0     0    71    0   132
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  350    32    17  194    35     0    0     0    71    0   132
Added Vol:      0    6     0     0    3     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  356    32    17  197    35     0    0     0    71    0   132
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  356    32    17  197    35     0    0     0    71    0   132
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  356    32    17  197    35     0    0     0    71    0   132
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  356    32    17  197    35     0    0     0    78    0   132
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.84  0.16  1.00 2.55  0.45  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2615   235  1425 3630   645     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.14  0.01 0.05  0.05  0.00 0.00  0.00  0.03 0.00  0.09
Crit Vol:          194          17                    0                    132
Crit Moves:       ****         ****                                      ****
************************************************************************
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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.201
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       23               Level Of Service:                A
************************************************************************
*** Street Name:     La CIENEGA BLVD.                / 111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permitted        Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     140  361     0     0  184    95    39    0    53     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  140  361     0     0  184    95    39    0    53     0    0     0
Added Vol:      0    6     0     0    3     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  140  367     0     0  187    95    39    0    53     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   140  367     0     0  187    95    39    0    53     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  140  367     0     0  187    95    39    0    53     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   140  367     0     0  187    95    43    0    53     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.00  1.00  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 2850  1425  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.13  0.00  0.00 0.07  0.07  0.02 0.00  0.04  0.00 0.00  0.00
Crit Vol:     140                94                    53           0
Crit Moves:  ****                ****                  ****
************************************************************************
```

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```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                              Alternative)
************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.466
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       35              Level Of Service:                 A
************************************************************************
*** Street Name:     La CIENEGA BLVD.                405 N/B RAPM
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:             Ovl              Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2  361    72    93  163     0     0    0     0   667    0    45
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2  361    72    93  163     0     0    0     0   667    0    45
Added Vol:      0    0     0     0    4     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2  361    72    93  167     0     0    0     0   667    0    45
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2  361    72    93  167     0     0    0     0   667    0    45
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2  361    72    93  167     0     0    0     0   667    0    45
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  361    79    93  167     0     0    0     0   734    0    45
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.88 0.00  0.12
Final Sat.:    19 2831  1425  1425 2850     0     0    0     0  2685    0   165
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.13  0.06  0.07 0.06  0.00  0.00 0.00  0.00  0.27 0.00  0.27
Crit Vol:          182          93                    0                    389
Crit Moves:       ****         ****                                      ****
************************************************************************
```

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------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                              Alternative)
************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.214
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29              Level Of Service:                 A
************************************************************************
*** Street Name:     La CIENEGA BLVD.                405 S/B RAMP
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected      Split Phase      Split Phase
Rights:           Include          Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  304    28   220  228    12     0    0     1     0    0    59
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  304    28   220  228    12     0    0     1     0    0    59
Added Vol:      0    6     0     6    3     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  310    28   226  231    12     0    0     1     0    0    59
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  310    28   226  231    12     0    0     1     0    0    59
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  310    28   226  231    12     0    0     1     0    0    59
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  310    28   249  231    12     0    0     1     0    0    65
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.83  0.17  2.00 1.90  0.10  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2522   228  2750 2614   136     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.12  0.09 0.09  0.09  0.00 0.00  0.00  0.00 0.00  0.02
Crit Vol:          169          124                    1                    0
Crit Moves:       ****         ****                 ****                 ****
************************************************************************
```

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.212
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  0  0  1    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       6  455    94    30  214     0     0    0     1    75    0    55
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6  455    94    30  214     0     0    0     1    75    0    55
Added Vol:      0    6     0     0    3     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    6  461    94    30  217     0     0    0     1    75    0    55
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     6  461    94    30  217     0     0    0     1    75    0    55
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    6  461    94    30  217     0     0    0     1    75    0    55
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     6  461    94    30  217     0     0    0     1    83    0    55
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 0.00  1.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0    0  1425  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.16  0.07  0.02 0.05  0.00  0.00 0.00  0.00  0.03 0.00  0.04
Crit Vol:          231          30                          1    41
Crit Moves:       ****         ****                      ****  ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.421
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       39                Level Of Service:                 A
******************************************************************************
*** Street Name:              Sepulveda Boulevard               La Tijera
Boulevard Approach:            North Bound       South Bound      East Bound
                 West Bound Movement:         L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      20 1004    67    22  755    31    41   55    42   171   74    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   20 1004    67    22  755    31    41   55    42   171   74    16
Added Vol:      0    5     0     0  194     0     2    0     4     3    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   20 1009    67    22  949    31    43   55    46   174   76    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    20 1009    67    22  949    31    43   55    46   174   76    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   20 1009    67    22  949    31    43   55    46   174   76    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    20 1009    67    22  949    31    43   55    46   174   76    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.65  0.35
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 2272   478
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.24  0.05  0.02 0.23  0.02  0.03 0.02  0.03  0.13 0.03  0.03
Crit Vol:          336          22                          46   174
Crit Moves:       ****         ****                       ****  ****
******************************************************************************
```

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.553
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       42                Level Of Service:                  A
******************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD               LINCOLN BOULEVARD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Permitted        Permitted        Permitted
Rights:            Include           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    1226 1238   102     0  980     8     0    0   660     0    0     4
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1226 1238   102     0  980     8     0    0   660     0    0     4
Added Vol:     13   21     0     0   76     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 1239 1259   102     0 1056     8     0    0   660     0    0     4
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1239 1259   102     0 1056     8     0    0   660     0    0     4
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1239 1259   102     0 1056     8     0    0   660     0    0     4
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1363 1259   102     0 1056     8     0    0   726     0    0     4
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.78  0.22  0.00 3.97  0.03  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3955   320     0 5657    43     0    0  5700     0    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.24 0.32  0.32  0.00 0.19  0.19  0.00 0.00  0.13  0.00 0.00  0.00
Crit Vol:     341                 266                   182     0
Crit Moves:  ****                ****                  ****  ****
******************************************************************************

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.478
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       44                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard               Manchester Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Protected        Prot+Permit
Rights:            Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      61  984    33    60  803    29    79  160    43    42  299   142
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   61  984    33    60  803    29    79  160    43    42  299   142
Added Vol:      0    7     0     0  194     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   61  991    33    60  997    29    79  160    43    42  299   142
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    61  991    33    60  997    29    79  160    43    42  299   142
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   61  991    33    60  997    29    79  160    43    42  299   142
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    61  991    33    60  997    29    87  160    43    42  299   142
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.36  0.64
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1865   885
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.24  0.02  0.04 0.24  0.02  0.03 0.06  0.03  0.03 0.16  0.16
Crit Vol:      61                 332           43                  221
Crit Moves:  ****                ****          ****                ****
******************************************************************************

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.365
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                Level Of Service:                  A
******************************************************************************
*** Street Name:               Pershing Drive        Westchester Parkway
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected         Permitted        Permitted
Rights:            Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  346   188    46  266     0     0    0     0   158    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  346   188    46  266     0     0    0     0   158    0    16
Added Vol:      0    0   135     0    0     0     0    0     0   116    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  346   323    46  266     0     0    0     0   274    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  346   323    46  266     0     0    0     0   274    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  346   323    46  266     0     0    0     0   274    0    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  346   323    46  266     0     0    0     0   301    0    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.23  0.03 0.09  0.00  0.00 0.00  0.00  0.11 0.00  0.01
Crit Vol:               323    46                    0         151
Crit Moves:             ****  ****                          ****
******************************************************************************
```

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Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.417
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       39                Level Of Service:                  A
******************************************************************************
*** Street Name:               Sepulveda Boulevard               Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:            Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     131 1085    24    63  880    57    13   52    42    60   96    81
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  131 1085    24    63  880    57    13   52    42    60   96    81
Added Vol:     16    5     0     0   74   127     0    0     0     1    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  147 1090    24    63  954   184    13   52    42    61   96    81
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   147 1090    24    63  954   184    13   52    42    61   96    81
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  147 1090    24    63  954   184    13   52    42    61   96    81
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   147 1090    24    63  954   184    13   52    42    61   96    81
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.11  0.89  1.00 1.08  0.92
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1521  1229  1375 1492  1258
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.11 0.26  0.02  0.05 0.23  0.13  0.01 0.03  0.03  0.04 0.06  0.06
Crit Vol:     147                   318              47          61
Crit Moves:  ****                  ****             ****        ****
******************************************************************************
```

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```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.417
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       25                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard               76th/77th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      17 1231     8    13  783    38   244   13    24    10    4    65
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   17 1231     8    13  783    38   244   13    24    10    4    65
Added Vol:      0    7     0     0  194     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   17 1238     8    13  977    38   244   13    24    10    4    65
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17 1238     8    13  977    38   244   13    24    10    4    65
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   17 1238     8    13  977    38   244   13    24    10    4    65
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    17 1238     8    13  977    38   268   13    24    10    4    65
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.28  0.01  0.01 0.22  0.03  0.09 0.01  0.02  0.01 0.00  0.04
Crit Vol:          413          13              134                        65
Crit Moves:       ****         ****            ****                       ****
******************************************************************************
```

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```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.331
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       22                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard               79th/80th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      24 1107     4     5  750    43    65   14    41    13   17    37
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   24 1107     4     5  750    43    65   14    41    13   17    37
Added Vol:      0    7     0     0  194     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   24 1114     4     5  944    43    65   14    41    13   17    37
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    24 1114     4     5  944    43    65   14    41    13   17    37
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   24 1114     4     5  944    43    65   14    41    13   17    37
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    24 1114     4     5  944    43    65   14    41    13   17    37
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.31  0.69
Final Sat.:  1500 4484    16  1500 4500  1500  1500 1500  1500  1500  472  1028
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.25  0.25  0.00 0.21  0.03  0.04 0.01  0.03  0.01 0.04  0.04
Crit Vol:          373           5              65                        54
Crit Moves:       ****         ****            ****                       ****
******************************************************************************
```

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```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.288
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       20                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                 83rd Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      11 1057     4     5  759    12    40    6    11     8    7    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   11 1057     4     5  759    12    40    6    11     8    7    24
Added Vol:      0    7     0     0  194     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   11 1064     4     5  953    12    40    6    11     8    7    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    11 1064     4     5  953    12    40    6    11     8    7    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   11 1064     4     5  953    12    40    6    11     8    7    24
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    11 1064     4     5  953    12    40    6    11     8    7    24
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 2.96  0.04  0.70 0.11  0.19  1.00 0.23  0.77
Final Sat.:  1500 4483    17  1500 4444    56  1053  158   289  1500  339  1161
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.24  0.24  0.00 0.21  0.21  0.04 0.04  0.04  0.01 0.02  0.02
Crit Vol:          356           5              40                   31
Crit Moves:       ****         ****            ****                 ****
******************************************************************************

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```



```
Future 2014 Without Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.185
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       23                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  104 TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    125  315     6     7  193    44     9    1    58     1    0     6
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 125  315     6     7  193    44     9    1    58     1    0     6
Added Vol:     0    6     0     0    3     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 125  321     6     7  196    44     9    1    58     1    0     6
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  125  321     6     7  196    44     9    1    58     1    0     6
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 125  321     6     7  196    44     9    1    58     1    0     6
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:  125  321     6     7  196    44     9    1    58     1    0     6
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.96  0.04  1.00 2.45  0.55  1.00 1.00  1.00  0.14 0.00  0.86
Final Sat.:  1425 2798    52  1425 3491   784  1425 1425  1425   204    0  1221
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.11  0.11  0.00 0.06  0.06  0.01 0.00  0.04  0.00 0.00  0.00
Crit Vol:     125                 80                   58     1
Crit Moves:  ****                ****                 ****  ****
******************************************************************************

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```
Future 2014 Without Project-PM Peak

------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                               --- Scenario Report
Scenario:             Future 2014 Without Project-PM Peak

Command:              Employee PM
Volume:               Employee PM
Geometry:             Existing
geometry Impact Fee:  Default Impact
Fee Trip Generation:  PM Peak
Trip Distribution:    Trip_am_pm
Paths:                Default
Paths Routes:         Default
Routes
Configuration:        Default Configuration

Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
*** Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.702
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       77                Level Of Service:                  C
******************************************************************************
*** Street Name:      AVIATION BLVD.                   CENTURY BLVD.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:           Include           Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     344  395   108    91  437    99   146 1444   371    70  859   107
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  344  395   108    91  437    99   146 1444   371    70  859   107
Added Vol:      0    5     0     0    0     0     1   92    44     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  344  400   108    91  437    99   147 1536   415    70  859   107
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   344  400   108    91  437    99   147 1536   415    70  859   107
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  344  400   108    91  437    99   147 1536   415    70  859   107
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   378  400   108   100  437    99   147 1536   415    70  859   107
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.57  0.43  2.00 2.00  1.00  1.00 3.15  0.85  1.00 3.56  0.44
Final Sat.:  2750 2165   585  2750 2750  1375  1375 4330  1170  1375 4891   609
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.18  0.18  0.04 0.16  0.07  0.11 0.35  0.35  0.05 0.18  0.18
Crit Vol:     189                219               488           70
Crit Moves:  ****               ****              ****         ****
******************************************************************************
```



```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Future Volume
                                  Alternative)
******************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.622
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       60                Level Of Service:                  B
******************************************************************************
*** Street Name:       AVIATION BL.                     IMPERIAL HWY.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:           Ovl               Ovl             Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  2  0  1    2  0  1  1  1    2  0  2  1  0    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     112  332   259   436  466   129   140  808   150   167  366   429
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  112  332   259   436  466   129   140  808   150   167  366   429
Added Vol:      0    0     0    41    2     1     5   36    12     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  112  332   259   477  468   130   145  844   162   167  366   429
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   112  332   259   477  468   130   145  844   162   167  366   429
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  112  332   259   477  468   130   145  844   162   167  366   429
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   123  332   259   525  468   143   160  844   162   184  366   429
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.52  0.48  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3461   664  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.19  0.19 0.17  0.10  0.06 0.24  0.24  0.07 0.09  0.31
Crit Vol:          166               262               335           92
Crit Moves:       ****              ****              ****         ****
******************************************************************************


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```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.500
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       46                Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                  111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:             Ovl              Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      27  717    92    72  885    75    67   56    30    72   27   105
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   27  717    92    72  885    75    67   56    30    72   27   105
Added Vol:      0    5     0     0   44     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   27  722    92    72  929    75    67   56    30    72   27   105
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    27  722    92    72  929    75    67   56    30    72   27   105
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   27  722    92    72  929    75    67   56    30    72   27   105
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    27  722    92    72  929    75    67   56    30    72   27   105
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.77  0.23  1.00 1.85  0.15  1.00 0.65  0.35  1.00 1.00  1.00
Final Sat.:  1375 2439   311  1375 2545   205  1375  895   480  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.30  0.30  0.05 0.37  0.37  0.05 0.06  0.06  0.05 0.02  0.08
Crit Vol:      27                502               86           72
Crit Moves:  ****               ****              ****         ****
******************************************************************************

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```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.897
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180                Level Of Service:                  D
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:             Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     100  274   426   412  565   342   122 1082   620    82 1158   135
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  100  274   426   412  565   342   122 1082   620    82 1158   135
Added Vol:      0    0     0     0    0     0     1   25    67     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  100  274   426   412  565   342   123 1107   687    82 1158   135
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   100  274   426   412  565   342   123 1107   687    82 1158   135
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  100  274   426   412  565   342   123 1107   687    82 1158   135
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   100  274   469   412  565   376   123 1107   687    82 1158   135
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.58  0.42
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4926   574
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.10  0.17  0.30 0.21  0.14  0.09 0.27  0.50  0.06 0.24  0.24
Crit Vol:               234   412                      687     0
Crit Moves:             ****  ****                     ****  ****
******************************************************************************

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.680
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       45              Level Of Service:                B
******************************************************************************
*** Street Name:     SEPULVEDA BLVD.                 CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 2832    24     0 2361    62     0    0     0   482   74   192
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 2832    24     0 2361    62     0    0     0   482   74   192
Added Vol:      0   41     0     0  143     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0 2873    24     0 2504    62     0    0     0   482   74   192
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 2873     0     0 2504    62     0    0     0   482   74   192
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 2873     0     0 2504    62     0    0     0   482   74   192
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:     0 2873     0     0 2504    62     0    0     0   530   74   211
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.76 0.24  2.00
Final Sat.:     0 6000  1500     0 6000  1500     0    0     0  2633  367  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.48  0.00  0.00 0.42  0.04  0.00 0.00  0.00  0.20 0.20  0.07
Crit Vol:           718           0                    0          302
Crit Moves:       ****          ****                 ****
******************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.472
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       27              Level Of Service:                A
******************************************************************************
*** Street Name:    405 NORTH OFF RAMP                CENTURY BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     388    0   249     0    0     4     5 1312   584     0  985     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  388    0   249     0    0     4     5 1312   584     0  985     0
Added Vol:      0    0     0     0    0     0     0   25     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  388    0   249     0    0     4     5 1337   584     0  985     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   388    0   249     0    0     4     5 1337   584     0  985     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  388    0   249     0    0     4     5 1337   584     0  985     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:   427    0   249     0    0     4     5 1337   642     0  985     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.70  1.30  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 4053  1947     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.00  0.17  0.00 0.00  0.00  0.00 0.33  0.33  0.00 0.22  0.00
Crit Vol:     213           0                    0          495           0
Crit Moves:  ****                 ****                 ****        ****
******************************************************************************
```

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```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.465
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43                Level Of Service:                  A
******************************************************************************
*** Street Name:      DOUGLAS STREET                  IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     126   17   245    90   34    31    43  770   101    79  355    60
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  126   17   245    90   34    31    43  770   101    79  355    60
Added Vol:      0    0     0     0    0     0     0   53     2     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  126   17   245    90   34    31    43  823   103    79  355    60
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   126   17   245    90   34    31    43  823   103    79  355    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  126   17   245    90   34    31    43  823   103    79  355    60
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   126   17   270    99   34    34    43  823   103    87  355    60
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.78 0.22  1.00  1.00 2.67  0.33  2.00 2.57  0.43
Final Sat.:  1375 1375  2750  2444  306  1375  1375 3666   459  2750 3529   596
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.01  0.10  0.04 0.11  0.02  0.03 0.22  0.22  0.03 0.10  0.10
Crit Vol:                135         153              309          43
Crit Moves:              ****        ****             ****         ****
******************************************************************************
```

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```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.506
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 1230   458   365 1417     0     0     0     0   654     0   207
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1230   458   365 1417     0     0     0     0   654     0   207
Added Vol:      0   43   158     0    0     0     0     0     0     0     0     0
PasserByVol:    0    0     0     0    0     0     0     0     0     0     0     0
Initial Fut:    0 1273   616   365 1417     0     0     0     0   654     0   207
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 1273     0   365 1417     0     0     0     0   654     0   207
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
Reduced Vol:    0 1273     0   365 1417     0     0     0     0   654     0   207
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0 1273     0   402 1417     0     0     0     0   719     0   207
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0     0     0  4500     0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.21  0.00  0.13 0.31  0.00  0.00 0.00  0.00  0.16 0.00  0.14
Crit Vol:            318         201                    0          240
Crit Moves:          ****        ****                          ****
******************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.542
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       50                Level Of Service:                 A
************************************************************************
*** Street Name:     La CIENEGA BLVD.                IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      97  163   508   278  335   279   171  833   116    42  297   191
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   97  163   508   278  335   279   171  833   116    42  297   191
Added Vol:      0    0     0     0    0     0     0   36     1     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   97  163   508   278  335   279   171  869   117    42  297   191
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    97  163   508   278  335   279   171  869   117    42  297   191
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   97  163   508   278  335   279   171  869   117    42  297   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:   107  163   559   306  335   307   188  869   129    46  297   210
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.00  2.00  2.00 1.57  1.43  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 1375  2750  2750 2153  1972  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.20  0.11 0.16  0.16  0.07 0.21  0.05  0.02 0.07  0.08
Crit Vol:                279   153                 290          23
Crit Moves:             ****  ****                ****         ****
************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.667
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       56                Level Of Service:                 B
************************************************************************
*** Street Name:       MAIN STREET                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase      Permitted        Protected
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    1  0  0  0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     149    1   393     4    0     0     0  798   253   463  510     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  149    1   393     4    0     0     0  798   253   463  510     0
Added Vol:      0    0     0     0    0     0     0  422     0     0  122     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  149    1   393     4    0     0     0 1220   253   463  632     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   149    1     0     4    0     0     0 1220   253   463  632     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  149    1     0     4    0     0     0 1220   253   463  632     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   164    1     0     4    0     0     0 1220   253   509  632     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.99 0.01  1.00  1.00 0.00  0.00  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2833   17  1425  1425    0     0  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.06  0.00  0.00 0.00  0.00  0.00 0.43  0.18  0.18 0.22  0.00
Crit Vol:      82                 4                  610          255
Crit Moves:  ****               ****                ****         ****
************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.641
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       52                Level Of Service:                  B
******************************************************************************
*** Street Name:                                      PERSHING
DR./HYPERION DWY.                                     IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected         Permitted
Rights:           Include          Include           Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  2  0  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2    0     8   682    0   154   110  362     0     0  230   447
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2    0     8   682    0   154   110  362     0     0  230   447
Added Vol:      0    0     0   422    0     0     0    0     0     0    0   122
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2    0     8  1104    0   154   110  362     0     0  230   569
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2    0     8  1104    0   154   110  362     0     0  230   569
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2    0     8  1104    0   154   110  362     0     0  230   569
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     2    0     8  1214    0   154   121  362     0     0  230   626
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425 1425  1425 1425  1425  1425 1425 1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.20 0.00  0.80  2.00 0.00  1.00  2.00 2.00  0.00  1.00 2.00  2.00
Final Sat.:   285    0  1140  2850    0  1425  2850 2850     0  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.43 0.00  0.11  0.04 0.13  0.00  0.00 0.08  0.22
Crit Vol:                 10   607                181                 115
Crit Moves:              ****  ****               ****                ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        1.105
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180                Level Of Service:                  F
******************************************************************************
*** Street Name:      SEPULVEDA BL.                    IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected         Protected         Protected
Rights:           Include          Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     118 1323   925   324 1973    19   126  234   145   136  155   333
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  118 1323   925   324 1973    19   126  234   145   136  155   333
Added Vol:      0    0     0    16   36     0     9   40     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  118 1323   925   340 2009    19   135  274   145   136  155   333
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   118 1323   925   340 2009    19   135  274   145   136  155   333
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  118 1323   925   340 2009    19   135  274   145   136  155   333
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   118 1323   925   374 2009    19   149  274   145   150  155   333
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5448    52  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.32  0.67  0.14 0.37  0.37  0.05 0.07  0.11  0.05 0.04  0.24
Crit Vol:                 925   187              74                        333
Crit Moves:               ****  ****             ****                      ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.329
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       28               Level Of Service:                 A
******************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      71    0   133     96  174   132      0  700    50    37  552     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   71    0   133     96  174   132      0  700    50    37  552     0
Added Vol:      0    0     0      0    0     0      0   54     2     0    0     0
PasserByVol:    0    0     0      0    0     0      0    0     0     0    0     0
Initial Fut:   71    0   133     96  174   132      0  754    52    37  552     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    71    0   133     96  174   132      0  754    52    37  552     0
Reduct Vol:     0    0     0      0    0     0      0    0     0     0    0     0
Reduced Vol:   71    0   133     96  174   132      0  754    52    37  552     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    71    0   146    106  174   145      0  754    52    41  552     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.64  1.36  0.00 2.81  0.19  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2333  1942     0 3999   276  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.05 0.00  0.05  0.07 0.07  0.07  0.00 0.19  0.19  0.01 0.13  0.00
Crit Vol:                73               107          269           20
Crit Moves:             ****             ****         ****          ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.565
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43               Level Of Service:                 A
******************************************************************************
*** Street Name:        / 105 RAMP                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:             Ovl              Ovl              Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     395    0   204      0    0     0      0  978   633   272  503     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  395    0   204      0    0     0      0  978   633   272  503     0
Added Vol:      0    0     0      0    0     0      0   37    40     0    0     0
PasserByVol:    0    0     0      0    0     0      0    0     0     0    0     0
Initial Fut:  395    0   204      0    0     0      0 1015   673   272  503     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   395    0   204      0    0     0      0 1015   673   272  503     0
Reduct Vol:     0    0     0      0    0     0      0    0     0     0    0     0
Reduced Vol:  395    0   204      0    0     0      0 1015   673   272  503     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:   435    0   224      0    0     0      0 1015   740   299  503     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.31  1.69  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 3296  2404  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.15 0.00  0.08  0.00 0.00  0.00  0.00 0.31  0.31  0.10 0.18  0.00
Crit Vol:     217                    0              439          150
Crit Moves:  ****                                  ****         ****
******************************************************************************
```

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```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.498
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       37               Level Of Service:                A
******************************************************************************
*** Street Name:      405 NORTH RAMP                  IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Permitted
Rights:           Include          Include          Ignore           Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     198    0   217     0    0     0     0 1439   192     0  339   215
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  198    0   217     0    0     0     0 1439   192     0  339   215
Added Vol:      0    0     0     0    0     0     0   36     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  198    0   217     0    0     0     0 1475   192     0  339   215
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   198    0   217     0    0     0     0 1475     0     0  339     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  198    0   217     0    0     0     0 1475     0     0  339     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   218    0   217     0    0     0     0 1475     0     0  339     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  1.00  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  1428    0  1422     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.15 0.00  0.15  0.00 0.00  0.00  0.00 0.35  0.00  0.00 0.08  0.00
Crit Vol:             217           0              492           0
Crit Moves:           ****                         ****        ****
******************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.384
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30               Level Of Service:                A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  LENNOX BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permitted      Permit+Prot      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  457   183   150  629     8     0    0     0    74    0    77
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  457   183   150  629     8     0    0     0    74    0    77
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1  457   183   150  629     8     0    0     0    74    0    77
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  457   183   150  629     8     0    0     0    74    0    77
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  457   183   150  629     8     0    0     0    74    0    77
PCE Adj:     4.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     4  457   183   150  629     8     0    0     0    81    0    77
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.42  0.57  1.00 2.96  0.04  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     4 2032   814  1425 4221    54     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.22 0.22  0.22  0.11 0.15  0.15  0.00 0.00  0.00  0.03 0.00  0.05
Crit Vol:           320           150                       0                 77
Crit Moves:         ****          ****                                      ****
******************************************************************************
```

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```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.389
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  / 111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     124  441     0     0  614   109   169    0   189     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  124  441     0     0  614   109   169    0   189     0    0     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  124  441     0     0  614   109   169    0   189     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   124  441     0     0  614   109   169    0   189     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  124  441     0     0  614   109   169    0   189     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   124  441     0     0  614   109   186    0   189     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.55  0.45  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 3630   645  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.15  0.00  0.00 0.17  0.17  0.07 0.00  0.13  0.00 0.00  0.00
Crit Vol:     124                  241                   189          0
Crit Moves:  ****                 ****                  ****
******************************************************************************

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.490
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 N/B RAPM
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Ovl              Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  527    75   174  576     0     0    0     0   601    0   157
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  527    75   174  576     0     0    0     0   601    0   157
Added Vol:      0    1     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1  528    75   174  576     0     0    0     0   601    0   157
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  528    75   174  576     0     0    0     0   601    0   157
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  528    75   174  576     0     0    0     0   601    0   157
PCE Adj:     2.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  528    83   174  576     0     0    0     0   661    0   157
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.62 0.00  0.38
Final Sat.:     7 2843  1425  1425 2850     0     0    0     0  2303    0   547
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.19  0.06  0.12 0.20  0.00  0.00 0.00  0.00  0.29 0.00  0.29
Crit Vol:       1                  288                   0          409
Crit Moves:  ****                 ****                  ****
******************************************************************************

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```

```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.387
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       37              Level Of Service:                 A
************************************************************************
*** Street Name:     La CIENEGA BLVD.                405 S/B RAMP
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  502    41   400  682     7     0    0     5     0    0   249
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  502    41   400  682     7     0    0     5     0    0   249
Added Vol:      0    0     0    66    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  502    41   466  682     7     0    0     5     0    0   249
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  502    41   466  682     7     0    0     5     0    0   249
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  502    41   466  682     7     0    0     5     0    0   249
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  502    41   513  682     7     0    0     5     0    0   274
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.85  0.15  2.00 1.98  0.02  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2542   208  2750 2722    28     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.20  0.20  0.19 0.25  0.25  0.00 0.00  0.00  0.00 0.00  0.10
Crit Vol:          272         256                    5           0
Crit Moves:       ****        ****                 ****        ****
************************************************************************
```



```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------
                    --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.293
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       26              Level Of Service:                 A
************************************************************************
*** Street Name:     La CIENEGA BLVD.                405 S/B RAMP
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  1! 0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       8  477    42    70  734     0     0    0     0   173    0   109
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    8  477    42    70  734     0     0    0     0   173    0   109
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    8  477    42    70  734     0     0    0     0   173    0   109
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     8  477    42    70  734     0     0    0     0   173    0   109
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    8  477    42    70  734     0     0    0     0   173    0   109
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     8  477    42    70  734     0     0    0     0   190    0   109
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 1.00  0.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0 1425     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.17  0.03  0.05 0.17  0.00  0.00 0.00  0.00  0.07 0.00  0.08
Crit Vol:          238         70                    0                    109
Crit Moves:       ****        ****                                       ****
************************************************************************
```

```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.699
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       76              Level Of Service:                  B
******************************************************************************
*** Street Name:               Sepulveda Boulevard               La Tijera
Boulevard Approach:            North Bound       South Bound      East Bound
                    West Bound Movement:         L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|--------------||--------------||--------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|--------------||--------------||--------------||-------------
--| Volume Module:
Base Vol:     130 1156   226    91 1275   105    89  314   106   247  208    93
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  130 1156   226    91 1275   105    89  314   106   247  208    93
Added Vol:      0  199     6     0    0     0     2    5     4     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  130 1355   232    91 1275   105    91  319   110   247  208    93
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   130 1355   232    91 1275   105    91  319   110   247  208    93
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  130 1355   232    91 1275   105    91  319   110   247  208    93
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   130 1355   232    91 1275   105    91  319   110   247  208    93
------------|--------------||--------------||--------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.38  0.62
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 1900   850
------------|--------------||--------------||--------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.33  0.17  0.07 0.31  0.08  0.07 0.12  0.08  0.18 0.11  0.11
Crit Vol:     130                425              160         247
Crit Moves:  ****               ****             ****        ****
******************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.845
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      120              Level Of Service:                  D
******************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD               LINCOLN BOULEVARD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|--------------||--------------||--------------||-------------
--| Control:    Protected        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|--------------||--------------||--------------||-------------
--| Volume Module:
Base Vol:    1283 1524   246     0 1744    29     0    0  1441     0    0    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1283 1524   246     0 1744    29     0    0  1441     0    0    22
Added Vol:      0   84     0     0   17     0     0    0    28     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 1283 1608   246     0 1761    29     0    0  1469     0    0    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1283 1608   246     0 1761    29     0    0  1469     0    0    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1283 1608   246     0 1761    29     0    0  1469     0    0    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1411 1608   246     0 1761    29     0    0  1616     0    0    22
------------|--------------||--------------||--------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.60  0.40  0.00 3.94  0.06  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3708   567     0 5608    92     0    0  5700     0    0  1425
------------|--------------||--------------||--------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.25 0.43  0.43  0.00 0.31  0.31  0.00 0.00  0.28  0.00 0.00  0.02
Crit Vol:     353                448                 404     0
Crit Moves:  ****               ****                ****  ****
******************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.846
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      148                Level Of Service:                 D
******************************************************************************
*** Street Name:   Sepulveda Boulevard              Manchester Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit       Protected       Prot+Permit
Rights:             Ovl             Ovl              Ovl             Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     128 1180    93   247 1211   179   198  689   114    87  489   204
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  128 1180    93   247 1211   179   198  689   114    87  489   204
Added Vol:      0  201     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  128 1381    93   247 1211   179   198  689   114    87  489   204
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   128 1381    93   247 1211   179   198  689   114    87  489   204
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  128 1381    93   247 1211   179   198  689   114    87  489   204
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   128 1381    93   247 1211   179   218  689   114    87  489   204
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.41  0.59
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1940   810
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.33  0.07  0.18 0.29  0.13  0.08 0.25  0.08  0.06 0.25  0.25
Crit Vol:           460         247              109                   347
Crit Moves:       ****        ****             ****                  ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.435
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       33                Level Of Service:                 A
******************************************************************************
*** Street Name:              Pershing Drive        Westchester Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected         Permitted        Permitted
Rights:           Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  390   253    56  403     0     0    0     0   186    0    80
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  390   253    56  403     0     0    0     0   186    0    80
Added Vol:      0    0   134     0    0     0     0    0     0   135    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  390   387    56  403     0     0    0     0   321    0    80
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  390   387    56  403     0     0    0     0   321    0    80
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  390   387    56  403     0     0    0     0   321    0    80
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  390   387    56  403     0     0    0     0   353    0    80
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.27  0.04 0.14  0.00  0.00 0.00  0.00  0.12 0.00  0.06
Crit Vol:               387    56                    0         177
Crit Moves:             ****  ****                          ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.766
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       97              Level Of Service:                C
******************************************************************************
*** Street Name:              Sepulveda Boulevard              Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     184 1302    61   191 1444    58    63  232    91   183  233   148
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  184 1302    61   191 1444    58    63  232    91   183  233   148
Added Vol:      6   78     0     0    4     0   127    0    13     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  190 1380    61   191 1448    58   190  232   104   183  233   148
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   190 1380    61   191 1448    58   190  232   104   183  233   148
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  190 1380    61   191 1448    58   190  232   104   183  233   148
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   190 1380    61   191 1448    58   190  232   104   183  233   148
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.38  0.62  1.00 1.22  0.78
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1899   851  1375 1682  1068
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.33  0.04  0.14 0.35  0.04  0.14 0.12  0.12  0.13 0.14  0.14
Crit Vol:     190                483         190                 191
Crit Moves:  ****                ****        ****                ****
******************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.547
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       32              Level Of Service:                A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              76th/77th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     40 1445    35   117 1756   264   198   64    75    37   46    48
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  40 1445    35   117 1756   264   198   64    75    37   46    48
Added Vol:     0  201     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  40 1646    35   117 1756   264   198   64    75    37   46    48
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   40 1646    35   117 1756   264   198   64    75    37   46    48
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  40 1646    35   117 1756   264   198   64    75    37   46    48
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   40 1646    35   117 1756   264   218   64    75    37   46    48
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.37  0.02  0.08 0.39  0.18  0.07 0.04  0.05  0.02 0.03  0.03
Crit Vol:          549         117              109                   46
Crit Moves:       ****        ****             ****                  ****
******************************************************************************
```

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.594
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              79th/80th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      99 1305    21    38 1796   172   118   94   107    27   43    33
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   99 1305    21    38 1796   172   118   94   107    27   43    33
Added Vol:      0  201     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   99 1506    21    38 1796   172   118   94   107    27   43    33
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    99 1506    21    38 1796   172   118   94   107    27   43    33
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   99 1506    21    38 1796   172   118   94   107    27   43    33
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    99 1506    21    38 1796   172   118   94   107    27   43    33
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.96  0.04  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.57  0.43
Final Sat.:  1500 4438    62  1500 4500  1500  1500 1500  1500  1500  849   651
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.34  0.34  0.03 0.40  0.11  0.08 0.06  0.07  0.02 0.05  0.05
Crit Vol:      99                599          118                   76
Crit Moves:  ****               ****         ****                  ****
******************************************************************************

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Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.538
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              83rd Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      40 1360    14    43 1826    60    50   45    38     6   36    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   40 1360    14    43 1826    60    50   45    38     6   36    22
Added Vol:      0  201     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   40 1561    14    43 1826    60    50   45    38     6   36    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    40 1561    14    43 1826    60    50   45    38     6   36    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   40 1561    14    43 1826    60    50   45    38     6   36    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    40 1561    14    43 1826    60    50   45    38     6   36    22
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.97  0.03  1.00 2.90  0.10  0.38 0.34  0.28  1.00 0.62  0.38
Final Sat.:  1500 4460    40  1500 4357   143   564  508   429  1500  931   569
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.35  0.35  0.03 0.42  0.42  0.09 0.09  0.09  0.00 0.04  0.04
Crit Vol:      40                629              133             6
Crit Moves:  ****               ****             ****            ****
******************************************************************************

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```

```
Future 2014 Without Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.353
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                 104 TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      93  445     7    42  611    58    75    1   176    11    2     8
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   93  445     7    42  611    58    75    1   176    11    2     8
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   93  445     7    42  611    58    75    1   176    11    2     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    93  445     7    42  611    58    75    1   176    11    2     8
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   93  445     7    42  611    58    75    1   176    11    2     8
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    93  445     7    42  611    58    75    1   176    11    2     8
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 2.74  0.26  1.00 1.00  1.00  0.52 0.10  0.38
Final Sat.:  1425 2806    44  1425 3904   371  1425 1425  1425   746  136   543
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.16  0.16  0.03 0.16  0.16  0.05 0.00  0.12  0.01 0.01  0.01
Crit Vol:      93                  223                   176    11
Crit Moves:  ****                ****                  ****  ****
******************************************************************************
```

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```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                                --- Scenario Report
Scenario:             Future 2014 With Project-AM Peak

Command:              Employee AM
Volume:               Employee AM
Geometry:             Existing
geometry Impact Fee:  Default Impact
Fee Trip Generation:  AM Peak
Trip Distribution:    Trip_am_pm
Paths:                Default
Paths Routes:         Default
Routes
Configuration:        Default Configuration
```

```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
*** Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
******************************************************************************
Cycle (sec):        100                Critical Vol./Cap. (X):        0.575
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       54                Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                   CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     443  350    34    68  152    73    75  797   235    67 1323   110
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  443  350    34    68  152    73    75  797   235    67 1323   110
Added Vol:     39    0     0     1    5     1     0   14     0     0   57     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  482  350    34    69  157    74    75  811   235    67 1380   110
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   482  350    34    69  157    74    75  811   235    67 1380   110
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  482  350    34    69  157    74    75  811   235    67 1380   110
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   530  350    34    76  157    74    75  811   235    67 1380   110
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.82  0.18  2.00 2.00  1.00  1.00 3.10  0.90  1.00 3.70  0.30
Final Sat.:  2750 2507   243  2750 2750  1375  1375 4264  1236  1375 5094   406
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.19 0.14  0.14  0.03 0.06  0.05  0.05 0.19  0.19  0.05 0.27  0.27
Crit Vol:     265                   79           75                  373
Crit Moves:  ****                 ****         ****                 ****
******************************************************************************
```

```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                     --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                  --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
******************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.685
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       72               Level Of Service:                  B
******************************************************************************
*** Street Name:       AVIATION BL.                  IMPERIAL HWY.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:             Ovl               Ovl             Include           Ovl
Min. Green:     0    0     0      0    0     0      0    0     0      0    0     0
Lanes:        2  0  2  0  1     2  0  1  1  1     2  0  2  1  0     2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     140  259    83   212  129    51    46  155    49   191  534   645
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  140  259    83   212  129    51    46  155    49   191  534   645
Added Vol:     12    5     0    50    0     5     8    0     0     0   39   135
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  152  264    83   262  129    56    54  155    49   191  573   780
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   152  264    83   262  129    56    54  155    49   191  573   780
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  152  264    83   262  129    56    54  155    49   191  573   780
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   167  264    83   288  129    62    59  155    49   210  573   780
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.28  0.72  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3134   991  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.10  0.06  0.10 0.05  0.04  0.02 0.05  0.05  0.08 0.14  0.57
Crit Vol:          132            0              30                        780
Crit Moves:       ****        ****            ****                      ****
******************************************************************************
```

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```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                     --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                  --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
******************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.483
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       44               Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:             Ovl               Include           Include           Ovl
Min. Green:     0    0     0      0    0     0      0    0     0      0    0     0
Lanes:        1  0  1  1  0     1  0  1  1  0     1  0  0  1  0     1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     15  786    51    42  363    40    23   18    12    24   28    77
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  15  786    51    42  363    40    23   18    12    24   28    77
Added Vol:     0  148     0     0    5     0    12   20    50     0    0    59
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  15  934    51    42  368    40    35   38    62    24   28   136
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   15  934    51    42  368    40    35   38    62    24   28   136
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  15  934    51    42  368    40    35   38    62    24   28   136
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   15  934    51    42  368    40    35   38    62    24   28   136
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.90  0.10  1.00 1.80  0.20  1.00 0.38  0.62  1.00 1.00  1.00
Final Sat.:  1375 2608   142  1375 2480   270  1375  522   853  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.36  0.36  0.03 0.15  0.15  0.03 0.07  0.07  0.02 0.02  0.10
Crit Vol:          493            0              35                        136
Crit Moves:       ****        ****            ****                      ****
******************************************************************************
```

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```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.724
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       83                Level Of Service:                  C
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:             Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      90  156   111    54  148   584    59  527   268   249 1935   325
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   90  156   111    54  148   584    59  527   268   249 1935   325
Added Vol:      6    0     0     0    4     1     0    0    15    34   50     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   96  156   111    54  152   585    59  527   283   283 1985   325
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    96  156   111    54  152   585    59  527   283   283 1985   325
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   96  156   111    54  152   585    59  527   283   283 1985   325
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    96  156   122    54  152   644    59  527   283   283 1985   325
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.44  0.56
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4726   774
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.06  0.04  0.04 0.06  0.23  0.04 0.13  0.21  0.21 0.42  0.42
Crit Vol:      96                    322     0                   577
Crit Moves:  ****                  ****  ****                  ****
******************************************************************************
```

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```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.552
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       32                Level Of Service:                  A
******************************************************************************
*** Street Name:     SEPULVEDA BLVD.                   CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      0 2445    19     0  821    44     0    0     0   195   74   180
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0 2445    19     0  821    44     0    0     0   195   74   180
Added Vol:     0  119     0     0   12    30     0    0     0     9   75    13
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0 2564    19     0  833    74     0    0     0   204  149   193
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0 2564     0     0  833    74     0    0     0   204  149   193
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0 2564     0     0  833    74     0    0     0   204  149   193
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:    0 2564     0     0  833    74     0    0     0   224  149   212
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.20 0.80  2.00
Final Sat.:    0 6000  1500     0 6000  1500     0    0     0  1803 1197  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.43  0.00  0.00 0.14  0.05  0.00 0.00  0.00  0.12 0.12  0.07
Crit Vol:          641           0                   0         187
Crit Moves:       ****        ****                           ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.674
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       44              Level Of Service:                B
******************************************************************************
*** Street Name:    405 NORTH OFF RAMP                CENTURY BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     572    0    72     0    0     0     5  315   389     0 1951     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  572    0    72     0    0     0     5  315   389     0 1951     0
Added Vol:     56    0     0     0    0     0     0    0     0     0   29     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  628    0    72     0    0     0     5  315   389     0 1980     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   628    0    72     0    0     0     5  315   389     0 1980     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  628    0    72     0    0     0     5  315   389     0 1980     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:   691    0    72     0    0     0     5  315   428     0 1980     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.00  2.00  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 3000  3000     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.23 0.00  0.05  0.00 0.00  0.00  0.00 0.11  0.14  0.00 0.44  0.00
Crit Vol:     345                    0           5                   660
Crit Moves:  ****                    ****                            ****
******************************************************************************
```



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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.275
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31              Level Of Service:                A
******************************************************************************
*** Street Name:      DOUGLAS STREET                  IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase      Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      20    8    33    51   45     5    19  244   166   152  384    81
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   20    8    33    51   45     5    19  244   166   152  384    81
Added Vol:      2    0     1     0    0     0     0    8     0     0   56     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   22    8    34    51   45     5    19  252   166   152  440    81
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    22    8    34    51   45     5    19  252   166   152  440    81
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   22    8    34    51   45     5    19  252   166   152  440    81
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    22    8    37    56   45     6    19  252   166   167  440    81
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.58 0.42  1.00  1.00 2.00  1.00  2.00 2.53  0.47
Final Sat.:  1375 1375  2750  2171  579  1375  1375 2750  1375  2750 3484   641
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.01  0.01  0.03 0.08  0.00  0.01 0.09  0.12  0.06 0.13  0.13
Crit Vol:      22                    107                   166    84
Crit Moves:  ****                    ****                  ****  ****
******************************************************************************
```

```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.332
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       22               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  861   710    46  282     0     0    0     0   551    0   167
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  861   710    46  282     0     0    0     0   551    0   167
Added Vol:      0    0     7     0   51     0     0    0     0   151    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  861   717    46  333     0     0    0     0   702    0   167
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  861     0    46  333     0     0    0     0   702    0   167
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  861     0    46  333     0     0    0     0   702    0   167
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  861     0    51  333     0     0    0     0   772    0   167
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0    0     0  4500    0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.00  0.02 0.07  0.00  0.00 0.00  0.00  0.17 0.00  0.11
Crit Vol:          215          25                   0          257
Crit Moves:       ****         ****                 ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.261
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31               Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      32  105    95    41   58   171   157  304    65    28  418   305
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   32  105    95    41   58   171   157  304    65    28  418   305
Added Vol:      1    0     0     0    0     3     0   21     0     0   58     6
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   33  105    95    41   58   174   157  325    65    28  476   311
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    33  105    95    41   58   174   157  325    65    28  476   311
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   33  105    95    41   58   174   157  325    65    28  476   311
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:    36  105   104    45   58   191   173  325    72    31  476   342
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.50  1.50  2.00 1.00  2.00  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 2067  2058  2750 1375  2750  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.05  0.05  0.02 0.04  0.07  0.06 0.08  0.03  0.01 0.12  0.12
Crit Vol:      18                       96    86                   159
Crit Moves:  ****                     ****  ****                 ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.777
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       84              Level Of Service:                  C
******************************************************************************
*** Street Name:       MAIN STREET                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Permitted       Protected
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    0  0  1! 0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     203    0   364     3    1     1     0  476    52   276  944     1
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  203    0   364     3    1     1     0  476    52   276  944     1
Added Vol:      0    0     0     0    0     0     0  122     0     0  440     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  203    0   364     3    1     1     0  598    52   276 1384     1
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   203    0     0     3    1     1     0  598    52   276 1384     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  203    0     0     3    1     1     0  598    52   276 1384     1
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   223    0     0     3    1     1     0  598    52   304 1384     1
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.60 0.20  0.20  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2850    0  1425   855  285   285  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.08 0.00  0.00  0.00 0.00  0.00  0.00 0.21  0.04  0.11 0.49  0.00
Crit Vol:     112                   5              299              692
Crit Moves:  ****                 ****             ****             ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.509
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       57              Level Of Service:                  A
******************************************************************************
*** Street Name:                                    PERSHING
DR./HYPERION DWY.                                  IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected         Permitted
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  1  1  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1    0     1   304    0    41    65  223     1     9  328   811
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     1   304    0    41    65  223     1     9  328   811
Added Vol:      0    0     0   122    0     0     0    0     0     0    0   440
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1    0     1   426    0    41    65  223     1     9  328  1251
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0     1   426    0    41    65  223     1     9  328  1251
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1    0     1   426    0    41    65  223     1     9  328  1251
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     1    0     1   469    0    41    72  223     1     9  328  1376
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.50 0.00  0.50  2.00 0.00  1.00  2.00 1.99  0.01  1.00 2.00  2.00
Final Sat.:   713    0   713  2850    0  1425  2850 2837    13  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.16 0.00  0.03  0.03 0.08  0.08  0.01 0.12  0.48
Crit Vol:                   2     0             36                       688
Crit Moves:               ****  ****            ****                     ****
******************************************************************************
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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.594
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       56               Level Of Service:                  A
******************************************************************************
*** Street Name:      SEPULVEDA BL.                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      62 1015   452   165 1136    12   110  125    53    73   99   191
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   62 1015   452   165 1136    12   110  125    53    73   99   191
Added Vol:     15   21     7     0    0     0     0    0     0     0   43    16
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   77 1036   459   165 1136    12   110  125    53    73  142   207
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    77 1036   459   165 1136    12   110  125    53    73  142   207
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   77 1036   459   165 1136    12   110  125    53    73  142   207
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:    77 1036   459   182 1136    12   121  125    53    80  142   207
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5443    57  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.25  0.33  0.07 0.21  0.21  0.04 0.03  0.04  0.03 0.03  0.15
Crit Vol:               459    91              61                       207
Crit Moves:            ****  ****            ****                     ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.443
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       33               Level Of Service:                  A
******************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      15    0    13   253  749   526     0  269    55    44  352     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15    0    13   253  749   526     0  269    55    44  352     0
Added Vol:      2    0     1     0    0     0     0    7     0     0   57     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   17    0    14   253  749   526     0  276    55    44  409     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17    0    14   253  749   526     0  276    55    44  409     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   17    0    14   253  749   526     0  276    55    44  409     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    17    0    15   278  749   579     0  276    55    48  409     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.56  1.44  0.00 2.50  0.50  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2222  2053     0 3565   710  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.20 0.34  0.28  0.00 0.08  0.08  0.02 0.10  0.00
Crit Vol:      17                480              110           24
Crit Moves:  ****                ****             ****          ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.666
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       56                Level Of Service:                  B
******************************************************************************
*** Street Name:         / 105 RAMP                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Permitted       Protected
Rights:             Ovl             Ovl             Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     853    0   368     0    0     0     0  212   313    84  544     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  853    0   368     0    0     0     0  212   313    84  544     0
Added Vol:    111    0     0     0    0     0     0   21    29     0   62     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  964    0   368     0    0     0     0  233   342    84  606     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   964    0   368     0    0     0     0  233   342    84  606     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  964    0   368     0    0     0     0  233   342    84  606     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:  1060    0   405     0    0     0     0  233   376    92  606     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.00  2.00  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 2850  2850  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.37 0.00  0.14  0.00 0.00  0.00  0.00 0.08  0.13  0.03 0.21  0.00
Crit Vol:     530                 0              116              303
Crit Moves:  ****                              ****             ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.234
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                  A
******************************************************************************
*** Street Name:      405 NORTH RAMP                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Permitted       Permitted
Rights:             Include         Include          Ignore          Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     204    0    26     0    0     0     0  238   197     0  545   583
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  204    0    26     0    0     0     0  238   197     0  545   583
Added Vol:     21    0     0     0    0     0     0    0    21     0   43     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  225    0    26     0    0     0     0  238   218     0  588   583
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   225    0    26     0    0     0     0  238     0     0  588     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  225    0    26     0    0     0     0  238     0     0  588     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   248    0    26     0    0     0     0  238     0     0  588     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.81 0.00  0.19  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  2579    0   271     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.00  0.10  0.00 0.00  0.00  0.00 0.06  0.00  0.00 0.14  0.00
Crit Vol:     137                 0               0              196
Crit Moves:  ****                              ****             ****
******************************************************************************
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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.241
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  LENNOX BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permit+Prot      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  350    32    17  194    35     0    0     0    71    0   132
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  350    32    17  194    35     0    0     0    71    0   132
Added Vol:      0    6     0     0   15     0     0    0     0     1    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  356    32    17  209    35     0    0     0    72    0   132
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  356    32    17  209    35     0    0     0    72    0   132
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  356    32    17  209    35     0    0     0    72    0   132
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  356    32    17  209    35     0    0     0    79    0   132
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.84  0.16  1.00 2.57  0.43  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2615   235  1425 3662   613     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.14  0.01 0.06  0.06  0.00 0.00  0.00  0.03 0.00  0.09
Crit Vol:          194          17                    0                    132
Crit Moves:       ****         ****                                      ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.258
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       25                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  / 111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permitted        Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     140  361     0     0  184    95    39    0    53     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  140  361     0     0  184    95    39    0    53     0    0     0
Added Vol:     47    6     0     0    3    12     0    0    20     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  187  367     0     0  187   107    39    0    73     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   187  367     0     0  187   107    39    0    73     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  187  367     0     0  187   107    39    0    73     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   187  367     0     0  187   107    43    0    73     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.00  1.00  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 2850  1425  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.13 0.13  0.00  0.00 0.07  0.08  0.02 0.00  0.05  0.00 0.00  0.00
Crit Vol:     187                     107                 73           0
Crit Moves:  ****                    ****                ****
******************************************************************************
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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.466
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       35                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 N/B RAPM
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted       Split Phase      Split Phase
Rights:             Ovl              Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2  361    72    93  163     0     0    0     0   667    0    45
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2  361    72    93  163     0     0    0     0   667    0    45
Added Vol:      0    0     0     0    5     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2  361    72    93  168     0     0    0     0   667    0    45
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2  361    72    93  168     0     0    0     0   667    0    45
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2  361    72    93  168     0     0    0     0   667    0    45
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  361    79    93  168     0     0    0     0   734    0    45
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.88 0.00  0.12
Final Sat.:    19 2831  1425  1425 2850     0     0    0     0  2685    0   165
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.13  0.06  0.07 0.06  0.00  0.00 0.00  0.00  0.27 0.00  0.27
Crit Vol:         182          93                    0                     389
Crit Moves:      ****         ****                                       ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.214
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  304    28   220  228    12     0    0     1     0    0    59
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  304    28   220  228    12     0    0     1     0    0    59
Added Vol:      0    6     0     6   48     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  310    28   226  276    12     0    0     1     0    0    59
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  310    28   226  276    12     0    0     1     0    0    59
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  310    28   226  276    12     0    0     1     0    0    59
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  310    28   249  276    12     0    0     1     0    0    65
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.83  0.17  2.00 1.92  0.08  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2522   228  2750 2635   115     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.12  0.09 0.10  0.10  0.00 0.00  0.00  0.00 0.00  0.02
Crit Vol:         169          124                                1           0
Crit Moves:      ****         ****                              ****        ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.269
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       25                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  0  0  1    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       6  455    94    30  214     0     0    0     1    75    0    55
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6  455    94    30  214     0     0    0     1    75    0    55
Added Vol:      0    6     0    20    3     0     0    0     0     0    0    47
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    6  461    94    50  217     0     0    0     1    75    0   102
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     6  461    94    50  217     0     0    0     1    75    0   102
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    6  461    94    50  217     0     0    0     1    75    0   102
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     6  461    94    50  217     0     0    0     1    83    0   102
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 0.00  1.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0    0  1425  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.16  0.07  0.04 0.05  0.00  0.00 0.00  0.00  0.03 0.00  0.07
Crit Vol:          231          50                      1              102
Crit Moves:       ****         ****                  ****            ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.421
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       39                Level Of Service:                 A
******************************************************************************
*** Street Name:              Sepulveda Boulevard               La Tijera
Boulevard Approach:           North Bound       South Bound      East Bound
                 West Bound Movement:         L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      20 1004    67    22  755    31    41   55    42   171   74    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   20 1004    67    22  755    31    41   55    42   171   74    16
Added Vol:      0    5     0     0  202     0     2    0     4     3    2     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   20 1009    67    22  957    31    43   55    46   174   76    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    20 1009    67    22  957    31    43   55    46   174   76    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   20 1009    67    22  957    31    43   55    46   174   76    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    20 1009    67    22  957    31    43   55    46   174   76    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.65  0.35
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 2272   478
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.24  0.05  0.02 0.23  0.02  0.03 0.02  0.03  0.13 0.03  0.03
Crit Vol:          336          22                      46   174
Crit Moves:       ****         ****                    ****  ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.555
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       42                Level Of Service:                  A
******************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD               LINCOLN BOULEVARD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Permitted        Permitted        Permitted
Rights:            Include           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    1226 1238   102     0  980     8     0    0   660     0    0     4
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1226 1238   102     0  980     8     0    0   660     0    0     4
Added Vol:     13   21     0     0   84     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 1239 1259   102     0 1064     8     0    0   660     0    0     4
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1239 1259   102     0 1064     8     0    0   660     0    0     4
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1239 1259   102     0 1064     8     0    0   660     0    0     4
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1363 1259   102     0 1064     8     0    0   726     0    0     4
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.78  0.22  0.00 3.97  0.03  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3955   320     0 5657    43     0    0  5700     0    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.24 0.32  0.32  0.00 0.19  0.19  0.00 0.00  0.13  0.00 0.00  0.00
Crit Vol:     341                 268                   182     0
Crit Moves:  ****                ****                  ****  ****
******************************************************************************

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.480
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       44                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard               Manchester Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:  Prot+Permit      Prot+Permit      Protected        Prot+Permit
Rights:            Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      61  984    33    60  803    29    79  160    43    42  299   142
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   61  984    33    60  803    29    79  160    43    42  299   142
Added Vol:      0    7     0     0  202     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   61  991    33    60 1005    29    79  160    43    42  299   142
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    61  991    33    60 1005    29    79  160    43    42  299   142
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   61  991    33    60 1005    29    79  160    43    42  299   142
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    61  991    33    60 1005    29    87  160    43    42  299   142
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.36  0.64
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1865   885
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.24  0.02  0.04 0.24  0.02  0.03 0.06  0.03  0.03 0.16  0.16
Crit Vol:      61                  335           43                  221
Crit Moves:  ****                ****          ****                ****
******************************************************************************

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.365
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                Level Of Service:                  A
******************************************************************************
*** Street Name:               Pershing Drive        Westchester Parkway
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected         Permitted        Permitted
Rights:           Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  346   188    46  266     0     0    0     0   158    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  346   188    46  266     0     0    0     0   158    0    16
Added Vol:      0    0   135     0    0     0     0    0     0   116    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  346   323    46  266     0     0    0     0   274    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  346   323    46  266     0     0    0     0   274    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  346   323    46  266     0     0    0     0   274    0    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  346   323    46  266     0     0    0     0   301    0    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.23  0.03 0.09  0.00  0.00 0.00  0.00  0.11 0.00  0.01
Crit Vol:               323    46                    0         151
Crit Moves:             ****  ****                          ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.419
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       39                Level Of Service:                  A
******************************************************************************
*** Street Name:               Sepulveda Boulevard               Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     131 1085    24    63  880    57    13   52    42    60   96    81
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  131 1085    24    63  880    57    13   52    42    60   96    81
Added Vol:     16    5     0     0   82   127     0    0     0     1    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  147 1090    24    63  962   184    13   52    42    61   96    81
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   147 1090    24    63  962   184    13   52    42    61   96    81
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  147 1090    24    63  962   184    13   52    42    61   96    81
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   147 1090    24    63  962   184    13   52    42    61   96    81
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.11  0.89  1.00 1.08  0.92
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1521  1229  1375 1492  1258
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.11 0.26  0.02  0.05 0.23  0.13  0.01 0.03  0.03  0.04 0.06  0.06
Crit Vol:     147                   321              47          61
Crit Moves:  ****                  ****             ****        ****
******************************************************************************
```

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```
Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.417
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       25               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              76th/77th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      17 1231     8    13  783    38   244   13    24    10    4    65
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   17 1231     8    13  783    38   244   13    24    10    4    65
Added Vol:      0    7     0     0  202     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   17 1238     8    13  985    38   244   13    24    10    4    65
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17 1238     8    13  985    38   244   13    24    10    4    65
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   17 1238     8    13  985    38   244   13    24    10    4    65
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    17 1238     8    13  985    38   268   13    24    10    4    65
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.28  0.01  0.01 0.22  0.03  0.09 0.01  0.02  0.01 0.00  0.04
Crit Vol:          413          13             134                        65
Crit Moves:       ****         ****           ****                       ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.331
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       22               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              79th/80th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      24 1107     4     5  750    43    65   14    41    13   17    37
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   24 1107     4     5  750    43    65   14    41    13   17    37
Added Vol:      0    7     0     0  202     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   24 1114     4     5  952    43    65   14    41    13   17    37
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    24 1114     4     5  952    43    65   14    41    13   17    37
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   24 1114     4     5  952    43    65   14    41    13   17    37
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    24 1114     4     5  952    43    65   14    41    13   17    37
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.31  0.69
Final Sat.:  1500 4484    16  1500 4500  1500  1500 1500  1500  1500  472  1028
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.25  0.25  0.00 0.21  0.03  0.04 0.01  0.03  0.01 0.04  0.04
Crit Vol:          373           5              65                        54
Crit Moves:       ****         ****           ****                       ****
******************************************************************************
```

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.288
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       20               Level Of Service:                A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                83rd Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      11 1057     4     5  759    12    40    6    11     8    7    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   11 1057     4     5  759    12    40    6    11     8    7    24
Added Vol:      0    7     0     0  202     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   11 1064     4     5  961    12    40    6    11     8    7    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    11 1064     4     5  961    12    40    6    11     8    7    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   11 1064     4     5  961    12    40    6    11     8    7    24
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    11 1064     4     5  961    12    40    6    11     8    7    24
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 2.96  0.04  0.70 0.11  0.19  1.00 0.23  0.77
Final Sat.:  1500 4483    17  1500 4445    55  1053  158   289  1500  339  1161
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.24  0.24  0.00 0.22  0.22  0.04 0.04  0.04  0.01 0.02  0.02
Crit Vol:          356           5              40                   31
Crit Moves:       ****         ****           ****                 ****
******************************************************************************

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Future 2014 With Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.265
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       25               Level Of Service:                A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                104 TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    125  315     6     7  193    44     9    1    58     1    0     6
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 125  315     6     7  193    44     9    1    58     1    0     6
Added Vol:     0    6     0     0   48     0     0    0    98     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 125  321     6     7  241    44     9    1   156     1    0     6
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  125  321     6     7  241    44     9    1   156     1    0     6
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 125  321     6     7  241    44     9    1   156     1    0     6
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:  125  321     6     7  241    44     9    1   156     1    0     6
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.96  0.04  1.00 2.54  0.46  1.00 1.00  1.00  0.14 0.00  0.86
Final Sat.:  1425 2798    52  1425 3615   660  1425 1425  1425   204    0  1221
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.11  0.11  0.00 0.07  0.07  0.01 0.00  0.11  0.00 0.00  0.00
Crit Vol:     125                95                   156     1
Crit Moves:  ****                ****                 ****  ****
******************************************************************************

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```

```
Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                             --- Scenario Report
Scenario:             Future 2014 With Project-PM Peak

Command:              Employee PM
Volume:               Employee PM
Geometry:             Existing
geometry Impact Fee:  Default Impact
Fee Trip Generation:  PM Peak
Trip Distribution:    Trip_am_pm
Paths:                Default
Paths Routes:         Default
Routes
Configuration:        Default Configuration

Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
     Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
*** Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.705
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       77                Level Of Service:                  C
******************************************************************************
*** Street Name:      AVIATION BLVD.                    CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     344  395   108    91  437    99   146 1444   371    70  859   107
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  344  395   108    91  437    99   146 1444   371    70  859   107
Added Vol:      8    6     5     0    0     0     1   92    44     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  352  401   113    91  437    99   147 1536   415    70  859   107
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   352  401   113    91  437    99   147 1536   415    70  859   107
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  352  401   113    91  437    99   147 1536   415    70  859   107
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   387  401   113   100  437    99   147 1536   415    70  859   107
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.56  0.44  2.00 2.00  1.00  1.00 3.15  0.85  1.00 3.56  0.44
Final Sat.:  2750 2145   605  2750 2750  1375  1375 4330  1170  1375 4891   609
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.19  0.19  0.04 0.16  0.07  0.11 0.35  0.35  0.05 0.18  0.18
Crit Vol:     194                219              488           70
Crit Moves:  ****               ****             ****          ****
******************************************************************************
```



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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                  Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.643
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       64                Level Of Service:                  B
******************************************************************************
*** Street Name:       AVIATION BL.                      IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Ovl              Ovl            Include            Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  2  0  1    2  0  1  1  1    2  0  2  1  0    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     112  332   259   436  466   129   140  808   150   167  366   429
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  112  332   259   436  466   129   140  808   150   167  366   429
Added Vol:      0    0     0    91    2     1     5   36    12     3    7    50
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  112  332   259   527  468   130   145  844   162   170  373   479
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   112  332   259   527  468   130   145  844   162   170  373   479
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  112  332   259   527  468   130   145  844   162   170  373   479
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   123  332   259   580  468   143   160  844   162   187  373   479
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.52  0.48  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3461   664  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.19  0.21 0.17  0.10  0.06 0.24  0.24  0.07 0.09  0.35
Crit Vol:     166              290              335            94
Crit Moves:  ****             ****             ****          ****
******************************************************************************


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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.551
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       51                Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                  111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:             Ovl              Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      27  717    92    72  885    75    67   56    30    72   27   105
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   27  717    92    72  885    75    67   56    30    72   27   105
Added Vol:      0   55     0     0   44     0    12   20    50     0    0    46
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   27  772    92    72  929    75    79   76    80    72   27   151
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    27  772    92    72  929    75    79   76    80    72   27   151
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   27  772    92    72  929    75    79   76    80    72   27   151
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    27  772    92    72  929    75    79   76    80    72   27   151
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.79  0.21  1.00 1.85  0.15  1.00 0.49  0.51  1.00 1.00  1.00
Final Sat.:  1375 2457   293  1375 2545   205  1375  670   705  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.31  0.31  0.05 0.37  0.37  0.06 0.11  0.11  0.05 0.02  0.11
Crit Vol:      27                502              156           72
Crit Moves:  ****              ****             ****          ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.897
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180                Level Of Service:                  D
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:             Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     100  274   426   412  565   342   122 1082   620    82 1158   135
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  100  274   426   412  565   342   122 1082   620    82 1158   135
Added Vol:      0    0     0     0    0     0     2   29    67     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  100  274   426   412  565   342   124 1111   687    82 1158   135
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   100  274   426   412  565   342   124 1111   687    82 1158   135
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  100  274   426   412  565   342   124 1111   687    82 1158   135
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   100  274   469   412  565   376   124 1111   687    82 1158   135
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.58  0.42
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4926   574
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.10  0.17  0.30 0.21  0.14  0.09 0.27  0.50  0.06 0.24  0.24
Crit Vol:               234   412                       687     0
Crit Moves:             ****  ****                      ****  ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
******************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.680
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       45               Level Of Service:                B
******************************************************************************
*** Street Name:     SEPULVEDA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 2832    24     0 2361    62     0    0     0   482   74   192
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 2832    24     0 2361    62     0    0     0   482   74   192
Added Vol:      0   41     0     0  143     0     0    0     0     0    0     8
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0 2873    24     0 2504    62     0    0     0   482   74   200
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 2873     0     0 2504    62     0    0     0   482   74   200
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 2873     0     0 2504    62     0    0     0   482   74   200
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:     0 2873     0     0 2504    62     0    0     0   530   74   220
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.76 0.24  2.00
Final Sat.:     0 6000  1500     0 6000  1500     0    0     0  2633  367  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.48  0.00  0.00 0.42  0.04  0.00 0.00  0.00  0.20 0.20  0.07
Crit Vol:          718            0                      0          302
Crit Moves:       ****           ****                    ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
******************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.473
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       27               Level Of Service:                A
******************************************************************************
*** Street Name:    405 NORTH OFF RAMP                  CENTURY BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     388    0   249     0    0     4     5 1312   584     0  985     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  388    0   249     0    0     4     5 1312   584     0  985     0
Added Vol:      0    0     0     0    0     0     0   29     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  388    0   249     0    0     4     5 1341   584     0  985     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   388    0   249     0    0     4     5 1341   584     0  985     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  388    0   249     0    0     4     5 1341   584     0  985     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:   427    0   249     0    0     4     5 1341   642     0  985     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.70  1.30  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 4057  1943     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.00  0.17  0.00 0.00  0.00  0.00 0.33  0.33  0.00 0.22  0.00
Crit Vol:     213            0                      496            0
Crit Moves:  ****           ****                   ****           ****
******************************************************************************
```

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
******************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.466
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43              Level Of Service:                  A
******************************************************************************
*** Street Name:      DOUGLAS STREET                  IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase      Protected        Protected
Rights:          Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     126   17   245    90   34    31    43  770   101    79  355    60
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  126   17   245    90   34    31    43  770   101    79  355    60
Added Vol:      0    0     0     0    0     0     0   53     2     1    8     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  126   17   245    90   34    31    43  823   103    80  363    60
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   126   17   245    90   34    31    43  823   103    80  363    60
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  126   17   245    90   34    31    43  823   103    80  363    60
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   126   17   270    99   34    34    43  823   103    88  363    60
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.78 0.22  1.00  1.00 2.67  0.33  2.00 2.57  0.43
Final Sat.:  1375 1375  2750  2444  306  1375  1375 3666   459  2750 3540   585
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.01  0.10  0.04 0.11  0.02  0.03 0.22  0.22  0.03 0.10  0.10
Crit Vol:                135         153              309          44
Crit Moves:              ****        ****             ****         ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
******************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.507
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29              Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 1230   458   365 1417     0     0     0     0   654     0   207
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1230   458   365 1417     0     0     0     0   654     0   207
Added Vol:      0   51   158     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0 1281   616   365 1417     0     0    0     0   654     0   207
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 1281     0   365 1417     0     0    0     0   654     0   207
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 1281     0   365 1417     0     0    0     0   654     0   207
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0 1281     0   402 1417     0     0    0     0   719     0   207
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0    0     0  4500     0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.21  0.00  0.13 0.31  0.00  0.00 0.00  0.00  0.16 0.00  0.14
Crit Vol:            320         201                    0          240
Crit Moves:          ****        ****                   ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.561
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       52                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                 IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      97  163   508   278  335   279   171  833   116    42  297   191
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   97  163   508   278  335   279   171  833   116    42  297   191
Added Vol:      0    0     0    34    0    52     0   57     1     0   21     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   97  163   508   312  335   331   171  890   117    42  318   191
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    97  163   508   312  335   331   171  890   117    42  318   191
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   97  163   508   312  335   331   171  890   117    42  318   191
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:   107  163   559   343  335   364   188  890   129    46  318   210
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.00  2.00  2.00 1.44  1.56  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 1375  2750  2750 1977  2148  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.20  0.12 0.17  0.17  0.07 0.22  0.05  0.02 0.08  0.08
Crit Vol:                279   172                297          23
Crit Moves:             ****  ****               ****         ****
******************************************************************************

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.667
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       56                Level Of Service:                  B
******************************************************************************
*** Street Name:       MAIN STREET                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Protected
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    1  0  0  0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     149    1   393     4    0     0     0  798   253   463  510     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  149    1   393     4    0     0     0  798   253   463  510     0
Added Vol:      0    0     0     0    0     0     0  422     0     0  122     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  149    1   393     4    0     0     0 1220   253   463  632     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   149    1     0     4    0     0     0 1220   253   463  632     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  149    1     0     4    0     0     0 1220   253   463  632     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   164    1     0     4    0     0     0 1220   253   509  632     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.99 0.01  1.00  1.00 0.00  0.00  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2833   17  1425  1425    0     0  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.06  0.00  0.00 0.00  0.00  0.00 0.43  0.18  0.18 0.22  0.00
Crit Vol:      82                4                  610          255
Crit Moves:  ****              ****               ****         ****
******************************************************************************

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.641
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       52                Level Of Service:                  B
******************************************************************************
*** Street Name:                                      PERSHING
DR./HYPERION DWY.                                     IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected         Permitted
Rights:           Include          Include           Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  2  0  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2    0     8   682    0   154   110  362     0     0  230   447
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2    0     8   682    0   154   110  362     0     0  230   447
Added Vol:      0    0     0   422    0     0     0    0     0     0    0   122
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2    0     8  1104    0   154   110  362     0     0  230   569
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2    0     8  1104    0   154   110  362     0     0  230   569
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2    0     8  1104    0   154   110  362     0     0  230   569
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     2    0     8  1214    0   154   121  362     0     0  230   626
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425 1425  1425 1425 1425  1425 1425 1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.20 0.00  0.80  2.00 0.00  1.00  2.00 2.00  0.00  1.00 2.00  2.00
Final Sat.:   285    0  1140  2850    0  1425  2850 2850     0  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.43 0.00  0.11  0.04 0.13  0.00  0.00 0.08  0.22
Crit Vol:                 10   607                181              115
Crit Moves:              ****  ****              ****             ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        1.105
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180                Level Of Service:                  F
******************************************************************************
*** Street Name:      SEPULVEDA BL.                    IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected         Protected         Protected
Rights:           Include          Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     118 1323   925   324 1973    19   126  234   145   136  155   333
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  118 1323   925   324 1973    19   126  234   145   136  155   333
Added Vol:      0    0     0    16   36     0     9   40     0     7    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  118 1323   925   340 2009    19   135  274   145   143  155   333
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   118 1323   925   340 2009    19   135  274   145   143  155   333
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  118 1323   925   340 2009    19   135  274   145   143  155   333
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   118 1323   925   374 2009    19   149  274   145   157  155   333
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5448    52  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.32  0.67  0.14 0.37  0.37  0.05 0.07  0.11  0.06 0.04  0.24
Crit Vol:                 925   187              74                       333
Crit Moves:               ****  ****             ****                     ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.329
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       28               Level Of Service:                 A
******************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      71    0   133    96  174   132     0  700    50    37  552     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   71    0   133    96  174   132     0  700    50    37  552     0
Added Vol:      0    0     0     0    0     0     0   54     2     1    7     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   71    0   133    96  174   132     0  754    52    38  559     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    71    0   133    96  174   132     0  754    52    38  559     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   71    0   133    96  174   132     0  754    52    38  559     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    71    0   146   106  174   145     0  754    52    42  559     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.64  1.36  0.00 2.81  0.19  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2333  1942     0 3999   276  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.05 0.00  0.05  0.07 0.07  0.07  0.00 0.19  0.19  0.01 0.13  0.00
Crit Vol:                73              107         269          21
Crit Moves:             ****            ****        ****         ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.602
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       47               Level Of Service:                 B
******************************************************************************
*** Street Name:        / 105 RAMP                IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:             Ovl              Ovl              Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     395    0   204     0    0     0     0  978   633   272  503     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  395    0   204     0    0     0     0  978   633   272  503     0
Added Vol:     29    0     0     0    0     0     0   58    69    42   31     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  424    0   204     0    0     0     0 1036   702   314  534     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   424    0   204     0    0     0     0 1036   702   314  534     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  424    0   204     0    0     0     0 1036   702   314  534     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:   466    0   224     0    0     0     0 1036   772   345  534     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.29  1.71  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 3266  2434  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.16 0.00  0.08  0.00 0.00  0.00  0.00 0.32  0.32  0.12 0.19  0.00
Crit Vol:     233                    0              452          173
Crit Moves:  ****                                  ****         ****
******************************************************************************
```

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.507
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       38                Level Of Service:                 A
******************************************************************************
*** Street Name:      405 NORTH RAMP                   IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Permitted        Permitted
Rights:           Include          Include          Ignore           Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     198    0   217     0    0     0     0 1439   192     0  339   215
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  198    0   217     0    0     0     0 1439   192     0  339   215
Added Vol:     21    0     0     0    0     0     0   43    49     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  219    0   217     0    0     0     0 1482   241     0  339   215
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   219    0   217     0    0     0     0 1482     0     0  339     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  219    0   217     0    0     0     0 1482     0     0  339     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   241    0   217     0    0     0     0 1482     0     0  339     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.05 xxxx  0.95  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  1499    0  1351     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.16 0.00  0.16  0.00 0.00  0.00  0.00 0.35  0.00  0.00 0.08  0.00
Crit Vol:     229                    0              494           0
Crit Moves:  ****                                 ****        ****
******************************************************************************
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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.384
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  LENNOX BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permitted      Permit+Prot      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  457   183   150  629     8     0    0     0    74    0    77
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  457   183   150  629     8     0    0     0    74    0    77
Added Vol:      0    0     0     0  140     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1  457   183   150  769     8     0    0     0    74    0    77
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  457   183   150  769     8     0    0     0    74    0    77
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  457   183   150  769     8     0    0     0    74    0    77
PCE Adj:     4.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     4  457   183   150  769     8     0    0     0    81    0    77
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.42  0.57  1.00 2.97  0.03  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     4 2032   814  1425 4231    44     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.22 0.22  0.22  0.11 0.18  0.18  0.00 0.00  0.00  0.03 0.00  0.05
Crit Vol:          320         150                    0                    77
Crit Moves:       ****        ****                                      ****
******************************************************************************
```

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
******************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.450
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       34                 Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  / 111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     124  441     0     0  614   109   169    0   189     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  124  441     0     0  614   109   169    0   189     0    0     0
Added Vol:     20    0     0     0  114    26     0    0    20     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  144  441     0     0  728   135   169    0   209     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   144  441     0     0  728   135   169    0   209     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  144  441     0     0  728   135   169    0   209     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   144  441     0     0  728   135   186    0   209     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.53  0.47  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 3606   669  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.15  0.00  0.00 0.20  0.20  0.07 0.00  0.15  0.00 0.00  0.00
Crit Vol:     144                  288                   209          0
Crit Moves:  ****                 ****                  ****
******************************************************************************
```

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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
******************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.490
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36                 Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 N/B RAPM
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:              Ovl            Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  527    75   174  576     0     0    0     0   601    0   157
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  527    75   174  576     0     0    0     0   601    0   157
Added Vol:      0    2     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1  529    75   174  576     0     0    0     0   601    0   157
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  529    75   174  576     0     0    0     0   601    0   157
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  529    75   174  576     0     0    0     0   601    0   157
PCE Adj:     2.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  529    83   174  576     0     0    0     0   661    0   157
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.62 0.00  0.38
Final Sat.:     7 2843  1425  1425 2850     0     0    0     0  2303    0   547
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.19  0.06  0.12 0.20  0.00  0.00 0.00  0.00  0.29 0.00  0.29
Crit Vol:       1                  288                   0          409
Crit Moves:  ****                 ****                  ****
******************************************************************************
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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.387
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       37                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  502    41   400  682     7     0    0     5     0    0   249
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  502    41   400  682     7     0    0     5     0    0   249
Added Vol:      0    0     0    66    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  502    41   466  682     7     0    0     5     0    0   249
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  502    41   466  682     7     0    0     5     0    0   249
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  502    41   466  682     7     0    0     5     0    0   249
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  502    41   513  682     7     0    0     5     0    0   274
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.85  0.15  2.00 1.98  0.02  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2542   208  2750 2722    28     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.20  0.20  0.19 0.25  0.25  0.00 0.00  0.00  0.00 0.00  0.10
Crit Vol:          272         256                      5           0
Crit Moves:       ****        ****                   ****        ****
******************************************************************************
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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.340
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       28                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  1! 0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       8  477    42    70  734     0     0    0     0   173    0   109
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    8  477    42    70  734     0     0    0     0   173    0   109
Added Vol:      0    0     0    47   86     0     0    0     0     0    0    20
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    8  477    42   117  820     0     0    0     0   173    0   129
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     8  477    42   117  820     0     0    0     0   173    0   129
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    8  477    42   117  820     0     0    0     0   173    0   129
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     8  477    42   117  820     0     0    0     0   190    0   129
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 1.00  0.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0 1425     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.17  0.03  0.08 0.19  0.00  0.00 0.00  0.00  0.07 0.00  0.09
Crit Vol:          238         117                      0                   129
Crit Moves:       ****        ****                                         ****
******************************************************************************
```

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.699
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       76               Level Of Service:                B
******************************************************************************
*** Street Name:               Sepulveda Boulevard               La Tijera
Boulevard Approach:            North Bound       South Bound      East Bound
                    West Bound Movement:         L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||------------
--| Volume Module:
Base Vol:     130 1156   226    91 1275   105    89  314   106   247  208    93
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  130 1156   226    91 1275   105    89  314   106   247  208    93
Added Vol:      0  207     6     0    0     0     2    5     4     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  130 1363   232    91 1275   105    91  319   110   247  208    93
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   130 1363   232    91 1275   105    91  319   110   247  208    93
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  130 1363   232    91 1275   105    91  319   110   247  208    93
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   130 1363   232    91 1275   105    91  319   110   247  208    93
------------|---------------||---------------||---------------||------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.38  0.62
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 1900   850
------------|---------------||---------------||---------------||------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.33  0.17  0.07 0.31  0.08  0.07 0.12  0.08  0.18 0.11  0.11
Crit Vol:     130                425              160         247
Crit Moves:  ****               ****             ****        ****
******************************************************************************
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------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.845
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      120               Level Of Service:                D
******************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD               LINCOLN BOULEVARD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||------------
--| Control:    Protected        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|---------------||---------------||---------------||------------
--| Volume Module:
Base Vol:    1283 1524   246     0 1744    29     0    0  1441     0    0    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1283 1524   246     0 1744    29     0    0  1441     0    0    22
Added Vol:      0   92     0     0   17     0     0    0    28     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 1283 1616   246     0 1761    29     0    0  1469     0    0    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1283 1616   246     0 1761    29     0    0  1469     0    0    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1283 1616   246     0 1761    29     0    0  1469     0    0    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1411 1616   246     0 1761    29     0    0  1616     0    0    22
------------|---------------||---------------||---------------||------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.60  0.40  0.00 3.94  0.06  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3710   565     0 5608    92     0    0  5700     0    0  1425
------------|---------------||---------------||---------------||------------
--| Capacity Analysis Module:
Vol/Sat:     0.25 0.44  0.44  0.00 0.31  0.31  0.00 0.00  0.28  0.00 0.00  0.02
Crit Vol:     353                448                404     0
Crit Moves:  ****               ****               ****  ****
******************************************************************************
```

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.848
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      150                Level Of Service:                 D
******************************************************************************
*** Street Name:   Sepulveda Boulevard              Manchester Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit       Protected       Prot+Permit
Rights:             Ovl             Ovl              Ovl             Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     128 1180    93   247 1211   179   198  689   114    87  489   204
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  128 1180    93   247 1211   179   198  689   114    87  489   204
Added Vol:      0  209     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  128 1389    93   247 1211   179   198  689   114    87  489   204
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   128 1389    93   247 1211   179   198  689   114    87  489   204
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  128 1389    93   247 1211   179   198  689   114    87  489   204
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   128 1389    93   247 1211   179   218  689   114    87  489   204
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.41  0.59
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1940   810
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.34  0.07  0.18 0.29  0.13  0.08 0.25  0.08  0.06 0.25  0.25
Crit Vol:          463         247              109                   347
Crit Moves:       ****        ****             ****                  ****
******************************************************************************

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.435
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       33                Level Of Service:                 A
******************************************************************************
*** Street Name:               Pershing Drive        Westchester Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected         Permitted         Permitted
Rights:           Include         Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  390   253    56  403     0     0    0     0   186    0    80
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  390   253    56  403     0     0    0     0   186    0    80
Added Vol:      0    0   134     0    0     0     0    0     0   135    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  390   387    56  403     0     0    0     0   321    0    80
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  390   387    56  403     0     0    0     0   321    0    80
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  390   387    56  403     0     0    0     0   321    0    80
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  390   387    56  403     0     0    0     0   353    0    80
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.27  0.04 0.14  0.00  0.00 0.00  0.00  0.12 0.00  0.06
Crit Vol:               387    56                      0          177
Crit Moves:             ****  ****                               ****
******************************************************************************

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.766
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       97              Level Of Service:                C
******************************************************************************
*** Street Name:               Sepulveda Boulevard               Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     184 1302    61   191 1444    58    63  232    91   183  233   148
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  184 1302    61   191 1444    58    63  232    91   183  233   148
Added Vol:      6   86     0     0    4     0   127    0    13     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  190 1388    61   191 1448    58   190  232   104   183  233   148
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   190 1388    61   191 1448    58   190  232   104   183  233   148
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  190 1388    61   191 1448    58   190  232   104   183  233   148
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   190 1388    61   191 1448    58   190  232   104   183  233   148
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.38  0.62  1.00 1.22  0.78
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1899   851  1375 1682  1068
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.34  0.04  0.14 0.35  0.04  0.14 0.12  0.12  0.13 0.14  0.14
Crit Vol:     190                483         190                  191
Crit Moves:  ****                ****        ****                 ****
******************************************************************************
```

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.549
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       32              Level Of Service:                A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              76th/77th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     40 1445    35   117 1756   264   198   64    75    37   46    48
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  40 1445    35   117 1756   264   198   64    75    37   46    48
Added Vol:     0  209     0     0    0     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  40 1654    35   117 1756   264   198   64    75    37   46    48
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   40 1654    35   117 1756   264   198   64    75    37   46    48
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  40 1654    35   117 1756   264   198   64    75    37   46    48
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   40 1654    35   117 1756   264   218   64    75    37   46    48
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.37  0.02  0.08 0.39  0.18  0.07 0.04  0.05  0.02 0.03  0.03
Crit Vol:           551         117              109                   46
Crit Moves:       ****        ****             ****                  ****
******************************************************************************
```

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```
Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.594
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard               79th/80th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      99 1305    21    38 1796   172   118   94   107    27   43    33
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   99 1305    21    38 1796   172   118   94   107    27   43    33
Added Vol:      0  209     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   99 1514    21    38 1796   172   118   94   107    27   43    33
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    99 1514    21    38 1796   172   118   94   107    27   43    33
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   99 1514    21    38 1796   172   118   94   107    27   43    33
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    99 1514    21    38 1796   172   118   94   107    27   43    33
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.96  0.04  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.57  0.43
Final Sat.:  1500 4438    62  1500 4500  1500  1500 1500  1500  1500  849   651
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.34  0.34  0.03 0.40  0.11  0.08 0.06  0.07  0.02 0.05  0.05
Crit Vol:      99                599          118                   76
Crit Moves:  ****                ****         ****                  ****
******************************************************************************

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.538
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31               Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                83rd Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      40 1360    14    43 1826    60    50   45    38     6   36    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   40 1360    14    43 1826    60    50   45    38     6   36    22
Added Vol:      0  209     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   40 1569    14    43 1826    60    50   45    38     6   36    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    40 1569    14    43 1826    60    50   45    38     6   36    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   40 1569    14    43 1826    60    50   45    38     6   36    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    40 1569    14    43 1826    60    50   45    38     6   36    22
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.97  0.03  1.00 2.90  0.10  0.38 0.34  0.28  1.00 0.62  0.38
Final Sat.:  1500 4460    40  1500 4357   143   564  508   429  1500  931   569
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.35  0.35  0.03 0.42  0.42  0.09 0.09  0.09  0.00 0.04  0.04
Crit Vol:      40                629              133             6
Crit Moves:  ****                ****             ****            ****
******************************************************************************

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Future 2014 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.361
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                 104 TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      93  445     7    42  611    58    75    1   176    11    2     8
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   93  445     7    42  611    58    75    1   176    11    2     8
Added Vol:      0    0     0     0    0     0     0    0    12     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   93  445     7    42  611    58    75    1   188    11    2     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    93  445     7    42  611    58    75    1   188    11    2     8
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   93  445     7    42  611    58    75    1   188    11    2     8
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    93  445     7    42  611    58    75    1   188    11    2     8
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 2.74  0.26  1.00 1.00  1.00  0.52 0.10  0.38
Final Sat.:  1425 2806    44  1425 3904   371  1425 1425  1425   746  136   543
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.16  0.16  0.03 0.16  0.16  0.05 0.00  0.13  0.01 0.01  0.01
Crit Vol:      93                  223                   188    11
Crit Moves:  ****                ****                  ****  ****
******************************************************************************
```

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```
Baseline 2013 plus Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                                --- Scenario Report
Scenario:             Baseline 2013 plus Project-AM Peak

Command:              Employee AM
Volume:               Employee AM
Geometry:             Existing
geometry Impact Fee:  Default Impact
Fee Trip Generation:  AM Peak
Trip Distribution:    Trip_am_pm
Paths:                Default
Paths Routes:         Default
Routes
Configuration:        Default Configuration
```

```
Baseline 2013 plus Project-AM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
*** Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.537
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       49                Level Of Service:                  A
******************************************************************************
*** Street Name:      AVIATION BLVD.                   CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     434  343    33    67  149    72    74  781   230    66 1297   108
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  434  343    33    67  149    72    74  781   230    66 1297   108
Added Vol:      0    0     0     2    0     0     0   11     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  434  343    33    69  149    72    74  792   230    66 1297   108
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   434  343    33    69  149    72    74  792   230    66 1297   108
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  434  343    33    69  149    72    74  792   230    66 1297   108
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   477  343    33    76  149    72    74  792   230    66 1297   108
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.82  0.18  2.00 2.00  1.00  1.00 3.10  0.90  1.00 3.69  0.31
Final Sat.:  2750 2509   241  2750 2750  1375  1375 4262  1238  1375 5077   423
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.17 0.14  0.14  0.03 0.05  0.05  0.05 0.19  0.19  0.05 0.26  0.26
Crit Vol:     239                  75           74                   351
Crit Moves:  ****                ****         ****                 ****
******************************************************************************
```

```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                     --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                   --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
********************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.710
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       79               Level Of Service:                  C
********************************************************************************
*** Street Name:       AVIATION BL.                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:             Ovl              Ovl              Include          Ovl
Min. Green:     0    0    0      0    0    0      0    0    0      0    0    0
Lanes:        2  0  2  0  1    2  0  1  1  1    2  0  2  1  0    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     137  254    81   208  126    50    45  152    48   187  524   632
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  137  254    81   208  126    50    45  152    48   187  524   632
Added Vol:      0    4     0   115    0     0    11    0     0     0    0   185
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  137  258    81   323  126    50    56  152    48   187  524   817
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   137  258    81   323  126    50    56  152    48   187  524   817
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  137  258    81   323  126    50    56  152    48   187  524   817
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   151  258    81   355  126    55    62  152    48   206  524   817
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.28  0.72  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3135   990  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.05 0.09  0.06  0.13 0.05  0.04  0.02 0.05  0.05  0.07 0.13  0.59
Crit Vol:          129            0              31                        817
Crit Moves:       ****           ****           ****                      ****
********************************************************************************

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```



```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                     --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                   --- Level Of Service Computation Report
              Circular 212 Planning Method (Future Volume
                              Alternative)
********************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
********************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.556
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       51               Level Of Service:                  A
********************************************************************************
*** Street Name:       AVIATION BLVD.                  111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:             Ovl              Include          Include          Ovl
Min. Green:     0    0    0      0    0    0      0    0    0      0    0    0
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      15  771    50    41  356    39    23   18    12    24   27    75
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15  771    50    41  356    39    23   18    12    24   27    75
Added Vol:      0  199     0     0    0     0    12   45   115     0    0    96
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   15  970    50    41  356    39    35   63   127    24   27   171
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    15  970    50    41  356    39    35   63   127    24   27   171
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   15  970    50    41  356    39    35   63   127    24   27   171
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    15  970    50    41  356    39    35   63   127    24   27   171
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.90  0.10  1.00 1.80  0.20  1.00 0.33  0.67  1.00 1.00  1.00
Final Sat.:  1375 2615   135  1375 2478   272  1375  456   919  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.37  0.37  0.03 0.14  0.14  0.03 0.14  0.14  0.02 0.02  0.12
Crit Vol:          510            41                 190           24
Crit Moves:       ****           ****               ****          ****
********************************************************************************

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```

```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.696
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       75                Level Of Service:                B
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                 CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:             Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      88  153   109    53  145   573    58  517   263   244 1897   319
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   88  153   109    53  145   573    58  517   263   244 1897   319
Added Vol:      0    0     0     0    2     0     0    0    13    49    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   88  153   109    53  147   573    58  517   276   293 1897   319
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    88  153   109    53  147   573    58  517   276   293 1897   319
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   88  153   109    53  147   573    58  517   276   293 1897   319
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    88  153   120    53  147   630    58  517   276   293 1897   319
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.42  0.58
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4708   792
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.06  0.04  0.04 0.05  0.23  0.04 0.13  0.20  0.21 0.40  0.40
Crit Vol:      88                    315     0                   554
Crit Moves:  ****                  ****  ****                  ****
********************************************************************************

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```



```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.494
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       28                Level Of Service:                A
********************************************************************************
*** Street Name:     SEPULVEDA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      0 2397    19     0  805    43     0    0     0   191   73   176
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   0 2397    19     0  805    43     0    0     0   191   73   176
Added Vol:     0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   0 2397    19     0  816    43     0    0     0   191   73   176
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    0 2397     0     0  816    43     0    0     0   191   73   176
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   0 2397     0     0  816    43     0    0     0   191   73   176
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:    0 2397     0     0  816    43     0    0     0   210   73   194
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.48 0.52  2.00
Final Sat.:     0 6000  1500     0 6000  1500     0    0     0  2226  774  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.40  0.00  0.00 0.14  0.03  0.00 0.00  0.00  0.09 0.09  0.06
Crit Vol:          599           0                   0         142
Crit Moves:       ****        ****                  ****
********************************************************************************

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```

```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
********************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.651
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       41                Level Of Service:                B
********************************************************************************
*** Street Name:    405 NORTH OFF RAMP                  CENTURY BLVD
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     561    0    71     0    0     0     5  309   381     0 1913     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  561    0    71     0    0     0     5  309   381     0 1913     0
Added Vol:     43    0     0     0    0     0     0    0     0     0    6     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  604    0    71     0    0     0     5  309   381     0 1919     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   604    0    71     0    0     0     5  309   381     0 1919     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  604    0    71     0    0     0     5  309   381     0 1919     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:   664    0    71     0    0     0     5  309   419     0 1919     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.00  2.00  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 3000  3000     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.22 0.00  0.05  0.00 0.00  0.00  0.00 0.10  0.14  0.00 0.43  0.00
Crit Vol:     332                    0           5                   640
Crit Moves:  ****                         ****                      ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
********************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.269
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31                Level Of Service:                A
********************************************************************************
*** Street Name:      DOUGLAS STREET                  IMPERIAL HWY.
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase      Protected        Protected
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     20    8    32    50   44     5    19  239   163   149  376    79
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  20    8    32    50   44     5    19  239   163   149  376    79
Added Vol:     0    0     1     0    0     0     0   10     0     0    0     0
PasserByVol:   0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  20    8    33    50   44     5    19  249   163   149  376    79
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   20    8    33    50   44     5    19  249   163   149  376    79
Reduct Vol:    0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  20    8    33    50   44     5    19  249   163   149  376    79
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   20    8    36    55   44     6    19  249   163   164  376    79
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.58 0.42  1.00  1.00 2.00  1.00  2.00 2.48  0.52
Final Sat.:  1375 1375  2750  2171  579  1375  1375 2750  1375  2750 3409   716
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.01  0.01  0.03 0.08  0.00  0.01 0.09  0.12  0.06 0.11  0.11
Crit Vol:     20                    104                   163    82
Crit Moves:  ****                  ****                  ****  ****
********************************************************************************
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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.289
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       20                Level Of Service:                  A
********************************************************************************
*** Street Name:   Sepulveda Boulevard              H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  844   696    45  276     0     0    0     0   540    0   164
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  844   696    45  276     0     0    0     0   540    0   164
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  844   696    45  287     0     0    0     0   540    0   164
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  844     0    45  287     0     0    0     0   540    0   164
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  844     0    45  287     0     0    0     0   540    0   164
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  844     0    50  287     0     0    0     0   594    0   164
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0    0     0  4500    0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.14  0.00  0.02 0.06  0.00  0.00 0.00  0.00  0.13 0.00  0.11
Crit Vol:          211          25                   0          198
Crit Moves:       ****         ****                 ****
********************************************************************************
```



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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.261
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       31                Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      31  103    93    40   57   168   154  298    64    27  410   299
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   31  103    93    40   57   168   154  298    64    27  410   299
Added Vol:      0    0     0     0    0     0     0   48     0     0   57     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   31  103    93    40   57   168   154  346    64    27  467   299
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    31  103    93    40   57   168   154  346    64    27  467   299
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   31  103    93    40   57   168   154  346    64    27  467   299
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:    34  103   102    44   57   185   169  346    70    30  467   329
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.51  1.49  2.00 1.00  2.00  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 2070  2055  2750 1375  2750  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.05  0.05  0.02 0.04  0.07  0.06 0.08  0.03  0.01 0.11  0.12
Crit Vol:      17                         92    85                        164
Crit Moves:  ****                       ****  ****                      ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
********************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
********************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.569
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43              Level Of Service:                 A
********************************************************************************
*** Street Name:       MAIN STREET                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Permitted       Protected
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    0  0  1! 0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     199    0   357     3    1     1     0  467    51   271  925     1
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  199    0   357     3    1     1     0  467    51   271  925     1
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  199    0   357     3    1     1     0  467    51   271  925     1
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   199    0     0     3    1     1     0  467    51   271  925     1
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  199    0     0     3    1     1     0  467    51   271  925     1
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   219    0     0     3    1     1     0  467    51   298  925     1
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.60 0.20  0.20  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2850    0  1425   855  285   285  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.08 0.00  0.00  0.00 0.00  0.00  0.00 0.16  0.04  0.10 0.32  0.00
Crit Vol:     109                    5              234              463
Crit Moves:  ****                 ****             ****             ****
********************************************************************************
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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
********************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
********************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.254
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       25              Level Of Service:                 A
********************************************************************************
*** Street Name:                                    PERSHING
DR./HYPERION DWY.                                  IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected         Permitted
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  1  1  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1    0     1   298    0    40    64  219     1     9  322   795
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1    0     1   298    0    40    64  219     1     9  322   795
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1    0     1   298    0    40    64  219     1     9  322   795
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0     1   298    0    40    64  219     1     9  322   795
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1    0     1   298    0    40    64  219     1     9  322   795
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     1    0     1   328    0    40    70  219     1     9  322   874
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.50 0.00  0.50  2.00 0.00  1.00  2.00 1.99  0.01  1.00 2.00  2.00
Final Sat.:   713    0   713  2850    0  1425  2850 2837    13  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.00  0.00  0.12 0.00  0.03  0.02 0.08  0.08  0.01 0.11  0.31
Crit Vol:                  2   164              35                161
Crit Moves:               ****  ****            ****              ****
********************************************************************************
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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
********************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.573
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       53               Level Of Service:                  A
********************************************************************************
*** Street Name:      SEPULVEDA BL.                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      61  995   443   162 1114    12   108  123    52    72   97   187
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   61  995   443   162 1114    12   108  123    52    72   97   187
Added Vol:      0    0     9     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   61  995   452   162 1114    12   108  123    52    72   97   187
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    61  995   452   162 1114    12   108  123    52    72   97   187
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   61  995   452   162 1114    12   108  123    52    72   97   187
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:    61  995   452   178 1114    12   119  123    52    79   97   187
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5441    59  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.24  0.33  0.06 0.20  0.20  0.04 0.03  0.04  0.03 0.02  0.14
Crit Vol:                452    89              59                       187
Crit Moves:              ****  ****            ****                     ****
********************************************************************************
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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
********************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.434
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       33               Level Of Service:                  A
********************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      15    0    13   248  734   516     0  264    54    43  345     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   15    0    13   248  734   516     0  264    54    43  345     0
Added Vol:      0    0     1     0    0     0     0   10     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   15    0    14   248  734   516     0  274    54    43  345     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    15    0    14   248  734   516     0  274    54    43  345     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   15    0    14   248  734   516     0  274    54    43  345     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    15    0    15   273  734   568     0  274    54    47  345     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.56  1.44  0.00 2.51  0.49  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2222  2053     0 3571   704  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.19 0.33  0.28  0.00 0.08  0.08  0.02 0.08  0.00
Crit Vol:      15                471              109           24
Crit Moves:  ****                ****             ****          ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.669
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       56                Level Of Service:                B
********************************************************************************
*** Street Name:        / 105 RAMP                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:             Ovl             Ovl             Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     836    0   361     0    0     0     0  208   307    82  533     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  836    0   361     0    0     0     0  208   307    82  533     0
Added Vol:    127    0     0     0    0     0     0   48    67     0   58     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  963    0   361     0    0     0     0  256   374    82  591     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   963    0   361     0    0     0     0  256   374    82  591     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  963    0   361     0    0     0     0  256   374    82  591     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:  1059    0   397     0    0     0     0  256   411    90  591     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.00  2.00  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 2850  2850  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.37 0.00  0.14  0.00 0.00  0.00  0.00 0.09  0.14  0.03 0.21  0.00
Crit Vol:     530                   0              128              296
Crit Moves:  ****                                 ****             ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.232
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                A
********************************************************************************
*** Street Name:      405 NORTH RAMP                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted        Permitted
Rights:           Include          Include           Ignore           Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     200    0    25     0    0     0     0  233   193     0  534   572
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  200    0    25     0    0     0     0  233   193     0  534   572
Added Vol:     48    0     0     0    0     0     0    0    48     0    9     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  248    0    25     0    0     0     0  233   241     0  543   572
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   248    0    25     0    0     0     0  233     0     0  543     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  248    0    25     0    0     0     0  233     0     0  543     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   273    0    25     0    0     0     0  233     0     0  543     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.83 0.00  0.17  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  2611    0   239     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.00  0.10  0.00 0.00  0.00  0.00 0.05  0.00  0.00 0.13  0.00
Crit Vol:               149           0              0                181
Crit Moves:             ****                         ****             ****
********************************************************************************
```

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```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.234
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  LENNOX BLVD
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permit+Prot      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  343    31    17  190    34     0    0     0    70    0   129
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  343    31    17  190    34     0    0     0    70    0   129
Added Vol:      0    0     0     0   12     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  343    31    17  202    34     0    0     0    70    0   129
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  343    31    17  202    34     0    0     0    70    0   129
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  343    31    17  202    34     0    0     0    70    0   129
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  343    31    17  202    34     0    0     0    77    0   129
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.83  0.17  1.00 2.57  0.43  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2614   236  1425 3659   616     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.13  0.13  0.01 0.06  0.06  0.00 0.00  0.00  0.03 0.00  0.09
Crit Vol:          187          17                    0                    129
Crit Moves:       ****         ****                                      ****
********************************************************************************
```



```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.297
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       26                Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  / 111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permitted        Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     137  354     0     0  180    93    38    0    52     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  137  354     0     0  180    93    38    0    52     0    0     0
Added Vol:     84    0     0     0    0    12     0    0    45     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  221  354     0     0  180   105    38    0    97     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   221  354     0     0  180   105    38    0    97     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  221  354     0     0  180   105    38    0    97     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   221  354     0     0  180   105    42    0    97     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.00  1.00  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 2850  1425  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.16 0.12  0.00  0.00 0.06  0.07  0.01 0.00  0.07  0.00 0.00  0.00
Crit Vol:     221                      105                97           0
Crit Moves:  ****                     ****               ****
********************************************************************************
```

```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.457
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       34                Level Of Service:                A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 N/B RAPM
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted       Split Phase      Split Phase
Rights:             Ovl              Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2  354    71    91  160     0     0    0     0   654    0    44
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2  354    71    91  160     0     0    0     0   654    0    44
Added Vol:      0    0     0     0    2     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2  354    71    91  162     0     0    0     0   654    0    44
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2  354    71    91  162     0     0    0     0   654    0    44
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2  354    71    91  162     0     0    0     0   654    0    44
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  354    78    91  162     0     0    0     0   719    0    44
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.88 0.00  0.12
Final Sat.:    20 2830  1425  1425 2850     0     0    0     0  2686    0   164
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.10 0.13  0.05  0.06 0.06  0.00  0.00 0.00  0.00  0.27 0.00  0.27
Crit Vol:          178          91                    0          382
Crit Moves:       ****         ****                  ****
********************************************************************************
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--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.205
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                Level Of Service:                A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  298    27   216  224    12     0    0     1     0    0    58
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  298    27   216  224    12     0    0     1     0    0    58
Added Vol:      0    0     0     0   64     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  298    27   216  288    12     0    0     1     0    0    58
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  298    27   216  288    12     0    0     1     0    0    58
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  298    27   216  288    12     0    0     1     0    0    58
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  298    27   238  288    12     0    0     1     0    0    64
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.83  0.17  2.00 1.92  0.08  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2522   228  2750 2640   110     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.12  0.09 0.11  0.11  0.00 0.00  0.00  0.00 0.00  0.02
Crit Vol:          163          119                             1           0
Crit Moves:       ****         ****                           ****        ****
********************************************************************************
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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
********************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.306
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       27                 Level Of Service:                 A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  0  0  1    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       6  446    92    29  210     0     0    0     1    74    0    54
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    6  446    92    29  210     0     0    0     1    74    0    54
Added Vol:      0    0     0    45    0     0     0    0     0     0    0    84
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    6  446    92    74  210     0     0    0     1    74    0   138
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     6  446    92    74  210     0     0    0     1    74    0   138
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    6  446    92    74  210     0     0    0     1    74    0   138
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     6  446    92    74  210     0     0    0     1    81    0   138
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 0.00  1.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0    0  1425  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.16  0.06  0.05 0.05  0.00  0.00 0.00  0.00  0.03 0.00  0.10
Crit Vol:          223          74                      1                 138
Crit Moves:       ****         ****                   ****               ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
********************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.407
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       38                 Level Of Service:                 A
********************************************************************************
*** Street Name:              Sepulveda Boulevard               La Tijera
Boulevard Approach:           North Bound       South Bound      East Bound
                  West Bound Movement:        L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      20  984    66    22  740    30    40   54    41   168   73    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   20  984    66    22  740    30    40   54    41   168   73    16
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   20  984    66    22  751    30    40   54    41   168   73    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    20  984    66    22  751    30    40   54    41   168   73    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   20  984    66    22  751    30    40   54    41   168   73    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    20  984    66    22  751    30    40   54    41   168   73    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.64  0.36
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 2256   494
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.24  0.05  0.02 0.18  0.02  0.03 0.02  0.03  0.12 0.03  0.03
Crit Vol:          328          22                                41   168
Crit Moves:       ****         ****                             ****  ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
********************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
********************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.529
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       39                 Level Of Service:                 A
********************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD               LINCOLN BOULEVARD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Permitted        Permitted        Permitted
Rights:            Include           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    1202 1214   100     0  961     8     0    0   647     0    0     4
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1202 1214   100     0  961     8     0    0   647     0    0     4
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 1202 1214   100     0  972     8     0    0   647     0    0     4
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1202 1214   100     0  972     8     0    0   647     0    0     4
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1202 1214   100     0  972     8     0    0   647     0    0     4
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1322 1214   100     0  972     8     0    0   712     0    0     4
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.77  0.23  0.00 3.97  0.03  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3950   325     0 5653    47     0    0  5700     0    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.23 0.31  0.31  0.00 0.17  0.17  0.00 0.00  0.12  0.00 0.00  0.00
Crit Vol:     331                 245                   178     0
Crit Moves:  ****                ****                  ****  ****
********************************************************************************

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                  Alternative)
********************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
********************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.465
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       43                 Level Of Service:                 A
********************************************************************************
*** Street Name:   Sepulveda Boulevard               Manchester Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Protected        Prot+Permit
Rights:            Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      60  965    32    59  787    28    77  157    42    41  293   139
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   60  965    32    59  787    28    77  157    42    41  293   139
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   60  965    32    59  798    28    77  157    42    41  293   139
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    60  965    32    59  798    28    77  157    42    41  293   139
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   60  965    32    59  798    28    77  157    42    41  293   139
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    60  965    32    59  798    28    85  157    42    41  293   139
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.36  0.64
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1865   885
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.23  0.02  0.04 0.19  0.02  0.03 0.06  0.03  0.03 0.16  0.16
Crit Vol:           322                 59                  42                  216
Crit Moves:       ****                ****                ****                ****
********************************************************************************

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.221
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                  A
********************************************************************************
*** Street Name:               Pershing Drive        Westchester Parkway
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected         Permitted        Permitted
Rights:           Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  339   184    45  261     0     0    0     0   155    0    16
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  339   184    45  261     0     0    0     0   155    0    16
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  339   184    45  261     0     0    0     0   155    0    16
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  339   184    45  261     0     0    0     0   155    0    16
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  339   184    45  261     0     0    0     0   155    0    16
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  339   184    45  261     0     0    0     0   171    0    16
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.12  0.13  0.03 0.09  0.00  0.00 0.00  0.00  0.06 0.00  0.01
Crit Vol:                184    45                    0          85
Crit Moves:              ****  ****                          ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.379
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       37                Level Of Service:                  A
********************************************************************************
*** Street Name:               Sepulveda Boulevard               Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     128 1064    24    62  863    56    13   51    41    59   94    79
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  128 1064    24    62  863    56    13   51    41    59   94    79
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  128 1064    24    62  874    56    13   51    41    59   94    79
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   128 1064    24    62  874    56    13   51    41    59   94    79
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  128 1064    24    62  874    56    13   51    41    59   94    79
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   128 1064    24    62  874    56    13   51    41    59   94    79
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.11  0.89  1.00 1.09  0.91
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1524  1226  1375 1494  1256
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.26  0.02  0.05 0.21  0.04  0.01 0.03  0.03  0.04 0.06  0.06
Crit Vol:            355          62                  46          59
Crit Moves:       ****         ****                ****        ****
********************************************************************************
```

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Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.407
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       24                Level Of Service:                  A
********************************************************************************
*** Street Name:   Sepulveda Boulevard                76th/77th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      17 1207     8    13  768    37   239   13    24    10    4    64
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   17 1207     8    13  768    37   239   13    24    10    4    64
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   17 1207     8    13  779    37   239   13    24    10    4    64
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    17 1207     8    13  779    37   239   13    24    10    4    64
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   17 1207     8    13  779    37   239   13    24    10    4    64
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    17 1207     8    13  779    37   263   13    24    10    4    64
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.27  0.01  0.01 0.17  0.02  0.09 0.01  0.02  0.01 0.00  0.04
Crit Vol:          402          13             131                          64
Crit Moves:       ****         ****           ****                        ****
********************************************************************************

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                                ALEXANDRIA
```



```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.323
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       21                Level Of Service:                  A
********************************************************************************
*** Street Name:   Sepulveda Boulevard                79th/80th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      24 1085     4     5  735    42    64   14    40    13   17    36
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   24 1085     4     5  735    42    64   14    40    13   17    36
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   24 1085     4     5  746    42    64   14    40    13   17    36
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    24 1085     4     5  746    42    64   14    40    13   17    36
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   24 1085     4     5  746    42    64   14    40    13   17    36
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    24 1085     4     5  746    42    64   14    40    13   17    36
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.32  0.68
Final Sat.:  1500 4483    17  1500 4500  1500  1500 1500  1500  1500  481  1019
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.24  0.24  0.00 0.17  0.03  0.04 0.01  0.03  0.01 0.04  0.04
Crit Vol:          363           5              64                          53
Crit Moves:       ****         ****           ****                        ****
********************************************************************************

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```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.281
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       20                Level Of Service:                  A
********************************************************************************
*** Street Name:   Sepulveda Boulevard                 83rd Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      11 1036     4     5  744    12    39    6    11     8    7    24
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   11 1036     4     5  744    12    39    6    11     8    7    24
Added Vol:      0    0     0     0   11     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   11 1036     4     5  755    12    39    6    11     8    7    24
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    11 1036     4     5  755    12    39    6    11     8    7    24
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   11 1036     4     5  755    12    39    6    11     8    7    24
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    11 1036     4     5  755    12    39    6    11     8    7    24
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.99  0.01  1.00 2.95  0.05  0.69 0.11  0.20  1.00 0.23  0.77
Final Sat.:  1500 4483    17  1500 4430    70  1045  161   295  1500  339  1161
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.23  0.23  0.00 0.17  0.17  0.04 0.04  0.04  0.01 0.02  0.02
Crit Vol:          347           5              39                   31
Crit Moves:       ****         ****            ****                 ****
********************************************************************************
```

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```
Baseline 2013 plus Project-AM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
********************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.291
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       26                Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                 104 TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:    123  309     6     7  189    43     9    1    57     1    0     6
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  123  309     6     7  189    43     9    1    57     1    0     6
Added Vol:      0    0     0     0   64     0     0    0   135     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  123  309     6     7  253    43     9    1   192     1    0     6
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   123  309     6     7  253    43     9    1   192     1    0     6
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  123  309     6     7  253    43     9    1   192     1    0     6
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   123  309     6     7  253    43     9    1   192     1    0     6
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.96  0.04  1.00 2.56  0.44  1.00 1.00  1.00  0.14 0.00  0.86
Final Sat.:  1425 2796    54  1425 3654   621  1425 1425  1425   204    0  1221
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.11  0.11  0.00 0.07  0.07  0.01 0.00  0.13  0.00 0.00  0.00
Crit Vol:     123                 99                   192     1
Crit Moves:  ****                ****                 ****  ****
********************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
--- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                          --- Scenario Report
Scenario:             Baseline 2013 With Project-PM Peak

Command:              Employee PM
Volume:               Employee PM
Geometry:             Existing
geometry Impact Fee:  Default Impact
Fee Trip Generation:  PM Peak
Trip Distribution:    Trip_am_pm
Paths:                Default
Paths Routes:         Default
Routes
Configuration:        Default Configuration

Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                   --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume Alternative)
******************************************************************************
*** Intersection #14 AVIATION BLVD. @ CENTURY BLVD.
******************************************************************************
Cycle (sec):        100                 Critical Vol./Cap. (X):        0.669
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       69                 Level Of Service:                 B
******************************************************************************
*** Street Name:      AVIATION BLVD.                    CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:           Include           Include           Include           Include
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        2  0  1  1  0    2  0  2  0  1    1  0  3  1  0    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     337  387   106    89  428    97   143 1416   364    69  842   105
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  337  387   106    89  428    97   143 1416   364    69  842   105
Added Vol:     11    2     7     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  348  389   113    89  428    97   143 1416   364    69  842   105
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   348  389   113    89  428    97   143 1416   364    69  842   105
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  348  389   113    89  428    97   143 1416   364    69  842   105
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   383  389   113    98  428    97   143 1416   364    69  842   105
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.55  0.45  2.00 2.00  1.00  1.00 3.18  0.82  1.00 3.56  0.44
Final Sat.:  2750 2131   619  2750 2750  1375  1375 4375  1125  1375 4890   610
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.18  0.18  0.04 0.16  0.07  0.10 0.32  0.32  0.05 0.17  0.17
Crit Vol:     191                214             445             69
Crit Moves:  ****               ****            ****            ****
******************************************************************************

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```



```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                   --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                              Alternative)
******************************************************************************
*** Intersection #16 IMPERIAL HWY. @ AVIATION BL.
******************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.630
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       62                 Level Of Service:                 B
******************************************************************************
*** Street Name:       AVIATION BL.                    IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected         Protected         Protected         Protected
Rights:           Ovl               Ovl               Include           Ovl
Min. Green:     0    0    0     0    0    0     0    0    0     0    0    0
Lanes:        2  0  2  0  1    2  0  1  1  1    2  0  2  1  0    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     110  325   254   427  457   126   137  792   147   164  359   421
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  110  325   254   427  457   126   137  792   147   164  359   421
Added Vol:      0    0     0   115    0     0     0    0     0     4   11   115
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  110  325   254   542  457   126   137  792   147   168  370   536
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   110  325   254   542  457   126   137  792   147   168  370   536
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  110  325   254   542  457   126   137  792   147   168  370   536
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.10 1.00  1.10  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   121  325   254   596  457   139   151  792   147   185  370   536
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 2.00  1.00  2.00 2.00  1.00  2.00 2.53  0.47  2.00 3.00  1.00
Final Sat.:  2750 2750  1375  2750 2750  1375  2750 3479   646  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.18  0.22 0.17  0.10  0.05 0.23  0.23  0.07 0.09  0.39
Crit Vol:          163             298             313              92
Crit Moves:       ****            ****            ****            ****
******************************************************************************

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #19 AVIATION BLVD. @ 111TH
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.611
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       59                Level Of Service:                  B
******************************************************************************
*** Street Name:      AVIATION BLVD.                  111TH STREET
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:             Ovl              Include          Include          Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  1  1  0    1  0  0  1  0    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      26  703    90    71  868    74    66   55    29    71   26   103
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   26  703    90    71  868    74    66   55    29    71   26   103
Added Vol:      0  115     0     0    0     0    12   45   115     0    0    77
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   26  818    90    71  868    74    78  100   144    71   26   180
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    26  818    90    71  868    74    78  100   144    71   26   180
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   26  818    90    71  868    74    78  100   144    71   26   180
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    26  818    90    71  868    74    78  100   144    71   26   180
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.80  0.20  1.00 1.84  0.16  1.00 0.41  0.59  1.00 1.00  1.00
Final Sat.:  1375 2477   273  1375 2534   216  1375  564   811  1375 1375  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.02 0.33  0.33  0.05 0.34  0.34  0.06 0.18  0.18  0.05 0.02  0.13
Crit Vol:          454          71                 244          71
Crit Moves:       ****         ****               ****         ****
******************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #36 La CIENEGA BLVD. @ CENTURY BLVD
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.832
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      136                Level Of Service:                  D
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:             Ovl              Ovl              Ovl              Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  2    1  0  2  0  2    1  0  3  0  1    1  0  3  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      98  269   418   404  554   335   120 1061   608    80 1135   132
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   98  269   418   404  554   335   120 1061   608    80 1135   132
Added Vol:      0    0     0     0    0     0     2    6     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   98  269   418   404  554   335   122 1067   608    80 1135   132
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    98  269   418   404  554   335   122 1067   608    80 1135   132
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   98  269   418   404  554   335   122 1067   608    80 1135   132
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    98  269   460   404  554   369   122 1067   608    80 1135   132
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  2.00  1.00 2.00  2.00  1.00 3.00  1.00  1.00 3.58  0.42
Final Sat.:  1375 2750  2750  1375 2750  2750  1375 4125  1375  1375 4927   573
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.07 0.10  0.17  0.29 0.20  0.13  0.09 0.26  0.44  0.06 0.23  0.23
Crit Vol:           230   404                       608     0
Crit Moves:        ****  ****                      ****  ****
******************************************************************************
```

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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #38 CENTURY BLVD. @ SEPULVEDA BLVD.
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.660
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       42              Level Of Service:                B
******************************************************************************
*** Street Name:     SEPULVEDA BLVD.                 CENTURY BLVD.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    0  0  4  0  1    0  0  0  0  0    1  1  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 2776    24     0 2315    61     0    0     0   473   73   188
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 2776    24     0 2315    61     0    0     0   473   73   188
Added Vol:      0    0     0     0    0     0     0    0     0     0    0    11
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0 2776    24     0 2315    61     0    0     0   473   73   199
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 2776     0     0 2315    61     0    0     0   473   73   199
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 2776     0     0 2315    61     0    0     0   473   73   199
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.10
Final Vol.:     0 2776     0     0 2315    61     0    0     0   520   73   219
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  0.00 4.00  1.00  0.00 0.00  0.00  1.75 0.25  2.00
Final Sat.:     0 6000  1500     0 6000  1500     0    0     0  2631  369  3000
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.46  0.00  0.00 0.39  0.04  0.00 0.00  0.00  0.20 0.20  0.07
Crit Vol:          694           0                  0         297
Crit Moves:       ****         ****                ****
******************************************************************************
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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #39 CENTURY BLVD. @ 405 N/B RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.460
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       27              Level Of Service:                A
******************************************************************************
*** Street Name:    405 NORTH OFF RAMP                CENTURY BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  1    0  0  0  0  1    1  0  2  1  1    0  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     380    0   244     0    0     4     5 1286   573     0  966     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  380    0   244     0    0     4     5 1286   573     0  966     0
Added Vol:      0    0     0     0    0     0     0    6     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  380    0   244     0    0     4     5 1292   573     0  966     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   380    0   244     0    0     4     5 1292   573     0  966     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  380    0   244     0    0     4     5 1292   573     0  966     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:   418    0   244     0    0     4     5 1292   630     0  966     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  1.00  0.00 0.00  1.00  1.00 2.69  1.31  0.00 3.00  0.00
Final Sat.:  3000    0  1500     0    0  1500  1500 4033  1967     0 4500     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.00  0.16  0.00 0.00  0.00  0.00 0.32  0.32  0.00 0.21  0.00
Crit Vol:     209           0                  481           0
Crit Moves:  ****         ****                ****         ****
******************************************************************************
```

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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #47 IMPERIAL HWY. @ DOUGLAS ST.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.445
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       41                Level Of Service:                  A
******************************************************************************
*** Street Name:      DOUGLAS STREET                  IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  0  2    1  0  1! 0  1    1  0  2  1  0    2  0  2  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     124   17   240    88   33    30    42  755    99    77  348    59
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  124   17   240    88   33    30    42  755    99    77  348    59
Added Vol:      0    0     0     0    0     0     0    0     0     1   10     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  124   17   240    88   33    30    42  755    99    78  358    59
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   124   17   240    88   33    30    42  755    99    78  358    59
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  124   17   240    88   33    30    42  755    99    78  358    59
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   124   17   264    97   33    33    42  755    99    86  358    59
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.00  2.00  1.78 0.22  1.00  1.00 2.65  0.35  2.00 2.58  0.42
Final Sat.:  1375 1375  2750  2453  297  1375  1375 3647   478  2750 3541   584
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.01  0.10  0.04 0.11  0.02  0.03 0.21  0.21  0.03 0.10  0.10
Crit Vol:                132         153              285          43
Crit Moves:              ****        ****             ****         ****
******************************************************************************
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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #65 SEPULVEDA @ H. HUGHES PARKWAY
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.491
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       28                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              H. Hughes Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  4  0  1    2  0  3  0  0    0  0  0  0  0    3  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0 1206   449   358 1389     0     0    0     0   641    0   203
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0 1206   449   358 1389     0     0    0     0   641    0   203
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0 1217   449   358 1389     0     0    0     0   641    0   203
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0 1217     0   358 1389     0     0    0     0   641    0   203
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0 1217     0   358 1389     0     0    0     0   641    0   203
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  0.00  1.10 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0 1217     0   394 1389     0     0    0     0   705    0   203
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 4.00  1.00  2.00 3.00  0.00  0.00 0.00  0.00  3.00 0.00  1.00
Final Sat.:     0 6000  1500  3000 4500     0     0    0     0  4500    0  1500
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.20  0.00  0.13 0.31  0.00  0.00 0.00  0.00  0.16 0.00  0.14
Crit Vol:           304         197                    0          235
Crit Moves:         ****        ****                   ****
******************************************************************************
```

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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #67 IMPERIAL HWY. @ La CIENEGA BLVD.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.554
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       51                Level Of Service:                  A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                 IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected        Protected        Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  1  1  1    2  0  1  1  1    2  0  3  0  2    2  0  3  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      95  160   498   273  328   274   168  817   114    41  291   187
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   95  160   498   273  328   274   168  817   114    41  291   187
Added Vol:      0    0     0    49    0    74     0   48     0     0   48     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   95  160   498   322  328   348   168  865   114    41  339   187
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    95  160   498   322  328   348   168  865   114    41  339   187
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   95  160   498   322  328   348   168  865   114    41  339   187
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10  1.10 1.00  1.10
Final Vol.:   104  160   548   354  328   383   185  865   125    45  339   206
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 1.00  2.00  2.00 1.38  1.62  2.00 3.00  2.00  2.00 3.00  2.00
Final Sat.:  2750 1375  2750  2750 1903  2222  2750 4125  2750  2750 4125  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.04 0.12  0.20  0.13 0.17  0.17  0.07 0.21  0.05  0.02 0.08  0.07
Crit Vol:               274   177                 288           23
Crit Moves:            ****  ****                ****          ****
******************************************************************************

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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #68 IMPERIAL HWY @MAIN STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.509
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       38                Level Of Service:                  A
******************************************************************************
*** Street Name:       MAIN STREET                    IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase      Permitted        Protected
Rights:           Ignore           Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  1  0  0  1    1  0  0  0  0    1  0  2  0  1    2  0  2  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     146    1   385     4    0     0     0  782   248   454  500     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  146    1   385     4    0     0     0  782   248   454  500     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  146    1   385     4    0     0     0  782   248   454  500     0
User Adj:    1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   146    1     0     4    0     0     0  782   248   454  500     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  146    1     0     4    0     0     0  782   248   454  500     0
PCE Adj:     1.00 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  0.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:   161    1     0     4    0     0     0  782   248   499  500     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.99 0.01  1.00  1.00 0.00  0.00  1.00 2.00  1.00  2.00 2.00  1.00
Final Sat.:  2832   18  1425  1425    0     0  1425 2850  1425  2850 2850  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.06  0.00  0.00 0.00  0.00  0.00 0.27  0.17  0.18 0.18  0.00
Crit Vol:      81                4                 391          250
Crit Moves:  ****              ****                ****         ****
******************************************************************************

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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #69 IMPERIAL HWY @ PERSHING DR.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.386
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30               Level Of Service:                  A
******************************************************************************
*** Street Name:                                    PERSHING
DR./HYPERION DWY.                                   IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Protected         Permitted
Rights:           Include          Include           Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1! 0  0    2  0  0  0  1    2  0  2  0  0    1  0  2  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       2    0     8   669    0   151   108  355     0     0  225   438
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    2    0     8   669    0   151   108  355     0     0  225   438
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2    0     8   669    0   151   108  355     0     0  225   438
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     2    0     8   669    0   151   108  355     0     0  225   438
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    2    0     8   669    0   151   108  355     0     0  225   438
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.10
Final Vol.:     2    0     8   736    0   151   119  355     0     0  225   482
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425 1425  1425 1425  1425  1425 1425 1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.20 0.00  0.80  2.00 0.00  1.00  2.00 2.00  0.00  1.00 2.00  2.00
Final Sat.:   285    0  1140  2850    0  1425  2850 2850     0  1425 2850  2850
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.00  0.01  0.26 0.00  0.11  0.04 0.12  0.00  0.00 0.08  0.17
Crit Vol:                 10   368              59                  113
Crit Moves:              ****  ****             ****                ****
******************************************************************************
```

```
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                          ALEXANDRIA
```



```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                               Alternative)
******************************************************************************
*** Intersection #71 IMPERIAL HWY @ SEPULVEDA BL.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        1.074
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      180               Level Of Service:                  F
******************************************************************************
*** Street Name:      SEPULVEDA BL.                      IMPERIAL HWY
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected         Protected         Protected
Rights:           Include          Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    2  0  3  1  0    2  0  3  0  1    2  0  3  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     116 1297   907   318 1934    19   124  229   142   133  152   326
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  116 1297   907   318 1934    19   124  229   142   133  152   326
Added Vol:      0    0     0     0    0     0     0    0     0     9    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  116 1297   907   318 1934    19   124  229   142   142  152   326
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   116 1297   907   318 1934    19   124  229   142   142  152   326
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  116 1297   907   318 1934    19   124  229   142   142  152   326
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00  1.10 1.00  1.00
Final Vol.:   116 1297   907   350 1934    19   136  229   142   156  152   326
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  2.00 3.96  0.04  2.00 3.00  1.00  2.00 3.00  1.00
Final Sat.:  1375 4125  1375  2750 5446    54  2750 4125  1375  2750 4125  1375
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.08 0.31  0.66  0.13 0.36  0.36  0.05 0.06  0.10  0.06 0.04  0.24
Crit Vol:                 907   175              68                        326
Crit Moves:               ****  ****             ****                      ****
******************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #73 IMPERIAL HWY @ NASH ST.
********************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.310
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       27              Level Of Service:                 A
********************************************************************************
*** Street Name:  FWY 105 OFF RAMP/ NASH STREET         IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  0  0  2    1  1  0  1  1    0  0  2  1  0    2  0  3  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      70    0   130    94  171   129     0  686    49    36  541     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   70    0   130    94  171   129     0  686    49    36  541     0
Added Vol:      0    0     0     0    0     0     0    0     0     1   10     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   70    0   130    94  171   129     0  686    49    37  551     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    70    0   130    94  171   129     0  686    49    37  551     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   70    0   130    94  171   129     0  686    49    37  551     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.10 1.00  1.10  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:    70    0   143   103  171   142     0  686    49    41  551     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 0.00  2.00  1.00 1.64  1.36  0.00 2.80  0.20  2.00 3.00  0.00
Final Sat.:  1425    0  2850  1425 2336  1939     0 3990   285  2850 4275     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.05 0.00  0.05  0.07 0.07  0.07  0.00 0.17  0.17  0.01 0.13  0.00
Crit Vol:                72        104              245          20
Crit Moves:             ****      ****             ****         ****
********************************************************************************

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```
Baseline 2013 With Project-PM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                     --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #74 IMPERIAL HWY. @  105 RAMP
********************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.611
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       48              Level Of Service:                 B
********************************************************************************
*** Street Name:        / 105 RAMP                IMPERIAL HWY.
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase        Permitted       Protected
Rights:           Ovl              Ovl              Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        2  0  0  0  2    0  0  0  0  0    0  0  2  1  1    2  0  2  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     387    0   200     0    0     0     0  959   621   267  493     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  387    0   200     0    0     0     0  959   621   267  493     0
Added Vol:     67    0     0     0    0     0     0   48    67    60   62     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  454    0   200     0    0     0     0 1007   688   327  555     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   454    0   200     0    0     0     0 1007   688   327  555     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  454    0   200     0    0     0     0 1007   688   327  555     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.10  1.10 1.00  1.00
Final Vol.:   499    0   220     0    0     0     0 1007   757   360  555     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       2.00 0.00  2.00  0.00 0.00  0.00  0.00 2.28  1.72  2.00 2.00  0.00
Final Sat.:  2850    0  2850     0    0     0     0 3254  2446  2850 2850     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.18 0.00  0.08  0.00 0.00  0.00  0.00 0.31  0.31  0.13 0.19  0.00
Crit Vol:     250                    0              441          180
Crit Moves:  ****                                  ****         ****
********************************************************************************

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```

```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #75 IMPERIAL HWY. @ 405 NORTH RAMP
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.500
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       37              Level Of Service:                 A
******************************************************************************
*** Street Name:      405 NORTH RAMP                   IMPERIAL HWY
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Split Phase      Split Phase       Permitted         Permitted
Rights:           Include          Include          Ignore            Ignore
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1! 0  0    0  0  0  0  0    0  0  2  1  1    0  0  2  1  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     194    0   213     0    0     0     0 1411   188     0  332   211
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  194    0   213     0    0     0     0 1411   188     0  332   211
Added Vol:     48    0     0     0    0     0     0    9    87     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  242    0   213     0    0     0     0 1420   275     0  332   211
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
PHF Volume:   242    0   213     0    0     0     0 1420     0     0  332     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  242    0   213     0    0     0     0 1420     0     0  332     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  0.00  1.00 1.00  0.00
Final Vol.:   266    0   213     0    0     0     0 1420     0     0  332     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.11 0.00  0.89  0.00 0.00  0.00  0.00 3.00  1.00  0.00 3.00  1.00
Final Sat.:  1583    0  1267     0    0     0     0 4275  1425     0 4275  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.17 0.00  0.17  0.00 0.00  0.00  0.00 0.33  0.00  0.00 0.08  0.00
Crit Vol:             240          0             473           0
Crit Moves:          ****                       ****        ****
******************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                      --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                    --- Level Of Service Computation Report
                Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #89 La CIENEGA BLVD. @ LENNOX BLVD
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.376
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30              Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  LENNOX BLVD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted      Permit+Prot      Split Phase      Split Phase
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  0    1  0  2  1  0    0  0  0  0  0    1  1  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  448   179   147  617     8     0    0     0    73    0    75
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  448   179   147  617     8     0    0     0    73    0    75
Added Vol:      0    0     0     0  195     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1  448   179   147  812     8     0    0     0    73    0    75
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  448   179   147  812     8     0    0     0    73    0    75
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  448   179   147  812     8     0    0     0    73    0    75
PCE Adj:     4.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     4  448   179   147  812     8     0    0     0    80    0    75
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.42  0.57  1.00 2.97  0.03  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     5 2033   812  1425 4233    42     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.22 0.22  0.22  0.10 0.19  0.19  0.00 0.00  0.00  0.03 0.00  0.05
Crit Vol:           314          147                 0                    75
Crit Moves:        ****         ****                                     ****
******************************************************************************
```

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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #94 La CIENEGA BLVD. @ 111TH STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.490
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  / 111TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  0    0  0  2  1  0    2  0  0  0  1    0  0  0  0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     122  432     0     0  602   107   166    0   185     0    0     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  122  432     0     0  602   107   166    0   185     0    0     0
Added Vol:     45    0     0     0  162    33     0    0    45     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  167  432     0     0  764   140   166    0   230     0    0     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   167  432     0     0  764   140   166    0   230     0    0     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  167  432     0     0  764   140   166    0   230     0    0     0
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   167  432     0     0  764   140   183    0   230     0    0     0
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  0.00  0.00 2.54  0.46  2.00 0.00  1.00  0.00 0.00  0.00
Final Sat.:  1425 2850     0     0 3613   662  2850    0  1425     0    0     0
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.12 0.15  0.00  0.00 0.21  0.21  0.06 0.00  0.16  0.00 0.00  0.00
Crit Vol:     167                  301                   230          0
Crit Moves:  ****                 ****                  ****
******************************************************************************

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                                     ALEXANDRIA
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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #96 La CIENEGA BLVD. @ 405 S/B RAPM
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.480
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       36                Level Of Service:                 A
******************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 N/B RAPM
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted      Split Phase      Split Phase
Rights:            Ovl              Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  1  0  1  1    1  0  2  0  0    0  0  0  0  0    1  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       1  517    74   171  565     0     0    0     0   589    0   154
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    1  517    74   171  565     0     0    0     0   589    0   154
Added Vol:      0    2     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1  519    74   171  565     0     0    0     0   589    0   154
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1  519    74   171  565     0     0    0     0   589    0   154
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    1  519    74   171  565     0     0    0     0   589    0   154
PCE Adj:     2.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.10  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     2  519    81   171  565     0     0    0     0   648    0   154
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.01 1.99  1.00  1.00 2.00  0.00  0.00 0.00  0.00  1.62 0.00  0.38
Final Sat.:     7 2843  1425  1425 2850     0     0    0     0  2303    0   547
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.14 0.18  0.06  0.12 0.20  0.00  0.00 0.00  0.00  0.28 0.00  0.28
Crit Vol:       1                  283                   0                   401
Crit Moves:  ****                 ****                                      ****
******************************************************************************

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Baseline 2013 With Project-PM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #97 La CIENEGA BLVD. @ 405 S/B RAMP
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.354
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       35                Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:    Protected        Protected       Split Phase      Split Phase
Rights:           Include          Include          Include           Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  1  1  0    2  0  1  1  0    0  0  0  0  1    0  0  0  0  2
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  492    40   392  669     7     0    0     5     0    0   244
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  492    40   392  669     7     0    0     5     0    0   244
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  492    40   392  669     7     0    0     5     0    0   244
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  492    40   392  669     7     0    0     5     0    0   244
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  492    40   392  669     7     0    0     5     0    0   244
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10
Final Vol.:     0  492    40   431  669     7     0    0     5     0    0   268
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 1.85  0.15  2.00 1.98  0.02  0.00 0.00  1.00  0.00 0.00  2.00
Final Sat.:     0 2543   207  2750 2722    28     0    0  1375     0    0  2750
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.19  0.19  0.16 0.25  0.25  0.00 0.00  0.00  0.00 0.00  0.10
Crit Vol:          266         216                    5           0
Crit Moves:       ****        ****                 ****        ****
********************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #98 La CIENEGA BLVD. @ 405 S/B RAMP
********************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.378
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30                Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  405 S/B RAMP
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted       Split Phase      Split Phase
Rights:           Include          Include          Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  0  1    1  0  2  1  0    0  0  1! 0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       8  468    41    69  720     0     0    0     0   170    0   107
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    8  468    41    69  720     0     0    0     0   170    0   107
Added Vol:      0    0     0    84  123     0     0    0     0     0    0    45
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    8  468    41   153  843     0     0    0     0   170    0   152
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     8  468    41   153  843     0     0    0     0   170    0   152
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    8  468    41   153  843     0     0    0     0   170    0   152
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     8  468    41   153  843     0     0    0     0   187    0   152
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.00  1.00  1.00 3.00  0.00  0.00 1.00  0.00  2.00 0.00  1.00
Final Sat.:  1425 2850  1425  1425 4275     0     0 1425     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.01 0.16  0.03  0.11 0.20  0.00  0.00 0.00  0.00  0.07 0.00  0.11
Crit Vol:          234         153                    0                    152
Crit Moves:       ****        ****                                      ****
********************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #101 SEPULVEDA BLVD. @ LA TIJERA BLVD.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.683
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       72                Level Of Service:                  B
******************************************************************************
*** Street Name:               Sepulveda Boulevard               La Tijera
Boulevard Approach:            North Bound       South Bound      East Bound
                  West Bound Movement:         L  -  T  -  R    L  -  T  -
R             L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:       1  0  3  0  1    1  0  3  0  1    1  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||------------
--| Volume Module:
Base Vol:     127 1133   222    89 1250   103    87  308   104   242  204    91
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  127 1133   222    89 1250   103    87  308   104   242  204    91
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  127 1144   222    89 1250   103    87  308   104   242  204    91
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   127 1144   222    89 1250   103    87  308   104   242  204    91
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  127 1144   222    89 1250   103    87  308   104   242  204    91
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   127 1144   222    89 1250   103    87  308   104   242  204    91
------------|---------------||---------------||---------------||------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 2.00  1.00  1.00 1.38  0.62
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 2750  1375  1375 1902   848
------------|---------------||---------------||---------------||------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.28  0.16  0.06 0.30  0.07  0.06 0.11  0.08  0.18 0.11  0.11
Crit Vol:     127                417               154          242
Crit Moves:  ****                ****              ****         ****
******************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
******************************************************************************
*** Intersection #108 SEPULVEDA BLVD. @ LINCOLN BLVD.
******************************************************************************
*** Cycle (sec):    100               Critical Vol./Cap. (X):        0.820
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      104               Level Of Service:                  D
******************************************************************************
*** Street Name:   SEPULVEDA BOULEVARD               LINCOLN BOULEVARD
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||------------
--| Control:    Protected         Permitted         Permitted         Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        4  0  2  1  0    0  0  3  1  0    0  0  0  0  4    0  0  0  0  1
------------|---------------||---------------||---------------||------------
--| Volume Module:
Base Vol:    1258 1494   241     0 1710    28     0    0  1413     0    0    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse: 1258 1494   241     0 1710    28     0    0  1413     0    0    22
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut: 1258 1505   241     0 1710    28     0    0  1413     0    0    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:  1258 1505   241     0 1710    28     0    0  1413     0    0    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol: 1258 1505   241     0 1710    28     0    0  1413     0    0    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.10 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.10  1.00 1.00  1.00
Final Vol.:  1384 1505   241     0 1710    28     0    0  1554     0    0    22
------------|---------------||---------------||---------------||------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       4.00 2.59  0.41  0.00 3.94  0.06  0.00 0.00  4.00  0.00 0.00  1.00
Final Sat.:  5700 3685   590     0 5608    92     0    0  5700     0    0  1425
------------|---------------||---------------||---------------||------------
--| Capacity Analysis Module:
Vol/Sat:     0.24 0.41  0.41  0.00 0.30  0.30  0.00 0.00  0.27  0.00 0.00  0.02
Crit Vol:     346               435               389     0
Crit Moves:  ****              ****              ****  ****
******************************************************************************
```

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #114 SEPULVEDA BLVD. @ MANCHESTER AVE.
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.784
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:      105                Level Of Service:                  C
******************************************************************************
*** Street Name:   Sepulveda Boulevard              Manchester Avenue
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit      Prot+Permit       Protected       Prot+Permit
Rights:             Ovl             Ovl              Ovl             Ovl
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  2  0  1    1  0  1  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:     125 1157    91   242 1187   175   194  675   112    85  479   200
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  125 1157    91   242 1187   175   194  675   112    85  479   200
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  125 1168    91   242 1187   175   194  675   112    85  479   200
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   125 1168    91   242 1187   175   194  675   112    85  479   200
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  125 1168    91   242 1187   175   194  675   112    85  479   200
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:   125 1168    91   242 1187   175   213  675   112    85  479   200
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 2.00  1.00  1.00 1.41  0.59
Final Sat.:  1375 4125  1375  1375 4125  1375  2750 2750  1375  1375 1940   810
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.09 0.28  0.07  0.18 0.29  0.13  0.08 0.25  0.08  0.06 0.25  0.25
Crit Vol:          389         242              107                  340
Crit Moves:       ****        ****             ****                 ****
******************************************************************************

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Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #123 WESTCHESTER PARKWAY @ PERSHING DRIVE
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.283
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       26                Level Of Service:                  A
******************************************************************************
*** Street Name:              Pershing Drive        Westchester Parkway
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted       Protected         Permitted        Permitted
Rights:            Include         Include           Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        0  0  2  0  1    1  0  2  0  0    0  0  0  0  0    2  0  0  0  1
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:       0  382   248    55  395     0     0    0     0   182    0    78
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0  382   248    55  395     0     0    0     0   182    0    78
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    0  382   248    55  395     0     0    0     0   182    0    78
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0  382   248    55  395     0     0    0     0   182    0    78
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:    0  382   248    55  395     0     0    0     0   182    0    78
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00
Final Vol.:     0  382   248    55  395     0     0    0     0   200    0    78
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       0.00 2.00  1.00  1.00 2.00  0.00  0.00 0.00  0.00  2.00 0.00  1.00
Final Sat.:     0 2850  1425  1425 2850     0     0    0     0  2850    0  1425
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.00 0.13  0.17  0.04 0.14  0.00  0.00 0.00  0.00  0.07 0.00  0.05
Crit Vol:               248    55                   0         100
Crit Moves:             ****  ****                          ****
******************************************************************************

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```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #135 SEPULVEDA BLVD. @ WESTCHESTER PARKWAY
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.719
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       81              Level Of Service:                  C
******************************************************************************
*** Street Name:              Sepulveda Boulevard              Westchester
Parkway Approach:   North Bound South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -
R
------------|--------------||--------------||--------------||-------------
--| Control:   Prot+Permit      Prot+Permit      Prot+Permit      Prot+Permit
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    1  0  1  1  0    1  0  1  1  0
------------|--------------||--------------||--------------||-------------
--| Volume Module:
Base Vol:     180 1276    60   187 1416    57    62  227    89   179  228   145
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:  180 1276    60   187 1416    57    62  227    89   179  228   145
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:  180 1287    60   187 1416    57    62  227    89   179  228   145
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:   180 1287    60   187 1416    57    62  227    89   179  228   145
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:  180 1287    60   187 1416    57    62  227    89   179  228   145
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:   180 1287    60   187 1416    57    62  227    89   179  228   145
------------|--------------||--------------||--------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1375 1375  1375  1375 1375  1375  1375 1375  1375  1375 1375  1375
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  1.00 1.44  0.56  1.00 1.22  0.78
Final Sat.:  1375 4125  1375  1375 4125  1375  1375 1975   775  1375 1681  1069
------------|--------------||--------------||--------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.13 0.31  0.04  0.14 0.34  0.04  0.05 0.11  0.11  0.13 0.14  0.14
Crit Vol:     180                472             158         179
Crit Moves:  ****               ****            ****        ****
******************************************************************************

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```



```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #136 SEPULVEDA @ 76th/77th STREET
******************************************************************************
*** Cycle (sec):    100              Critical Vol./Cap. (X):        0.510
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29              Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard              76th/77th Street
Approach:      North Bound      South Bound      East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|--------------||--------------||--------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:           Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  3  0  1    1  0  3  0  1    2  0  1  0  1    1  0  1  0  1
------------|--------------||--------------||--------------||-------------
--| Volume Module:
Base Vol:      39 1417    34   115 1722   259   194   63    74    36   45    47
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   39 1417    34   115 1722   259   194   63    74    36   45    47
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   39 1428    34   115 1722   259   194   63    74    36   45    47
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    39 1428    34   115 1722   259   194   63    74    36   45    47
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39 1428    34   115 1722   259   194   63    74    36   45    47
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.10 1.00  1.00  1.00 1.00  1.00
Final Vol.:    39 1428    34   115 1722   259   213   63    74    36   45    47
------------|--------------||--------------||--------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 3.00  1.00  1.00 3.00  1.00  2.00 1.00  1.00  1.00 1.00  1.00
Final Sat.:  1500 4500  1500  1500 4500  1500  3000 1500  1500  1500 1500  1500
------------|--------------||--------------||--------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.32  0.02  0.08 0.38  0.17  0.07 0.04  0.05  0.02 0.03  0.03
Crit Vol:      39                574         107                 45
Crit Moves:  ****               ****        ****                ****
******************************************************************************

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```

```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #137 SEPULVEDA BLVD. @ 79th/80th STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.583
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       35                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                79th/80th Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  3  0  1    1  0  1  0  1    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      97 1279    21    37 1761   169   116   92   105    26   42    32
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   97 1279    21    37 1761   169   116   92   105    26   42    32
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   97 1290    21    37 1761   169   116   92   105    26   42    32
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    97 1290    21    37 1761   169   116   92   105    26   42    32
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   97 1290    21    37 1761   169   116   92   105    26   42    32
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    97 1290    21    37 1761   169   116   92   105    26   42    32
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.95  0.05  1.00 3.00  1.00  1.00 1.00  1.00  1.00 0.57  0.43
Final Sat.:  1500 4428    72  1500 4500  1500  1500 1500  1500  1500  851   649
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.29  0.29  0.02 0.39  0.11  0.08 0.06  0.07  0.02 0.05  0.05
Crit Vol:      97                587          116                   74
Crit Moves:  ****               ****         ****                  ****
******************************************************************************

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```



```
Baseline 2013 With Project-PM Peak
------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                 Alternative)
******************************************************************************
*** Intersection #138 SEPULVEDA BLVD. @ 83rd STREET
******************************************************************************
*** Cycle (sec):    100                Critical Vol./Cap. (X):        0.528
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       30                Level Of Service:                  A
******************************************************************************
*** Street Name:   Sepulveda Boulevard                83rd Street
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:     Permitted        Permitted        Permitted        Permitted
Rights:            Include          Include          Include          Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  2  1  0    1  0  2  1  0    0  0  1! 0  0    1  0  0  1  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      39 1333    14    42 1790    59    49   44    37     6   35    22
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   39 1333    14    42 1790    59    49   44    37     6   35    22
Added Vol:      0   11     0     0    0     0     0    0     0     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   39 1344    14    42 1790    59    49   44    37     6   35    22
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    39 1344    14    42 1790    59    49   44    37     6   35    22
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   39 1344    14    42 1790    59    49   44    37     6   35    22
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    39 1344    14    42 1790    59    49   44    37     6   35    22
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1500 1500  1500  1500 1500  1500  1500 1500  1500  1500 1500  1500
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 2.97  0.03  1.00 2.90  0.10  0.38 0.34  0.28  1.00 0.61  0.39
Final Sat.:  1500 4454    46  1500 4356   144   565  508   427  1500  921   579
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.03 0.30  0.30  0.03 0.41  0.41  0.09 0.09  0.09  0.00 0.04  0.04
Crit Vol:      39                616              130             6
Crit Moves:  ****               ****             ****            ****
******************************************************************************

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```

```
Baseline 2013 With Project-PM Peak
--------------------------------------------------------------------------------
                        --- Runway 7L/25R Runway Safety Area
--------------------------------------------------------------------------------
                      --- Level Of Service Computation Report
                 Circular 212 Planning Method (Future Volume
                                Alternative)
********************************************************************************
*** Intersection #1000 La CIENEGA BLVD. @ 104 TH STREET
********************************************************************************
*** Cycle (sec):    100                 Critical Vol./Cap. (X):        0.355
Loss Time (sec):      0 (Y+R =  4 sec) Average Delay (sec/veh):      xxxxxx
Optimal Cycle:       29                 Level Of Service:                  A
********************************************************************************
*** Street Name:     La CIENEGA BLVD.                  104 TH STREET
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||-------------
--| Control:   Prot+Permit         Permitted         Permitted         Permitted
Rights:           Include           Include           Include           Include
Min. Green:     0    0     0     0    0     0     0    0     0     0    0     0
Lanes:        1  0  1  1  0    1  0  2  1  0    1  0  1  0  1    0  0  1! 0  0
------------|---------------||---------------||---------------||-------------
--| Volume Module:
Base Vol:      91  436     7    41  599    57    74    1   173    11    2     8
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:   91  436     7    41  599    57    74    1   173    11    2     8
Added Vol:      0    0     0     0    0     0     0    0    12     0    0     0
PasserByVol:    0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:   91  436     7    41  599    57    74    1   185    11    2     8
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:    91  436     7    41  599    57    74    1   185    11    2     8
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
Reduced Vol:   91  436     7    41  599    57    74    1   185    11    2     8
PCE Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
MLF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Final Vol.:    91  436     7    41  599    57    74    1   185    11    2     8
------------|---------------||---------------||---------------||-------------
--| Saturation Flow Module:
Sat/Lane:    1425 1425  1425  1425 1425  1425  1425 1425  1425  1425 1425  1425
Adjustment:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Lanes:       1.00 1.97  0.03  1.00 2.74  0.26  1.00 1.00  1.00  0.52 0.10  0.38
Final Sat.:  1425 2805    45  1425 3904   371  1425 1425  1425   746  136   543
------------|---------------||---------------||---------------||-------------
--| Capacity Analysis Module:
Vol/Sat:     0.06 0.16  0.16  0.03 0.15  0.15  0.05 0.00  0.13  0.01 0.01  0.01
Crit Vol:      91                  219                   185    11
Crit Moves:  ****                ****                  ****  ****
********************************************************************************

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Appendix D4

Construction Vehicle Haul Routes and Distributions

Table of Contents

D4.1 Construction Vehicle Distributions D4-1

List of Tables

Table D4.1 LAX RSA Project – Project Related Construction Vehicle Routes D4-2

D4.1 CONSTRUCTION VEHICLE DISTRIBUTIONS

Table D4-1 provides vehicle distribution of construction trips expected to be using the different routes entering and exiting the study area for the proposed Project. A description of each vehicle route is provided as well as the percentage of vehicles assumed to be distributed on each route by the type of construction vehicle.

Table D4-1

LAX RSA Project – Project Related Construction Vehicle Routes

From	To	Route [1]	Percentage of Trips [2]
Employees Entering the Study Area			
I-405 South	Construction Employee Lot [3]	I-405 NB to Century WB to La Cienega SB	23%
I-405 North	Construction Employee Lot [3]	I-405 SB to La Cienega SB	21%
I-105 East	Construction Employee Lot [3]	I-105 WB to Imperial WB to Aviation NB to 104th EB to La Cienega SB	32%
North Sepulveda [4]	Construction Employee Lot [3]	North Sepulveda SB to Century EB to La Cienega SB	6%
South Sepulveda	Construction Employee Lot [3]	South Sepulveda NB to Imperial EB to Aviation NB to 104th EB to La Cienega SB	5%
East Century	Construction Employee Lot [3]	Century WB to La Cienega SB	3%
North La Cienega	Construction Employee Lot [3]	La Cienega SB	1%
South La Cienega	Construction Employee Lot [3]	La Cienega NB to Imperial WB to Aviation NB to 104th EB to La Cienega SB	0.1%
East Imperial	Construction Employee Lot [3]	Imperial WB to Aviation NB to 104th EB to La Cienega SB	5%
West Imperial	Construction Employee Lot [3]	Imperial EB to Aviation NB to 104th EB to La Cienega SB	0.03%
South Main	Construction Employee Lot [3]	South Main NB to Imperial EB to Aviation NB to 104th EB to La Cienega SB	0.1%
South Douglas	Construction Employee Lot [3]	South Douglas NB to Imperial EB to Aviation NB to 104th EB to La Cienega SB	0.3%
South Nash	Construction Employee Lot [3]	South Nash NB to Imperial EB to Aviation NB to 104th EB to La Cienega SB	0.3%
North Aviation	Construction Employee Lot [3]	Aviation SB to Century EB to La Cienega SB	1%
South Aviation	Construction Employee Lot [3]	Aviation NB to 104th EB to La Cienega SB	2%
East Lennox	Construction Employee Lot [3]	Lennox WB to La Cienega SB to Imperial WB to Aviation NB to 104th EB to La Cienega SB	0.1%
Employees Exiting the Study Area			
Construction Employee Lot [3]	I-405 South	La Cienega SB to I-405 SB Ramp	23%
Construction Employee Lot [3]	I-405 North	La Cienega SB to Imperial EB to I-405 NB Ramp	21%
Construction Employee Lot [3]	I-105 East	La Cienega SB to Imperial WB to I-105 EB Ramp	32%
Construction Employee Lot [3]	North Sepulveda [4]	La Cienega SB to 111th WB to Aviation NB to Century WB to Sepulveda NB	6%
Construction Employee Lot [3]	South Sepulveda	La Cienega SB to Imperial WB to Sepulveda SB	5%
Construction Employee Lot [3]	East Century	La Cienega SB to 111th WB to Aviation NB to Century EB	3%
Construction Employee Lot [3]	North La Cienega	La Cienega SB to 111th WB to Aviation NB to Century EB to La Cienega NB	1%
Construction Employee Lot [3]	South La Cienega	La Cienega SB	0.1%
Construction Employee Lot [3]	East Imperial	La Cienega SB to Imperial EB	5%
Construction Employee Lot [3]	West Imperial	La Cienega SB to Imperial WB	0.03%
Construction Employee Lot [3]	South Main	La Cienega SB to Imperial WB to South Main SB	0.1%
Construction Employee Lot [3]	South Douglas	La Cienega SB to Imperial WB to South Douglas SB	0.3%
Construction Employee Lot [3]	South Nash	La Cienega SB to Imperial WB to South Nash SB	0.3%

Table D4-1

LAX RSA Project – Project Related Construction Vehicle Routes

From	To	Route [1]	Percentage of Trips [2]
Construction Employee Lot [3]	North Aviation	La Cienega SB to 111th WB to Aviation NB	1%
Construction Employee Lot [3]	South Aviation	La Cienega SB to Imperial WB to Aviation SB	2%
Construction Employee Lot [3]	East Lennox	La Cienega SB to Lennox EB	0.1%
Shuttles Entering the Construction Site			
Construction Employee Lot [3]	Construction Site	La Cienega SB to 111th WB to Aviation NB	N/A
Shuttles Exiting the Construction Site			
Construction Site	Construction Employee Lot [3]	Aviation NB to 104th EB to La Cienega SB	N/A
Deliveries Entering the Construction Site			
I-405 South	Construction Site	I-405 NB to La Cienega NB to 111th WB to Aviation NB	30%
I-405 North	Construction Site	I-405 SB to Imperial WB to Aviation NB	28%
I-105 East	Construction Site	I-105 WB to Imperial WB to Aviation NB	42%
Deliveries Exiting the Construction Site			
Construction Site	I-405 South	111th EB to La Cienega SB to I-405 SB Ramp	30%
Construction Site	I-405 North	Aviation SB to Imperial EB to I-405 NB Ramp	28%
Construction Site	I-105 East	Aviation SB to Imperial EB to I-105 EB Ramp	42%

Notes:
1/ Construction approach routes provided by LAWA Ground Transportation Planning Section.
2/ The percentage of trips were obtained from the estimated 2005 Regional Transportation Plan background population of the LAX Master Plan Supplement to the Draft EIR (Table S1).
3/ The Construction Employee Lot is located at the southeast quadrant formed by the intersection of La Cienega Boulevard on the east and 104th Street on the north. Vehicles enter and exit this location via La Cienega Boulevard.
4/ Several roadways were combined with North Sepulveda Boulevard including Lincoln Boulevard, La Tijera Boulevard, and Manchester Boulevard.
Sources: LAWA Staff and Ricondo & Associates, Inc., July 2013.

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APPENDIX E

CULTURAL RESOURCES EVALUATION REPORTS

Appendix E1 – September 2012 Report

Appendix E1.1 – SHPO Concurrence

Appendix E1.2 – Historic Photographs

Appendix E1.3 – Résumés

Appendix E2 – May 2013 Supplemental Report

Appendix E2.1 – SHPO Concurrence

Appendix E2.2 – Public Comment Letter from Mr. Michael Davison

Appendix E2.3 – Project Photographs

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APPENDIX E1

SEPTEMBER 2012 REPORT

Appendix E1.1 – SHPO Concurrence

Appendix E1.2 – Historic Photographs

Appendix E1.3 – Résumés

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CULTURAL RESOURCES EVALUATION REPORT

PROPOSED RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) AND ASSOCIATED IMPROVEMENTS PROJECT

(PAVEMENT RECONSTRUCTION OF PORTIONS OF RUNWAY 7L/25R AND TAXIWAY B, EASTERLY EXTENSION OF TAXIWAY C, DEMOLITION OF AIR FREIGHT BUILDING NO. 8, AND REPLACEMENT GROUND SUPPORT EQUIPMENT FACILITY)

Los Angeles International Airport
Los Angeles, Los Angeles County, California

Prepared for:

LOS ANGELES WORLD AIRPORTS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

Prepared by:

URS Corporation
Los Angeles, CA

September 2012

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Appendix E1.1 SHPO Concurrence
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1.0 SUMMARY OF FINDINGS

The City of Los Angeles, through its aviation department Los Angeles World Airports (LAWA), proposes to construct various improvements to the Runway Safety Area (RSA) of Runway 7L/25R to enhance safety at Los Angeles International Airport (LAX). Runway 7L/25R RSA improvements at LAX (proposed Project) are being undertaken by LAWA in response to the requirements of *The Transportation, Treasury, Housing and Urban Development, the Judiciary, The District of Columbia, and Independent Agencies Appropriations Act, 2006* (Public Law 109-115), November 30, 2005. Public Law 109-115 requires completion of RSA improvements by Airport Sponsors that hold a certificate under Title 14, Code of Federal Regulations (CFR) Part 139, to meet Federal Authority Administration (FAA) airport design standards by December 31, 2015.

In addition, the proposed Project includes pavement reconstruction of the eastern portions of Runway 25R and Taxiway B; the extension of Taxiway C from Taxiway C1 to Taxiway B1 (which includes demolition of Air Freight Building No.8); and a replacement Ground Support Equipment (GSE) Maintenance Facility (hereafter collectively referred to as the proposed Project).

This Cultural Resources Evaluation Report has been prepared to document identification, recordation, and evaluation efforts for known or previously unrecorded archaeological and historic architecture resources, such as buildings, structures, objects, districts, landscapes, sites, and linear features. Cultural resources have been evaluated pursuant to Section 106 of the *National Historic Preservation Act* and its implementing regulations 36 CFR Part 800 "Protection of Historic Properties" (Section 106), *National Environmental Policy Act of 1969* (NEPA) Section (§) 102(2)(c), and in accordance with *California Environmental Quality Act* (CEQA) Guidelines §15064.5(a)(2)-(3) of the CEQA Guidelines using the criteria outlined in Public Resources Code (PRC) §5024.1. This Cultural Resources Evaluation Report is intended to serve both the Federal Aviation Administration's (FAA) need for Section 106 Consultation with the California State Historic Preservation Officer (SHPO) and LAWA for their consultation efforts with the California SHPO for state legislation.

The FAA consulted with the California SHPO on the delineation of the proposed Project's Area of Potential Effects (APE). The California SHPO concurred with FAA's delineation of the APE in letters dated March 5, 2012 and September 20, 2012 (refer to **Appendix E1.1**). The APE is congruent to the footprint of proposed direct disturbance. Defining an indirect APE for archaeology and historic architecture was determined to not be necessary because the proposed Project is not anticipated to increase aircraft operations at LAX, but improve its safety. The proposed Project will not change the number or type of aircraft using the airport. The APE is entirely within the boundaries of LAX, which is situated on the shore of the Santa Monica Bay, in the southwestern portion of Los Angeles County, California. The City of Los Angeles owns and operates LAX through LAWA, and the Airport's property is under the City of Los Angeles' jurisdiction.

The APE is a discontiguous area due to the limited extent of construction activities at different ends of Runway 7L/25R, Taxiway B, Taxiway C, and the area of the proposed replacement GSE Maintenance Facility. The APE includes the footprint of Air Freight Building No. 8, located in the Century Cargo Complex, which would be demolished as part of the proposed Project. Additionally, the APE includes the proposed western and eastern construction staging areas. The APE is in an unsectioned portion of Township 3 South and Ranges 14 and 15 West, as depicted on the Venice United States Geologic Survey (USGS) 7.5-minute quadrangle topographic series map. The approximate center point of the APE is at UTM Zone 11 370573mE, 3756087mN. The APE generally has flat topography and includes recently constructed airport-related buildings and modern temporary structures, as well as historic-period[1]

[1] For purposes of this project, 'historic-period' refers to any building, structure, object, district, landscape, site, or linear features, that is older than 45 years and not listed or eligible for listing to a national, state, or local register.

runways, taxiways, approach-lighting trestles, and a building. The APE is primarily covered with hardscape and pavement. The APE includes a vertical APE, or the vertical footprint of the proposed direct disturbance, of a maximum of 6 feet deep for the runway and taxiway improvements, and 10 feet deep and approximately 25 feet high for the proposed replacement GSE Maintenance Facility. There is no vertical APE for the construction staging areas since materials will be placed on the surface temporarily and there will be no ground disturbance. Because of the previous ground disturbances due to the hardscaping and existing pavement, no cultural resources are expected to be present in the vertical APE.

Cultural resources investigations undertaken to support preparation of this report included archival research and field surveys. A reconnaissance archaeological and historic architecture field survey was completed of the APE to account for cultural resources that are known or appeared to be more than 45 years of age (*i.e.,* constructed in 1967 or earlier) and require additional study. Primary and secondary sources concerning the project site and general area from the Native American Heritage Commission (NAHC), the South Central Coastal Information Center (SCCIC), the LAX Master Plan Final Environmental Impact Report (EIR)/Environmental Impact Statement (EIS) (FAA and LAWA 2005), consultation with LAWA, the Flight Path Learning Center, the Los Angeles Public Library, and various online sources (*e.g.,* USGS Historical Topographic Maps, etc.) were reviewed.

As a result of the archival research and field surveys, two historic-period resources were identified in the proposed Project APE: Runway 7L/25R and its related features (non-historic and historic-period taxiways including Taxiways B and C, non-historic-period blast fence, and non-historic-period approach lighting systems), and Air Freight Building No.8. and its related feature (building's parking apron). One previously recorded cultural resource, a historic shell scatter along the base of a steep sided hill (19-000691), has been recorded in the proposed Project APE; however, it has been evaluated as ineligible for listing in the National Register of Historic Places (NRHP), California Register of Historic Resources (CRHR), or a local register due to lack of evidence found at the site and extensive disturbance of the area (FAA and LAWA 2005). No archaeological resources were identified during the survey.

This assessment concludes that no previously recorded or newly identified cultural resources within the APE are eligible for listing in the NRHP. Therefore, the proposed Project is not anticipated to have adverse effects to historic properties. Additionally, no cultural resources are eligible for listing in the CRHR or are considered historical resources for CEQA purposes (per PRC §15064.5[a][4]). Therefore, the proposed Project is not anticipated to have significant impacts to historical resources.

2.0 PROJECT DESCRIPTION AND AREA OF POTENTIAL EFFECTS

2.1 Description of proposed Project

The proposed Project consists of the following four components: Runway 7L/25 RSA improvements; pavement reconstruction of the eastern portions of Runway 25R and Taxiway B; extension of Taxiway C and demolition of Air Freight Building No. 8; and construction of a replacement GSE Maintenance Facility.

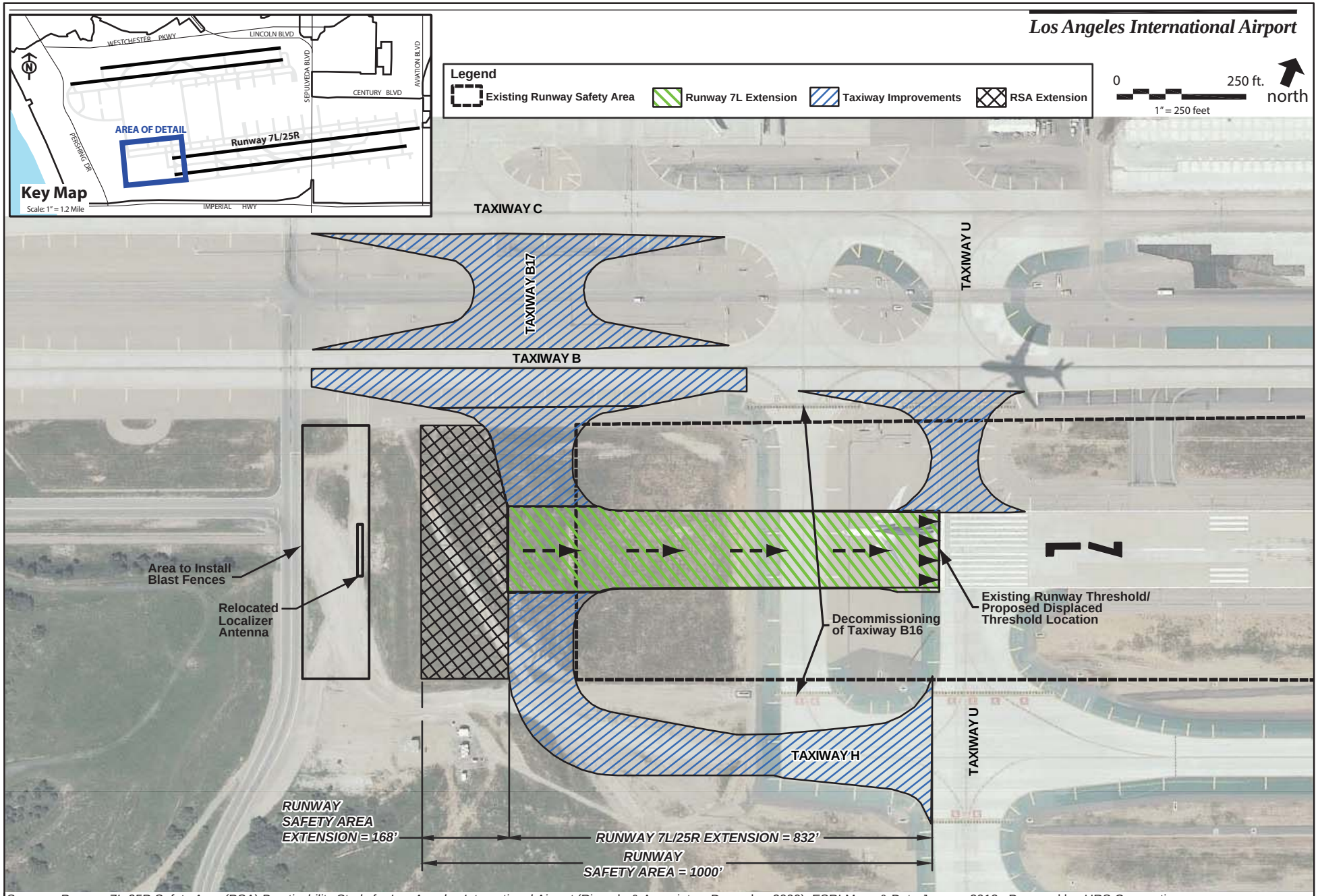
Runway 7L/25R RSA Improvements. The Runway 7L/25R RSA improvements primarily involve Runway 7L (west end of Runway 7L/25R), defined on the west by a north-south service road, to the east by Taxiway U, to the south by Taxiway H, and to the north by Taxiway C. The elements of the proposed Runway 7L/25R RSA improvements (shown in **Figure 1**) would:

- Extend the Runway 7L, 832 feet to the west. The Runway 7L threshold will remain at its current location for landings, resulting in an 832-foot displaced threshold;
- Construct an RSA, approximately 500 feet wide by 168 feet long, beyond the new Runway 7L runway end;
- Construct blast fences west of the Runway 7L extension;
- Extend Taxiway H 832 feet to the west;
- Construct a new taxiway connector (B17) from Taxiway H to Taxiway C;
- Decommission Taxiway B16 from Taxiway H to Taxiway C;
- Reconstruct a portion of Taxiway B at the intersection with new Taxiway B17;
- Relocate the existing Localizer Antenna to the west;
- Install in-pavement approach lighting system (ALS) in the footprint of the extended Runway 7L; and
- Modify the existing runway and taxiway lighting and markings in the newly constructed pavements.

The Runway 7L extension would increase the physical length of Runway 7L/25R from 12,091 feet to 12,923 feet. Although the additional pavement can be used for start of take-off rolls to the east, the Runway 7l/25R landing thresholds will remain at their present locations. In conjunction with the additional runway pavement, LAWA will implement the use of declared distances on Runway 7L/25R to allocate pavement at each end of the runway (along with the graded RSA areas), to provide an equivalent RSA for aircraft arrival and departure operations. This approach allows LAWA to satisfy RSA requirements without substantially affecting the amount of runway currently available for take-off and landing operations.

The existing Runway 25R localizer antenna array, a component of the Instrument Landing System (ILS) that provides runway centerline guidance to landing aircraft, would be relocated approximately 285 feet from the new end of Runway 7L. The existing localizer equipment shelter would not need to be relocated. New blast fences would be installed west of the extended Runway 7L to protect the existing service roads and the localizer antenna from jet blast.

When Runway 7L/25R is extended 832 feet to the west, the Runway 7L landing threshold location will remain unchanged and will be remarked as a displaced threshold. Through the use of the displaced threshold, associated pavement markings, and of in-pavement approach lighting systems, aircraft can begin their Runway departure roll at the western-most portion of the extended runway pavement.



Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); ESRI Maps & Data January 2012 ; Prepared by: URS Corporation.

FIGURE 1	**Runway 7L/25R RSA Improvements**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**

Currently, the existing Medium Intensity Approach Light Systems (MALSR) serving Runway 7L comprises multiple elevated light fixtures that must remain fixed at their current location and configuration. Accordingly, portions of the existing tower-mounted light fixtures must be replaced with in-pavement lights when the runway pavement is extended westward. The use of in-pavement lighting will allow Runway 7L departures west of the displaced threshold (**Figure 2**).

Runway 7L/25R and Taxiway B Pavement Reconstruction. Pavement reconstruction activities would be undertaken at the locations listed below, and the proposed Project elements are shown in **Figure 3**.[2] These elements include:

- Full-depth reconstruction of existing pavement from the Runway 25R threshold to Taxiway F (1,225 feet long by 150 feet wide by approximately 6 feet deep);
- Full-depth reconstruction of the keel (center) section of Runway 7L/25R from Taxiway F westward to Taxiway J (1,328 feet long by 50 feet wide by approximately 6 feet deep);
- Replace existing pavement surface of the keel section of Runway 7L/25R keel from Taxiway J west to the Taxiway N (5,986 feet long by 50 feet wide);
- Full-depth reconstruction of Taxiway B, from Taxiway C3 to its terminus near the Runway 25R threshold, including connecting taxiways (3,173 feet long by 176 feet wide by approximately 6 feet deep); and,
- Installation of in-pavement lights.

Taxiway C Extension. Taxiway C would be extended eastward from Taxiway C1 to Taxiway B1. Elements of the extension of Taxiway C (shown in **Figure 3**) would:

- Realign and extend Taxiway C approximately 960 feet eastward to Taxiway B1. The centerline of the new section of Taxiway C would have a separation distance of approximately 281 feet from the centerline of Taxiway B;
- Realign a portion the vehicle service road north of the Taxiway C extension;
- Demolish Air Freight Building No. 8 to accommodate the realigned service road; and,
- Pave the site of the demolished Air Freight Building No. 8 site and the area around this site with apron pavement suitable for aircraft parking.

Replacement GSE Maintenance Facility. The replacement GSE Maintenance Facility would be located on a 2.86-acre site along Imperial Highway, to the south of Taxiway A (**Figure 4**).[3] Elements of the replacement GSE Maintenance Facility include:

- Removal and relocation of 7 temporary structures (trailers) present at the proposed replacement GSE Maintenance Facility site to other parts of the Airport property;
- Removal of existing concrete;
- Grading and excavation (10 feet) for foundation; and
- Construction of a 60,000-square-foot, 2-story GSE facility.

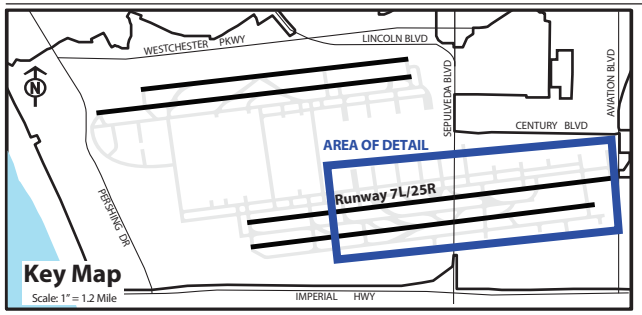
[2] HNTB, *Runway 25R & Taxiway B East End Rehabilitation and Taxiway C Extension Preliminary Engineer's Report*, 2011.
[3] Herb Glasgow, LAWA, personal communication, January 2012.

a. Existing Approach Light System (Towers) at South Airfield Runway 7L (Looking West).

b. Existing North Airfield Runway 24L (Looking West) In-Pavement Approach Light System, Similar to Proposed Runway 7L In-Pavement Approach Light System.

Source: LAWA 2012; URS Corporation - January 2012; Prepared by: URS Corporation

FIGURE 2	**Existing and Proposed Airfield Lighting**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**



Los Angeles International Airport

LEGEND

PAVEMENT RECONSTRUCTION PROJECT

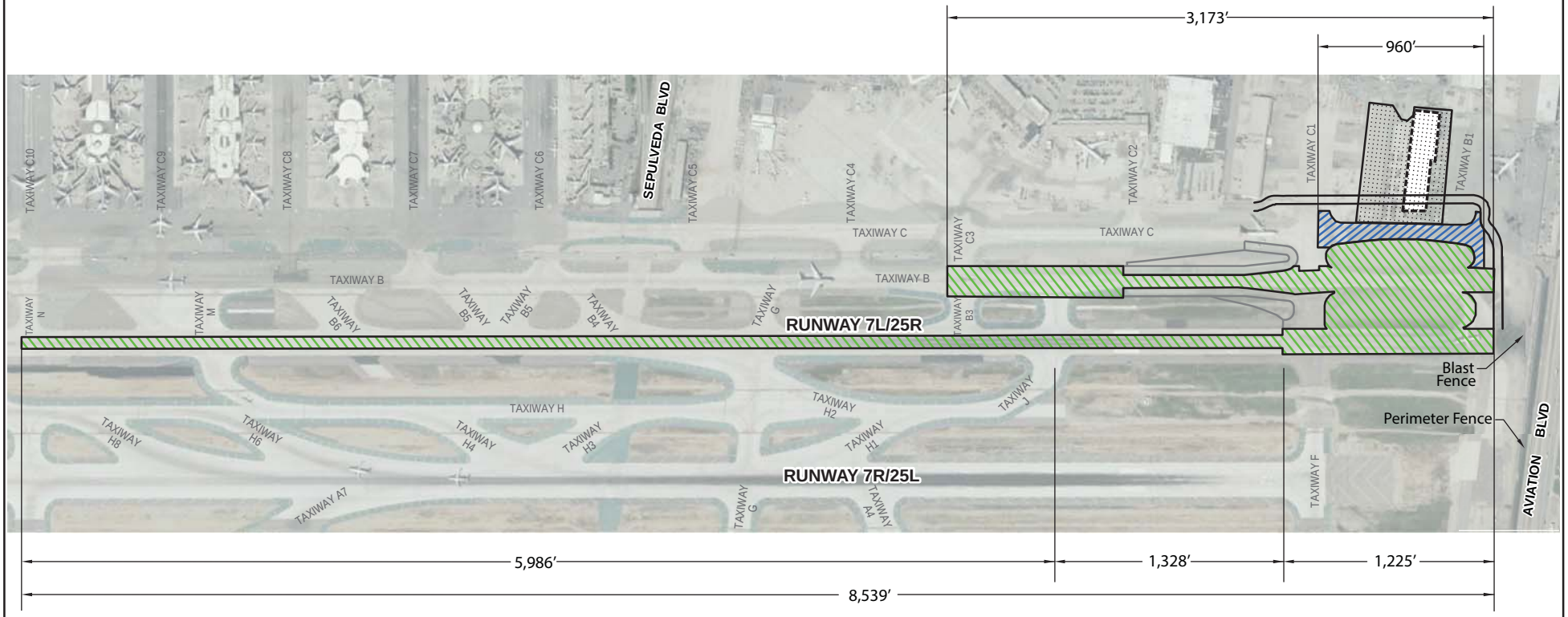
- Pavement Reconstruction

TAXIWAY C EXTENSION

- Taxiway C Extension
- Existing Air Freight Building No. 8 (To Be Demolished)
- New Aircraft Parking Apron
- Relocated Access Road

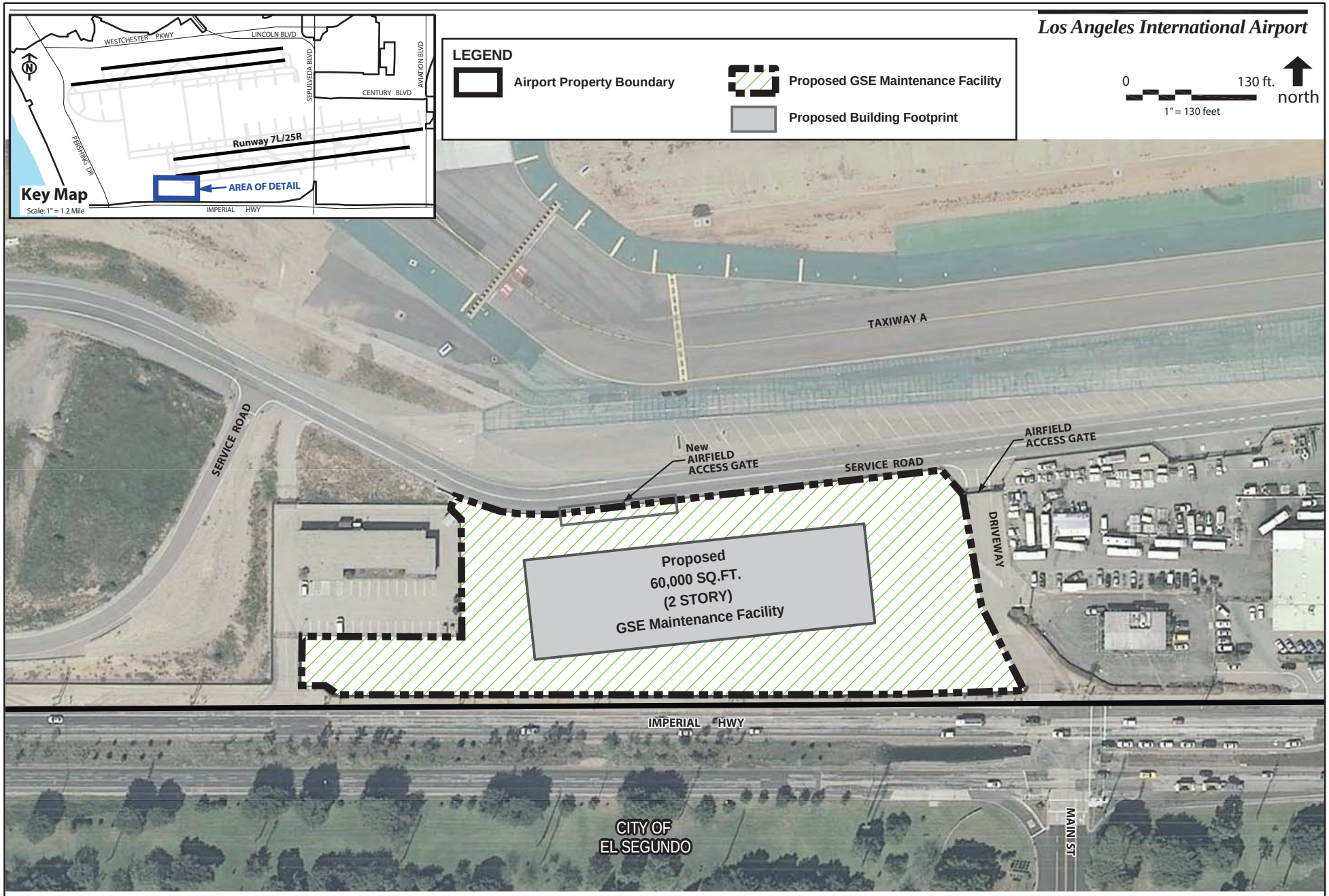
0 1300 ft. north

1" = 1300 feet



Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); *Runway 25R & Taxiway B East End Rehabilitation and Taxiway C Extension Preliminary Engineer's Report* (HNTB, 2011); ESRI Maps & Data January 2012 ; Prepared by: URS Corporation.

FIGURE 3	**Runway 25R and Taxiway B Pavement Reconstruction and Taxiway C Extension**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**



Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); ESRI Maps & Data January 2012 ; Prepared by: URS Corporation.

FIGURE 4	**Proposed Ground Support Equipment Maintenance Facility**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**

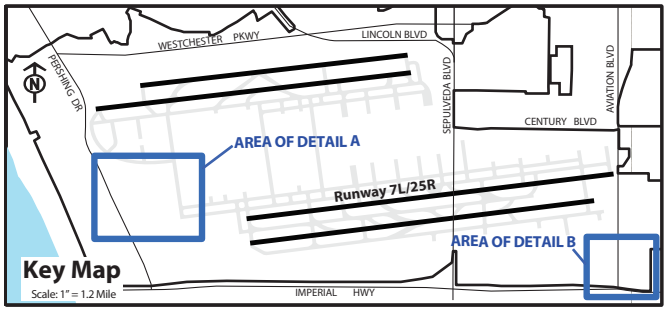
2.2 Area of Potential Effect

The APE for archaeology and historic architecture for the proposed Project includes boundaries of the entire area that will have physical disturbance, including construction staging areas (**Figure 5**). The APE includes the various demolition, construction, and navigational aid work described in the enclosed listing, such as runway shifts, repaving, relocating and constructing service roads and taxiways, modifications to existing navigation aids, building demolitions, and construction staging areas. All supplies and equipment would be stored in either of the two construction staging areas. The western staging area is located west of the end of Runway 7L and the eastern staging area is located in the former Continental City site, off Imperial Highway/Aviation Blvd. The staging areas will not create ground disturbance other than the normal effects of driving over and storing materials on the surface. LAWA delineated the APE boundaries through consultation with FAA. As the proposed Project would not increase the operational capacity of LAX, delineation of an indirect APE is not required. The proposed Project will not change the number or type of aircraft using the airport. In addition, due to non-historic period and recent construction within LAX's boundaries, the demolition of Air Freight Building No.8 as part of the proposed Project would not cause changes to the area's historic setting, context, or viewshed.

The APE is in an unsectioned portion of Township 3 South and Ranges 14 and 15 West, as depicted on the Venice USGS 7.5-minute quadrangle topographic series map. The approximate center point of the APE is at UTM Zone 11 370573mE, 3756087mN. The APE generally has flat topography and includes recently constructed airport-related buildings and modern temporary structures, as well as historic-period[2] runways, taxiways, approach-lighting trestles, and a building. The APE is primarily covered with hardscape and pavement.

The State Historic Preservation Office (SHPO) concurred with the delineation of the APE presented in **Figure 6** for the Section 106 consultation process in letters dated March 5, 2012 and September 20, 2012. These letters are included in **Appendix E1.1**.

[2] For purposes of this project, 'historic-period' refers to any building, structure, object, district, landscape, site, or linear features, that is older than 45 years and not listed or eligible for listing to a national, state, or local register.



Legend

- Airport Property Boundary
- Proposed Staging Areas

north
1" = 700 feet

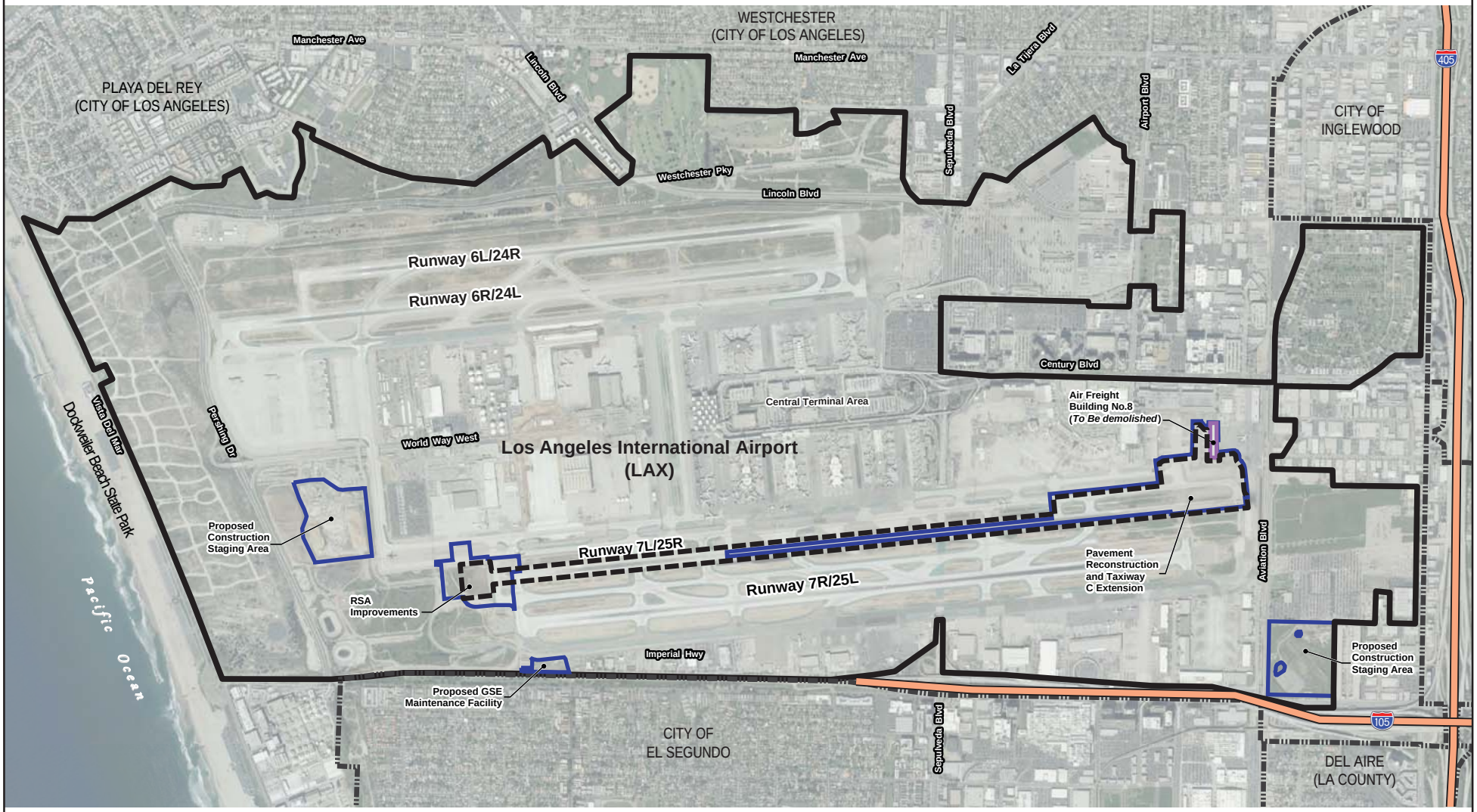
A. Proposed Western Staging Area

north
1" = 700 feet

B. Proposed Eastern Staging Area (Former Continental City site)

Source: LAWA 2012; URS Corporation, 2012; ESRI Maps and Data - January 2012; Prepared by: URS Corporation

FIGURE 5	**Proposed Construction Staging Areas**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**



Sources: LAWA, 2012; URS, 2012; ESRI Maps & Data, January 2012 ; Prepared by: URS Corporation.

FIGURE 6	**Area of Potential Effect**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**

3.0 REGULATORY SETTING

Cultural resources are typically buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, or scientific importance. Numerous laws, regulations, and statutes on both the federal and state levels seek to protect and target the management of cultural resources.

3.1 Federal Regulations

Historic Sites Act (1935). The *Historic Sites Act*, promulgated at 16 USC 461 et. seq., declares a national policy to preserve historic sites, buildings, antiquities, and objects of national significance, including those located on refuges. The Act provides procedures for designation, acquisition, administration, and protection of such sites.

National Historic Preservation Act, as Amended (1966). The *National Historic Preservation Act* (NHPA) declares federal policy to protect historic sites and values in cooperation with other nations, states, and local governments. The NHPA establishes a program of grants to assist states with historic preservation activities. Subsequent amendments designated the SHPO as the individual responsible for administering state-level programs. The Act also created the President's Advisory Council on Historic Preservation (ACHP). Federal agencies are required to consider the effects of their undertakings on historic resources, and to give the ACHP a reasonable opportunity to comment on those undertakings. A lead federal agency will be responsible for project compliance with NHPA Section 106 and its implementing regulations, set forth by the ACHP at 36 CFR Part 800.

National Environmental Policy Act, as Amended (1969). Under NEPA, 42 USC §§4321-4327, federal agencies are required to consider potential environmental impacts and appropriate mitigation measures for projects with federal involvement. If the proposed Project has federal involvement (*e.g.*, a Section 404 Permit under the *Clean Water Act*), the lead federal agency will be responsible for project compliance with NHPA Section 106 and its implementing regulations, set forth by the ACHP at 36 CFR Part 800.

Archaeological and Historic Preservation Act (1974). Under 16 USC 469-469c, the *Archaeological and Historic Preservation Act* (AHPA) requires federal agencies to provide notice to the Secretary of the Interior of any dam constructions, and if archaeological resources are found, for their recovery or salvage. The law applies to any agency whenever it receives information that a direct or federally assisted activity could cause irreparable harm to prehistoric, historic, or archaeological data. Up to 1 percent of project funds could be used to pay for salvage work. The NHPA also authorizes additional funding to be made available for this purpose.

American Indian Religious Freedom Act (1978). The *American Indian Religious Freedom Act*, 42 USC 1996, *et. seq.*, regulated under 43 CFR Part 7, has been established to protect religious practices, ethnic heritage sites, and land uses of Native Americans. The Act makes it a policy to protect and preserve for American Indians, Eskimos, Aleuts, and Native Hawaiians their inherent right of freedom to believe, express, and exercise their traditional religions. The Act allows them access to sites, use and possession of sacred objects, and freedom to worship through ceremonial and traditional rights. It further directs various federal departments, agencies, and other instrumentalities responsible for administering relevant laws to evaluate their policies and procedures in consultation with Native American traditional religious leaders to determine changes necessary to protect and preserve Native American cultural and religious practices.

Archaeological Resources Protection Act (1979). The *Archaeological Resources Protection Act* (ARPA) supplements the provisions of the Antiquities Act of 1906, and declares it illegal to excavate or remove from federal or Native American lands any archaeological resources without a permit from the land manager (or federal agency with jurisdiction over those lands). Permits may be issued only to educational or scientific institutions, and only if the resulting activities will increase knowledge about archaeological resources. Major penalties for violating the law are included. Regulations found at 43 CFR Part 7 state that the ultimate disposition of materials recovered as a result of permitted activities excavated

from public lands remain the property of the United States. Those excavated from Indian lands remain the property of the Indian or Indian tribe having rights of ownership over such resources.

Native American Graves Protection and Repatriation Act (1990). The *Native American Graves Protection and Repatriation Act* (NAGPRA), 25 USC 3001 *et. seq.*, defines cultural items, sacred objects, and objects of cultural patrimony, and establishes ownership hierarchy for remains found on federal lands. It also provides for specific case review, allows excavation of human remains, and stipulates return of the remains according to ownership. NAGPRA also sets penalties for violations of the Act, calls for cultural resource inventories, and has provisions for the return of specified cultural items to the appropriate Native American tribe(s) and/or Native Hawaiian organization(s). NAGPRA is initiated when the project and the finds are situated on federal lands.

3.2 State Regulations

In California, cultural resources include archaeological and historical objects, sites, and districts; historic buildings and structures; cultural landscapes; and sites and resources of concern to local Native American and other ethnic groups. Compliance procedures are set forth in the California Environmental Quality Act (CEQA), California Public Resources Code (PRC) §15064.5 and §15126.4. The primary applicable state laws and codes are presented below.

California Native American Graves Protection and Repatriation Act (2001). In the California Health and Safety Code, Division 7, Part 2, Chapter 5 (§§8010-8030), broad provisions are made for the protection of Native American cultural resources. The Act sets the state policy to ensure that all California Native American human remains and cultural items are treated with due respect and dignity. The Act also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the Act outlines the mechanism with which California Native American tribes not recognized by the federal government may file claims to human remains and cultural items held in agencies or museums.

California Public Resources Code, §5020. This California code created the California Historic Landmarks Committee in 1939, and authorizes the Department of Parks and Recreation to designate Registered Historical Landmarks and Registered Points of Historical Interest.

California Public Resources Code, §5097.9. Procedures are detailed under California PRC §5097.9 for actions taken whenever Native American remains are discovered. No public agency, and no private party using or occupying public property, or operating on public property, under a public license, permit, grant, lease, or contract made on or after July 1, 1977, shall in any manner whatsoever interfere with the free expression or exercise of Native American religion as provided in the U.S. Constitution and the California Constitution; nor shall any such agency or party cause severe or irreparable damage to any Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property, except on a clear and convincing showing that the public interest and necessity so require. The California Native American Heritage Commission (NAHC), pursuant to §5097.94 and §5097.97, shall enforce the provisions of this chapter.

California Health and Safety Code, §7050.5. Under this code, every person who knowingly mutilates or disinters, wantonly disturbs, or willfully removes any human remains in or from any location other than a dedicated cemetery without authority of law is guilty of a misdemeanor, except as provided in PRC §5097.99. In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined the remains to be archaeological. If the coroner determines that the remains are not subject to his or her authority, and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the NAHC.

California Health and Safety Code, §7051. Under this code, every person who removes any part of any human remains from any place where it has been interred, or from any place where it is deposited while awaiting interment or cremation, with intent to sell it or to dissect it, without authority of law, or written permission of the person or persons having the right to control the remains under §7100, or with malice or wantonness, has committed a public offense that is punishable by imprisonment in the state prison.

California Code of Regulations, Title 14, §4307. Under this state preservation law, no person shall remove, injure, deface, or destroy any object of paleontological, archaeological, or historical interest or value.

3.3 Significance Criteria

Federal and state significance criteria, as well as the conformity between these criteria, are presented below because this report is intended to meet both the FAA's need for NHPA Section 106 consultation requirements with the California SHPO, and for LAWA's consultation efforts for the project.

Potential significance of buildings, structures, or sites is determined by applying NRHP and CRHR criteria. In order to be eligible for a registry, a must be significant within a historic context, and meet certain other criteria. According to the National Park Service "…the significance of an historic property can be judged and explained only when it is evaluated within its historic context. Historic contexts are those patterns, themes, or trends in history by which a specific occurrence, property, or site is understood and its meaning made clear" (NPS, 1991).

The National Park Service has defined three main categories of historic contexts: local, state, and national. A local historic context "represents an aspect of the history of a town, city, county, cultural area, or region, or any portion thereof" (NPS, 1991). A state historic context represents "an aspect of history of the state as a whole" (NPS, 1991). Properties important within a national context represent "an aspect of the history of the United States as a whole" (NPS, 1991).

3.3.1 Federal Significance Criteria

In order to be eligible to the NRHP within its historic context, a property must demonstrate significance under one or more of the following criteria (36 CFR §60.4):

A. Is associated with an event, or series of events that have made a significant contribution to the broad pattern of history;

B. Has an association with the lives of people significant in the past;

C. Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or

D. Has yielded or may be likely to yield information important in prehistory or history.

Aside from meeting a NRHP criterion, a potential historical resource must also retain its historic integrity. Historic integrity is the ability of a property to convey its significance, and is comprised of seven aspects: location, design, setting, materials, workmanship, feeling, and association. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance.

3.3.2 State Significance Criteria

In order to be eligible to the CRHR within its historic context, a property must demonstrate significance under one or more of the following criteria (PRC §15064.5):

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory.

Aside from meeting a CRHR criterion, a potential historical resource must also retain its historic integrity. Historic integrity is the ability of a property to convey its significance, and is comprised of seven aspects: location, design, setting, materials, workmanship, feeling, and association. The evaluation of integrity is sometimes a subjective judgment, but it must always be grounded in an understanding of a property's physical features and how they relate to its significance.

Section 15064.5 of CEQA also assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. These procedures are detailed under California PRC §5097.98.

Impacts to "unique archaeological resources" and "unique paleontological resources" are also considered under CEQA, as described under PRC §21083.2. A unique archaeological resource implies an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge there is a high probability that it meets one of the following criteria:

a) The archaeological artifact, object, or site contains information needed to answer important scientific questions, and there is a demonstrable public interest in that information;
b) The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
c) The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

The lead agency shall first determine whether an archeological resource is an historical resource before evaluating the resource as a unique archaeological resource (CEQA Guidelines 15064.5 [c] [1]). A non-unique archaeological resource is an archaeological artifact, object, or site that does not meet the above criteria. Impacts to non-unique archaeological resources and resources that do not qualify for listing on the CRHR receive no further consideration under CEQA.

Under CEQA §15064.5, a project would potentially have significant impacts if it would cause substantial adverse change in the significance of one of the following:

a) A historical resource (*i.e.,* a cultural resource eligible for the CRHR);
b) An archaeological resource (defined as a unique archaeological resource which does not meet CRHR criteria);
c) A unique paleontological resource or unique geologic feature (*i.e.,* where the project would directly or indirectly destroy a site or resources); or
d) Human remains (*i.e.,* where the project would disturb or destroy burials).

A non-unique archaeological or paleontological resource is given no further consideration, other than the simple recording of its existence, by the lead agency.

3.3.3 Conformity of Federal and State Evaluation Criteria

The criteria for eligibility for the CRHR are very similar to those that qualify a property for the NRHP, which is the significance assessment tool used under the NHPA. The criteria of the NRHP apply when a project has federal involvement. A property that is eligible for the NRHP is also eligible to the CRHR. All potential impacts to significant resources under a federal agency must be assessed and addressed under the procedures of NHPA Section 106 of the NHPA, set forth at 36 CFR Part 800. All resources encountered during the project, with the exception of isolate artifacts and isolate features that appear to lack integrity or data potential, will be evaluated for significance according to NHPA Section 106.

4.0 ENVIRONMENTAL AND CULTURAL SETTING

4.1 Natural Setting

LAX is located at the edge of the Los Angeles Basin, adjacent to Santa Monica Bay, in the southwestern portion of Los Angeles County, California (**Figure 7**). The general environmental setting of LAX is characterized by highly urbanized development on the north, east, and south sides of the airport. Major freeway and rail lines are located to the east and south, while the Los Angeles/El Segundo Dunes are located to the west (**Figure 8**). These dunes are considered the largest extant remnant of one of five major sand dune complexes that historically occurred in California, south of San Francisco (Getchell and Atwood 2006). These dunes cover approximately 307 acres; of these 202.8 acres have been designated as the El Segundo Blue Butterfly Habitat Restoration Area. Historically the area once supported a vernal pool/grassland complex; however repeated grading of the area has modified the substrate and as a result vernal pools no longer exist in the area.

The local climate of the Los Angeles Basin is typified by warm, hot to dry summers and mild, somewhat rainy winters. The climate, sometimes classified as Subtropical-Mediterranean, consists of two seasons. The rainy season extends from late October through February, though may extend into March. Occasional monsoon type thunderstorms can occur during the summer time. Smog and air pollution occasionally gather in the coastal basin during periods of little air movement.

4.2 Prehistory

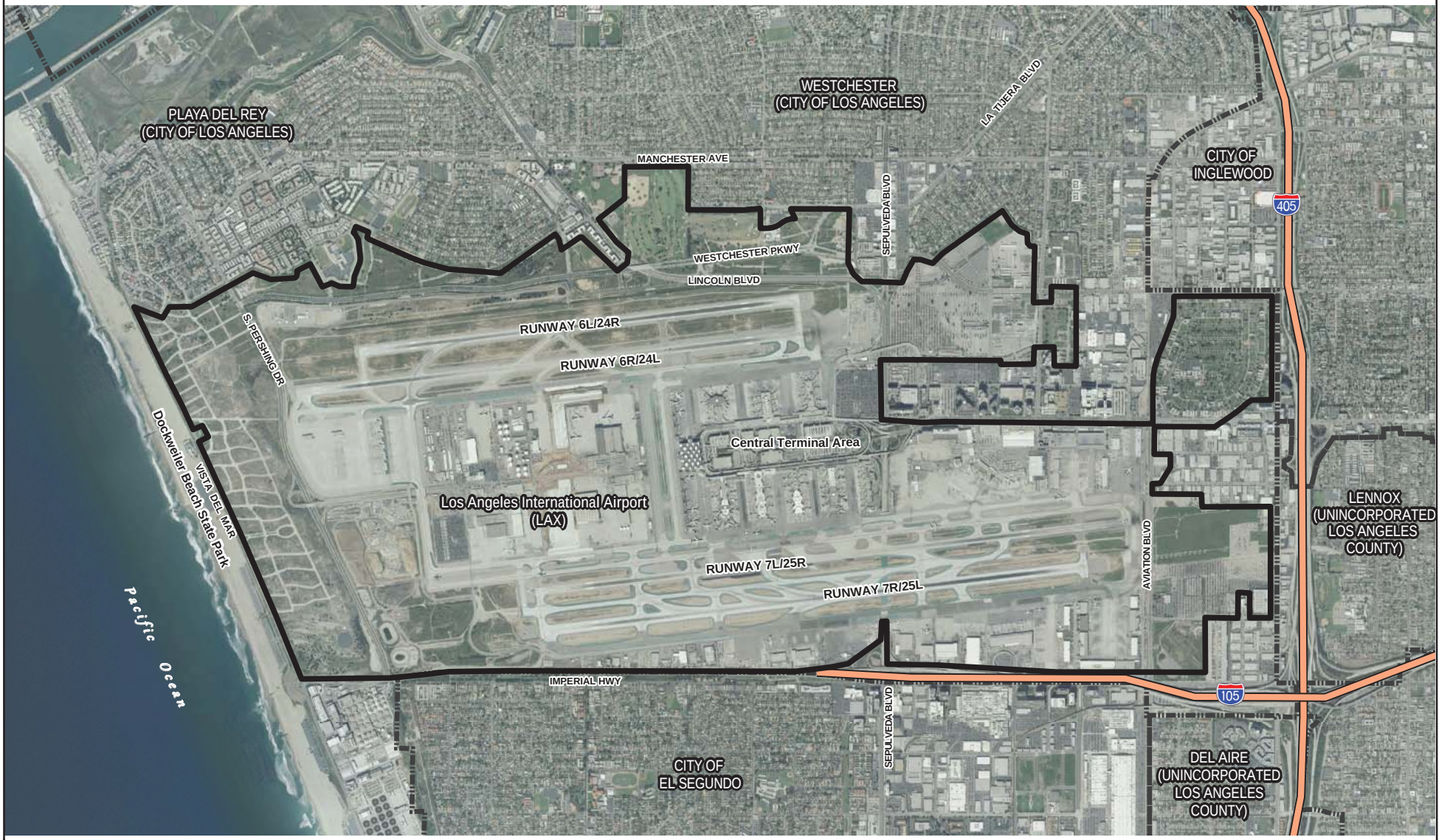
Unless otherwise noted, the prehistory is extracted from the LAX Master Plan Final EIS/EIR (FAA and LAWA, 2005).

The oldest directly dated human remains from coastal southern California are those of the “Los Angeles Man.” These remains were uncovered in a fragmentary condition at a depth of approximately four meters (13 feet) below the surface of the river bed near Ballona Creek, which is approximately 1.75 miles north of LAX. The discovery was made in 1936, and in the months that followed, the remains of a mammoth were found at the same general depth some 400 meters (approximately 1,300 feet) from the human skeleton. It is believed that the Ballona Creek region had a human population prior to the extinction of the North American Mammoth.

Los Angeles County’s oldest possible remains associated with the Milling Stone period (6,500-3,000 B.P.) are those of “La Brea Woman.” This skeletal material was recovered from the La Brea Tar Pits along with a mano (milling stone). The bones were radiocarboned and dated to 9,000 years (+/- 80) before present. Thus, the earliest date for the Milling Stone period in this region is circa 7,000 B.C. None of the sites within the boundaries of the APE were identified as having a definite association with the Milling Stone period.

Source: LAWA 2012; ESRI Maps and Data - January 2012; Prepared by: URS Corporation

FIGURE 7	**Regional Map**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**



Source: LAWA, 2012; ESRI Maps and Data, January 2012; Prepared by: URS Corporation.

FIGURE 8

Airport Location and Existing Layout

**Cultural Resources Evaluation Report
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Associated Improvements Project**

The Intermediate period is little known in most areas of the U.S., but is generally thought to have begun around 1,500 to 1,000 B.C. and to have lasted through about 500 A.D. During this period, the mortar and pestle came into common usage. The mortar and pestle were used to grind acorns. Sites dating to the Intermediate period are rare in Los Angeles County, as they are rare everywhere. Many regional coastal sites which probably included Intermediate deposits have been destroyed.

During the Lake Prehistoric period, the Shoshonean-speaking people of the Great Basin migrated westward into what are now Los Angeles and Orange counties. This resulted in the displacement of the indigenous populations either northward into Ventura County or south of the San Luis Reye River in San Diego County (areas which were inhabited respectively by the Chumash and Diegenos when the Spanish arrived). Judging by dialectical differences among the various branches of the Shoshonean language, it is estimated that the "Shoshonean Migration" may have taken place at least 1,000 years ago and perhaps as many as 1,500 years ago.

The APE lies within a region that was occupied during the late prehistoric period by Native American groups now known as the Gabrielino. The Gabrielino may have numbered as many as 5,000 people at their peak in the pre-European contact period (estimated as 1769 in the Los Angeles basin). However, population estimates are very difficult to make because many of the Indians did not come under Spanish control and, consequently, were not included in census records.

Generally, the California Native American groups were quite peaceful and did not often offer warlike resistance to European settlement. Consequently, they did not gain any great notoriety during the settlement period. Also, the original Californians were first under the control of the Spanish and Mexican governments and only later, after most of their culture had been destroyed by disease and displacement, did they come under the control of the United States. There was only a minor Native American presence remaining in California when it became a United States possession and massive development began. Consequently, very little interest in the Native Americans and their prehistory was generated. It was many years later that the size, complexity, and extent of archaeological deposits in the state became apparent and of interest.

4.3 Historic Overview

This historic period overview is divided into three periods—the Spanish, Mexican, and American periods—with an emphasis on the American period, because the cultural resources expected to be encountered and evaluated in the project site would be representative of this period.

The following historic period overviews are excerpted from *Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project* (2006) and *Hangar One National Register of Historic Places Registration Form* (1991).

4.3.1 Spanish Period

The first European account of the area to become Los Angeles County was by Portuguese navigator Juan Rodriguez Cabrillo, who led a Spanish expedition along the California coast in 1542-1543. Cabrillo noted the numerous campfires of the Gabrielino and thus named the area the "Bay of Smokes." Spain's presence in the region was only intermittent for approximately 200 years. Then, because of the possibility of territorial encroachment by the British and Russians from the north, Spanish Governor of Baja California Gaspar de Portola was instructed to lead a land-sea expedition to colonize Alta (upper) California in the 1760s.

On September 8, 1771, Fathers Pedro Cambon and Angel Somera established the Mission San Gabriel de Arcangel near the present-day city of Montebello. In 1775, the mission was moved to its current location in San Gabriel due to better agricultural lands. This mission marked the first sustained European occupation of the Los Angeles County area. Mission San Gabriel, despite a slow start partially due to

misconduct by Spanish soldiers, eventually became so prosperous it was known as "The Queen of the Missions."

The pueblo that eventually became the City of Los Angles was established in 1781. During this period, Spain also deeded ranchos to prominent citizens and soldiers (though very few in comparison to the Mexican Period (SWCA, 2006).

4.3.2 Mexican Period

The area that became Los Angeles County saw an increase in European settlement during the Mexican Period largely due to the land grants (ranchos) to Mexican citizens by various governors (SWCA, 2006).

The land that was to become LAX was part of Rancho Ajuaje de la Centinela, which was established by Ignacio Machado in 1883. Machado traded his property in 1845 to Bruno Avila, the brother of Antonio Avila who owned the adjacent Rancho Sausal Redondo. Together the brothers owned 25,000 acres of valuable land upon which the City of Inglewood and the airport would later be built (McAvoy, 1991).

However, the Mexican Period for Los Angeles ended in early January 1847. Mexican forces fought combined U.S. Army and Navy forces in the Battle of the San Gabriel River on January 8 and in the Battle of La Mesa on January 9. On January 10, leaders of the pueblo of Los Angles surrendered all of Alta California to U.S. Army Lieutenant Colonel John C. Fremont in the Treaty of Cahuenga (SWCA, 2006).

4.3.3 American Period

Settlement of the Los Angeles region continued in the early American Period. The County was established on February 18, 1850, one of 27 counties established in the months prior to California becoming a state. Many ranchos in the County were sold or otherwise acquired by Americans, and most were subdivided into agricultural parcels or towns (SWCA, 2006). Rancho Ajuaje de la Centinela and Rancho Sausal Redondo changed ownership many times and were purchased by Sir Robert Burnett of Scotland in 1858 and sold to Daniel Freeman of Canada in 1885. Freeman helped form a land company which began the early development of the City of Inglewood.

In 1894, Andrew Bennett leased 2,000 acres (which now comprises the major part of LAX) from Freeman and planted wheat, barley, and beans. Over the next 30 years, Bennett expanded his ranch to 3,000 acres, ran a successful ranch into the 1920s, and took an active role in the development of Inglewood as a builder and developer. In the early 1920s, William M. Mines leased a small section of Bennet's ranch for an aircraft landing strip between the fields. The dirt airstrip became known as Mines Field.

Though the aviation industry was still in its infancy, the City of Los Angeles recognized its potential and began to look for an airport site. Since the federal government forbade the use of federal funds to build or develop airports, the airport had to result from local government action. In 1926, Mines Field was included on a list of 13 possible sites for a municipal airport published by the Los Angeles Chamber of Commerce. The selection of Mines Field in 1927 as the site for the 1928 National Air Races, contributed to the final decision. On July 25, 1928, the City of Los Angeles selected Mines Field for the municipal airport and leased 640 acres of ranch property for ten years for use as an airport beginning on October 1. The airport was dedicated on June 7, 1930. The same year the lease on the land was renegotiated to 50 years, a demonstration of the City's commitment to the airport.

The aviation industry developed significantly in the United States in the late 1920s. In 1930, $35 million went into airport development nationwide. Because of the climate, the industry thrived in California, particularly in Southern California. By 1928, there were approximately 25 airplane and airplane motor manufacturers and about 40 aviation schools within the greater Los Angeles area. In 1920, California led the nation in the number of airports and federally licensed personnel with 154 airports, 1167 pilots, and 877 chief mechanics. Other municipal airports in southern California, including the Metropolitan Airport

(now Van Nuys Airport) in 1928 and the Ontario Airport in 1929, were developed at the same time as Los Angeles (McAvoy, 1991).

4.4 Project-Specific Historic Overview: Los Angeles International Airport

Unless otherwise noted, this project-specific historic overview is extracted from the LAX Master Plan Final EIS/EIR (FAA and LAWA, 2005).

In 1928, in preparation for the National Air Races, under entrepreneur Cliff Henderson, who later became the first airport director of Los Angeles Municipal Airport, construction crews laid out three runways and erected grandstands, temporary buildings, fencing, access roads, utilities, and sanitary facilities (Schoneberger et al, 2009). The first permanent building at the airfield was constructed in 1929 by the Curtiss-Wright Flying School. Known as 'Hangar One,' the building was designed by Los Angeles architects Gable and Wyant in a distinctive Spanish Colonial Revival style. Additional construction followed, until there were five hangars, a 2,000-foot paved runway, and administrative offices for the then Department of Aviation.

By 1941, Los Angeles Municipal Airport had a new runway system (South Runway Complex/ 7/25 system) under construction, including a main east-west runway that was 4,660 feet long and 300 feet wide (Schoneberger et al, 2009). Plans for a new modern airport, however, were derailed by World War II. Wartime production activity at the aircraft manufacturing plants on and around the airport intensified dramatically. In 1942, the federal government assumed control of the airport and the Army Air Corps stationed planes and men at the field. Despite wartime conditions, a 1944 master plan envisioning two stages of development, an initial stage to immediately accommodate commercial operations and a long-range expansion of the field, was implemented. The Intermediate Facilities, consisting of four passenger terminals, new administrative buildings, and hangars for individual airlines, were opened on the north side of the airfield in 1946, and the runways were extended to 6,000 feet (Schoneberger et al, 2009). Runway system 6/24, to the northwest of the administration building and municipal hangars, was graded and first paved between 1941 and 1951 (historic aerial photographs and airport maps).

A boom in commercial air travel followed, accompanied by marked increases in air freight traffic. A new master plan for the Los Angeles International Airport, so named in 1949, began to be developed. In 1953, the Sepulveda Boulevard underpass was constructed, allowing two runways to pass overhead (Schoneberger et al, 2009). In 1954, in the midst of the Cold War, a Nike missile surface-to-air defense battery was located by the Army on the northwest corner of the airport; it was one of several such facilities located around the Los Angeles basin.

In 1956, a new master plan for a "jet-age" airport was developed by an architectural joint venture of several prominent Los Angeles architects. Their innovative scheme incorporated a U-shaped access road flanked by seven ticketing buildings that in turn were connected via subterranean passageways to remote satellite buildings containing the actual boarding gates. The center of the "U" contained parking, an administrative building surmounted by a state-of-the-art control tower, support facilities, and an eye-catching Theme Building. This jet-age structure, composed of parabolic arches from which a flying saucer shaped restaurant was suspended, became the symbol and centerpiece of the new airport.

In anticipation of future air travel and passenger growth, construction began on a new terminal complex in 1957 and runways were extended (Schoneberger et al, 2009). Continuing growth of both commercial and freight traffic at the airport has resulted in numerous improvements over the latter half of the Twentieth Century. These have included the development of two cargo centers, Cargo City (late 1960s) and the Imperial Cargo Complex (1982); the Bradley International Terminal (1984); and, the new Airport Traffic Control Tower (1996).

Concurrent with the evolution of the airport has been the development of an industrial center around it. Soon after the airfield opened, a few aircraft manufacturers set up shop close to the airfield. The most notable early milestones in the growth of the aircraft industry in the vicinity were the establishment of the

Douglas El Segundo plant in 1932 and the construction of the North American Aviation Inglewood factory in 1934. After the end of the World War II in 1945, industries downsized. New avenues of growth were offered in the post-war period by the Korean Conflict, the growth of civilian and commercial air traffic, the replacement of the propeller-driven fleet with jet aircraft, and the Cold War with its accompanying arms and space races. The giants of the industry such as Douglas and North American secured new contracts, and new companies appeared.

The demand for industrial space by non-aircraft concerns also resulted in the expansion of the airport industrial area. One development in particular was notable. Located just east of the south runway, the International Airport Industrial District (1950-1955) was the product of the partnership of Samuel Hayden and S. Charles Lee. The two men purchased and subdivided the 95-acre parcel and Lee, a well-known architect, designed demonstration factories, customizing facades of standardized buildings to suit the image of individual tenants. Unlike the majority of industrial improvements in the airport area, these building exhibited an awareness of post-war design trends. Another complex, which was distinguished by its architectural qualities, was constructed for cosmetic manufacturer Merle Norman north of the airport (1950-1951).

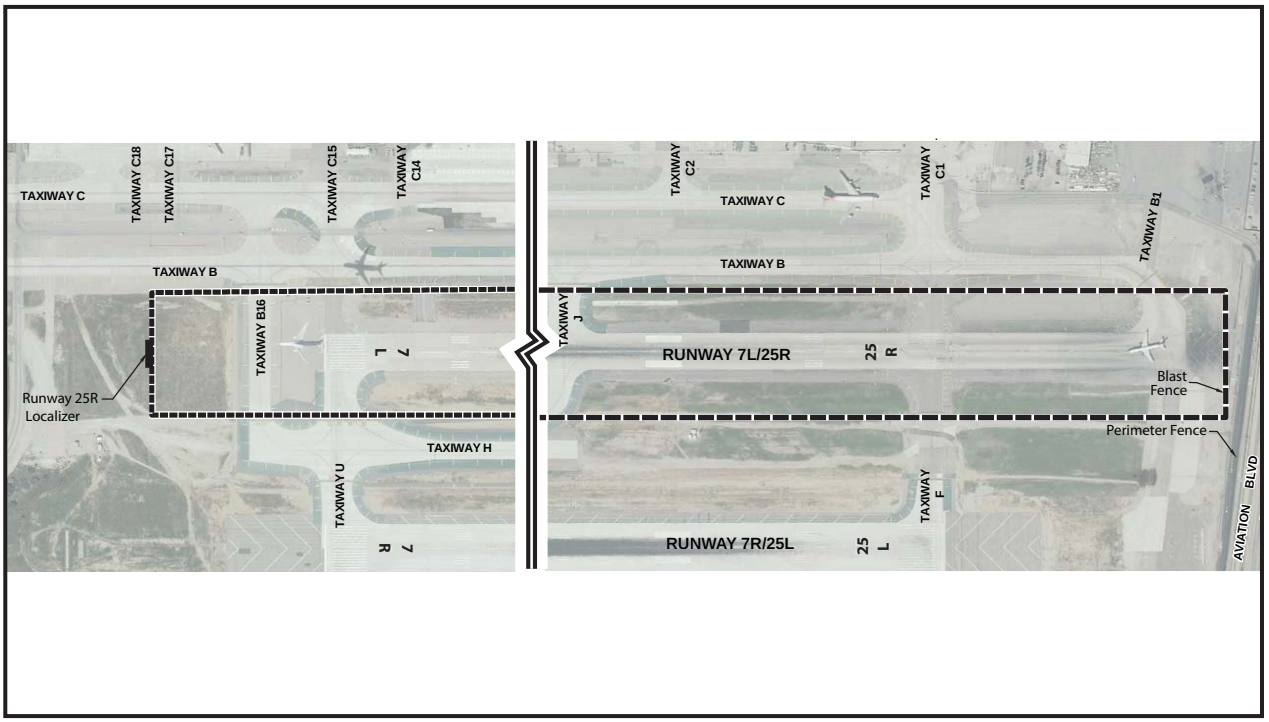
4.5 Development of the APE

As part of this cultural resource evaluation, investigators reviewed historic topographic maps from 1950, 1964, 1972, and 1981; historic aerial photographs from 1929, 1939, 1941, 1946, 1949, 1955, 1959, 1965, 1980, 1983, 1985, 1988, 1991; and LAX Airport Layout Plans and Taxiway Designation Maps from 1951, 1955, 1969, 1974, 1978, 1982, 1983, 1985, 1990, 1995, 1998, and 2002.

4.5.1 South Runway Complex (7/25 Runway System)

The runways at LAX have gone through a series of alterations since the first dirt runways were constructed in 1928 for the National Air Races. The runways were extended and reconfigured as the airport expanded to meet the growing popularity of air travel and increasing number of passengers following World War II. The first three runways, located south of the administration building and municipal hangars, were graded in 1928 and the first permanent runway was first paved at a length of 2,000 feet in 1929. A main east-west runway was constructed to the south of the administration building in 1941 and extended to 4,660 feet long and 300 feet wide (Schoneberger et al, 2009). This main runway appears to be either Runway 7L/25R or Runway 7R/25L, though it is unclear in aerial photographs. Due to the rarity of photographs during World War II, during which time the airport was concealed under a tarp camouflaged as agricultural fields, the first photographs of the current 7L/25R and 7R/25L runways were not available until 1946 (historic aerial photographs and topographic maps; Schoneberger et al, 2009). In 1946, these runways were extended to 6,000 feet. In 1953, the Sepulveda Boulevard underpass was constructed to allow for lengthening of the runways over the roadway because a longer stretch was now necessary for jets to land. A railroad-style crossing gate was initially used for aircraft to cross Sepulveda Boulevard, but safety concerns necessitated a grade separation. In 1957, the runways were extended again. The arrival of the Airbus A-380 in the first decade of the 21st century mandated major renovations at LAX, including a significant redesign and modification of certain runways and taxiways (Schoneberger et al, 2009). In 2007, as part of the South Airfield Improvement Project, Runway 7R/25L was relocated approximately 55 feet south of its original location to accommodate a new center taxiway (Taxiway H). The existing Runway 7L/25R Complex is shown in **Figure 9**.

Approach-lighting was constructed at the east end of Runway 7L/25R by 1951 to help guide pilots onto the runways, but are no longer included on maps after 1978 (LAX Airport Layout Plans and Taxiway Designation Maps). Approach-lighting trestles located at the west end of Runway 7L/25R are visible in an aerial from 1980, but no additional sources pertaining to their initial construction were available.



a. Runway 7L/25R Source: URS Corporation, 2012.

b. Air Freight Building No. 8 Source: URS Corporation, 2012.

Source: LAWA 2012; URS Corporation - January 2012; Prepared by: URS Corporation

FIGURE 9	**Resources Evaluated**	**Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**

4.5.2 Air Freight Building No. 8

Air Freight Building No. 8 has historically served two functions: industrial use as a cargo storage facility for Virgin Atlantic and administrative use as an office for Aircraft Service International Group (ASIG). The building, located just north of the eastern end of Runway 7L/25R, was constructed between 1964 and 1969 (per 1964 Venice Quadrangle USGS topographic map and 1969 Taxiway Designation Map) and is a Contemporary-style industrial/commercial warehouse (**Figure 9**). An addition was added to the building near the center of the west elevation between 1969 and 1974 (Taxiway Designation Maps) (see **Appendix E1.2**). A photograph of the property from January 2012 is included below.

5.0 RESEARCH METHODS

Investigators conducted research with/at the South Central Coastal Information Center (SCCIC), the Native American Heritage Commission (NAHC), the LAX Master Plan Final EIS/EIR (FAA and LAWA 2005), consultation with LAWA, the Flight Path Learning Center, the Los Angeles Public Library, and various online sources (*e.g.*, USGS Historical Topographic Maps, etc.) in January and February 2012.

5.1 Records Searches

On January 20, 2012, a record search and literature review from the SCCIC of the California Historic Resource Information System at California State University, Fullerton was received for the proposed Project (SCCIC File No. 12067.8789). The purpose of the record search was to ascertain whether any cultural resources had been previously identified within or adjacent to airport property and to identify any previous cultural resource investigations that may have included the current APE. The requested research included a review of ethnographic and historic literature and maps; federal, state, and local inventories of historic properties; archaeological base maps and site records; and, survey reports on file at the SCCIC. The SCCIC also reviewed the NRHP, the California Register of Historic Resources (CRHR), the California Historic Resources Inventory (HRI), the California State Historic Landmarks, the California Points of Historical Interest, the Office of Historic Preservation Historic Property Data File, and the City of Los Angeles Historic-Cultural Monuments (LAHCM) for the records search area, which comprised the entire airport property and a quarter-mile search radius buffer.

In addition, the LAX Master Plan Final EIS/EIR (FAA and LAWA, 2005) and the Caltrans Statewide Bridge Inventory of Local Agency and State Agency Bridges for Los Angeles County were reviewed to identify any additional previously recorded cultural resources within the Airport and quarter-mile search radius not reported by the SCCIC. A quarter-mile search radius is consistent with cultural resource methods in the state, where record searches are undertaken not only to identify previously recorded resources and previous investigations in the APE, but also to attain relevant contextual and background information. In a densely developed area such as LAX, the researchers considered a quarter-mile search radius sufficient to attain the contextual and background information relevant to the identification and evaluation of cultural resources within the APE.

5.1.1 Previously Conducted Investigations Within the Airport and Quarter-Mile Search Radius

The SCCIC records search results identified 54 previously conducted cultural resources investigations within the search area, which comprised the entire Airport property and a quarter-mile search radius. Of the 54 previous investigations, 12 were identified as overlapping with the APE: LA-78 (1975), LA-96, LA-309 (1987), LA-2659 (1992), LA-3673 (1987), LA-4910 (1995), LA-6239 (2000), LA-6240 (2000), LA-7851 (2006), LA-8255 (2006), LA-9925 (2009), and LA-10857 (2005). Supplementary research revealed an additional previously conducted investigation within the airport boundary that was reported as part of the LAX Master Plan Final EIS/EIR (FAA and LAWA 2005). The SCCIC reported 15 additional previous investigations located on the Inglewood, CA and Venice, CA 7.5' USGS Quadrangles that are

potentially within a quarter-mile radius of the Airport; however, these reports were not mapped by the SCCIC due to insufficient locational information.

Therefore, over the past 35 years, the APE has been investigated as part of 13 other cultural resources investigations. **Table 1** summarizes the investigations reported by the SCCIC and identified in supplementary research.

Table 1
Previously Conducted Cultural Resources Investigations at the Airport and the Quarter-Mile Search Radius*

NADB No./ SHPO ID	Author	Date	Title	7.5-minute Quadrangle	In APE
LA-69	Rosen, Martin D.	1974	Evaluation of the Archaeological Resources in Playa Del Rey Area	Venice	No
LA-78	Rosen, Martin D.	1975	Evaluation of the Archaeological Resources and Potential Impact of the Proposed Construction of Route 105 Freeway from El Segundo to Norwalk	Inglewood, South Gate	Yes
LA-96	Leonard, Nelson N. III	N/A	Archaeological Study of LAX (19-000691)	Venice	Yes
LA-125	Leonard, Nelson N. III	1975	Hyperion Plant	Venice	No
LA-309	Wlodarski, Robert J.	1987	Archaeological Reconnaissance Report for Areas Relating to the North Outfall Replacement Sewer Project, Los Angeles County, California	Beverly Hills, Hollywood	Yes
LA-513	Desautels, Roger J.	1979	Archaeological Survey Report on TT 35495, a 7.11-acre Parcel of Land on Manchester Boulevard in Playa Del Rey Area of the County of Los Angeles, California	Venice	No
LA-1975	Neuenschwander, Neal J.	1989	Cultural Resource Survey and Clearance Report for the Proposed American Telephone and Telegraph Los Angeles Airport Central Office to the Santa Monica Central Office Fiberoptic Communication Route	Beverly Hills, Venice	No
LA-2659	Wlodarski, Robert J.	1992	A Phase 1 Archaeological Study for the Sepulveda Tunnel Demonstration Project, Los Angeles International Airport, Los Angeles County, California	Venice	Yes
LA-2904	Stickel, Gary E.	1993	Draft Report a Phase I Cultural Resources Literature Search for the West Basin Water Reclamation Project	Inglewood, Redondo Beach	No
LA-3494	Briuer, Frederick L.	1976	Archaeological Impact Statement Development of the Hyperion Treatment Plant Secondary Treatment Facility W.O. 31225, Located at 12000 Vista Del Mar, Playa Del Rey	Venice	No

Table 1
Previously Conducted Cultural Resources Investigations at the Airport and the Quarter-Mile Search Radius*

NADB No./ SHPO ID	Author	Date	Title	7.5-minute Quadrangle	In APE
LA-3583	Bucknam, Bonnie M.	1974	The Los Angeles Basin and Vicinity: a Gazetteer and Compilation of Archaeological Site Information	Anaheim, Baldwin Park, Beverly Hills, El Monte, Hollywood, Inglewood, La Habra, Long Beach, Los Alamitos, Los Angeles, Malibu Beach, Newport Beach, Point Dume, Redondo Beach, San Pedro, Seal Beach, South Gate, Topanga, Torrance, Triunfo Pass, Venice, Whittier	No
LA-3673	Myra L. Frank & Associates	1987	Historic Property Survey Report North Outfall Relief Sewer	Beverly Hills, Hollywood, Inglewood, Venice	Yes
LA-3912	Unknown	1977	Historic Property Survey Airport Boulevard – Manchester Avenue to N/O 98th Street	Inglewood	No
LA-4051	D'Altroy, Terence N.	N/A	Evaluation of the Potential Impact on Archaeological Resources of the Proposed Hyperion Treatment Plant Interim Sludge Processing and Disposal System	Venice	No
LA-4560	Duke, Curt	1999	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 436-02, in the County of Los Angeles, California	Inglewood	No
LA-4647	Duke, Court	1999	Cultural Resources Assessment for Pacific Bell Mobil Services Facility La 942-04, in the County of Los Angeles, California	Venice	No
LA-4748	Duke, Court	1999	Cultural Resources Assessment for Pacific Bell Mobile Services Facility La 436-03, County of Los Angeles, California	Inglewood	No

Table 1
Previously Conducted Cultural Resources Investigations at the Airport and the Quarter-Mile Search Radius*

NADB No./ SHPO ID	Author	Date	Title	7.5-minute Quadrangle	In APE
LA-4835	Ashkar, Shahira	1999	Cultural Resources Inventory Report for Williams Communications, Inc. Proposed Fiber Optic Cable System Installation Project, Los Angeles to Riverside, Los Angeles and Riverside Counties	Baldwin Park, El Monte, Hollywood, La Habra, Los Angeles, Ontario, San Dimas, South Gate, Whittier, Yorba Linda	No
LA-4860	Lapin, Philippe	2000	Cultural Resource Assessment for Pacific Bell Mobile Services Facility La 942-02, in the County of Los Angeles, California	Venice	No
LA-4867	Wallock, Nicole	2001	Cultural Resource Assessment Cingular Wireless Facility No. La 913-13, Los Angeles County, California	Venice	No
LA-4868	Shepard, Richard S.	2000	Cultural Resources Records Search and Paleontological Resources Literature Review Report for the Sempre Energy Gas Leas Sale Project Area, Playa Del Rey and a Portion of the City of Los Angeles, Los Angeles County, California	Venice	No
LA-4891	Sylvia, Barbara	2000	A Proposed High Occupancy Vehicle Lane Between I-105 and SR-90 on I-405 in the City of Los Angeles, Los Angeles County, California	Inglewood, Venice	No
LA-4910	Raschke, Rod	1995	Paleontological and Archaeological Resources Reconnaissance of the Los Angeles International Airport (LAX) Property, Los Angeles County, California	Venice	Yes
LA-5103	Iverson, Gary	1999	Negative Archaeological Survey Report: 491601	Inglewood	No
LA-5496	Smith, Philomene C.	2000	Negative Archaeological Survey report: Constructing a Maintenance Equipment training Facility on 10 Acres of Land Underneath Interstate 105 Between La Cienega Blvd. and the Westbound Off-ramp in Los Angeles	Inglewood	No
LA-5499	Smith, Philomene C.	2000	Negative Archaeological Survey Report: to Cold Plane the Existing Pavement on Route 405 and Overlay With 30 mm of Rubberized Concrete at Selected ON/off-ramps From Vermont Ave. to Manchester Blvd.	Inglewood, Torrance	No

Table 1
Previously Conducted Cultural Resources Investigations at the Airport and the Quarter-Mile Search Radius*

NADB No./ SHPO ID	Author	Date	Title	7.5-minute Quadrangle	In APE
LA-5556	Tillman, Donald C.	1977	Historic Property Survey: Vista Del Mar – Culver Boulevard to Napoleon Street	Venice	No
LA-5558	Duke, Curt	2000	Cultural Resource Assessment for Pacific Bell Wireless Facility La 913-11 County of Los Angeles, California	Venice	No
LA-5561	Duke, Curt	2000	Cultural Resource Assessment for Pacific Bell Facility La 306-03 County of Los Angeles, California	Venice	No
LA-5562	Duke, Curt	2000	Cultural Resource Assessment for Pacific Bell Facility Sm 016-01 County of Los Angeles, California	Venice	No
LA-5564	Verity, Sue	1999	A Neighborhood History and Predictions of Archaeological Potential the Archaeology of Los Angeles XI 1971	Venice	No
LA-5710	Duke, Curt	2002	Cultural Resource Assessment AT&T Wireless Facility No. D432 Los Angeles County, California	Venice	No
LA-5760	Duke, Curt	2002	Cultural Resource Assessment at AT&T Wireless Services Facility No. 04135 Los Angeles County, California	Venice	No
LA-6233	Lortie, Frank and Paula Boghosian	1999	Historic Property Survey Report Interstate 405 / Arbor Vitae Street Interchange Inglewood	Inglewood	No
LA-6239	Wesson, Alex, Bryon Bass and Brian Hatoff	2000	El Segundo Power Redevelopment Project Cultural Resources (Archaeological Resources) Appendix J of the Application for Certification	Venice	Yes
LA-6240	Bunse, Meta and Stephen D. Mikesell	2000	El Segundo Power Redevelopment Project Historic Resources (Built Environment) Appendix K of Application for Certification	Venice	Yes
LA-6246	McKenna, Jeanette A.	2002	Cultural Resources for Proposed Expansion of Westchester High School 7400 W. Manchester Avenue in the City of Los Angeles	Venice	No
LA-6248	Hale, Alice E.	2002	Phase I Archaeological Survey Fire Station Number 5 Westchester, California	Venice	No
LA-7185	Foster, John M.	2004	Archaeological Investigation for Venice Pumping Plant Dual Force Main Project	Venice	No

Table 1
Previously Conducted Cultural Resources Investigations at the Airport and the Quarter-Mile Search Radius*

NADB No./ SHPO ID	Author	Date	Title	7.5-minute Quadrangle	In APE
LA-7715	Bonner, Wayne H.	2005	Cultural Resources Records Search Results and Site Visit for Cingular Wireless Candidate EI-014-03 (Neutrogena Property) 5705 West 98th Street, Los Angeles County, California	Venice	No
LA-7851	Getchell, Barbie Stevenson and John E. Atwood	2006	Archaeological and Historical Evaluations for the Proposed Airport Surveillance Detention Equipment, Model 3x (asde-3x) to Serve Los Angeles International Airport (LAX), Los Angeles County, California	Venice	Yes
LA-7939	Kane, Diane	2000	Historic Property Survey Report for the Route 1 Widening Project Between Culver Boulevard and Jefferson Boulevard in Los Angeles County, California	Venice	No
LA-8255	Arrington, Cindy and Nancy Sikes	2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project State of California, Volumes I and II	Anaheim, Black Mtn, Burbank, Camarillo, Canoga Park, Dana Point, El Toro, Frazier Mountain, Hollywood, Inglewood, Lebec, Liebre Mtn, Long Beach, Los Alamitos, Los Angeles, San Clemente, San Fernando, San Juan Capistrano, Santa Susana, Saticoy, Simi, South Gate, Tustin, Van Nuys, Venice, Ventura, Warm Springs Mountain, Whitaker Peak, White Ledge Peak, Whittier	Yes
LA-9923	Losee, Carolyn	2009	Cultural Resources Analysis for T-Mobile Site Number LA03358D "Intercom Building" 9800 South Sepulveda Avenue, Los Angeles, California	Venice	No

Table 1
Previously Conducted Cultural Resources Investigations at the Airport and the Quarter-Mile Search Radius*

NADB No./ SHPO ID	Author	Date	Title	7.5-minute Quadrangle	In APE
LA-9925	Richards, Michael D.	2009	A Report of the Monitoring During Excavation, Light Grading, and Planting for the Imperial Highway Stormwater Best Management Practices Project, near the Los Angeles International Airport (LAX) in the City of Los Angeles, California	Venice	Yes
LA-10160	Harper, Caprice D. and Francesca Smith	2008	Preliminary Cultural Resources Survey for the Formation of the Wiseburn Unified School District Project, Cities of El Segundo and Hawthorne, and Unincorporated Los Angeles County, CA	Inglewood, Venice	No
LA-10197	Sriro, Adam	2001	Negative Archaeological Survey Report: Erosion Control Measures at Various Locations Between La Cienega and Vermont on/off ramps on LA405	Inglewood, Torrance	No
LA-10489	Kane, Diane	2000	Historic Property Survey Report for Route 405 HOV Lane Between I-105 and SR-90 in Los Angeles County, California	Inglewood, Venice	No
LA-10732	Bonner, Wayne and Kathleen Crawford	2010	Cultural Resources Records Search, Site Visit Results, and Direct APE Historic Architectural Assessment for Clearwire Candidate CA-LOS2038/CA6587, 9750 Airport Boulevard, Los Angeles, California	Venice	No
LA-10826	Unknown	2008	Section 106 Consultation for Three-Hole Expansion and Two-Hole Course Modification, Westchester Golf Course and Los Angeles International Airport, Los Angeles, CA	Venice	No
LA-10857	Smith, Brian F.	2005	Final – LAX Master Plan Mitigation Monitoring & Reporting Program – Archaeological Treatment Plan	Venice	Yes
LA-10935	Stewart, Noah	2008	Supplemental Historic Property Survey Report – Interstate 405 at Arbor Vitae St.	Inglewood	No
LA-11031	Bonner, Wayne	2011	Direct APE Historic Architectural Assessment for AT&T Mobility, LLC Candidate LAR853-01-CLU2377-01 (Standard Aero Building), 6201 West Imperial Highway, Los Angeles County, California	Venice	No
LA-11347	Cardenas, Gloriella and Clint Helton	2011	Cultural Resources Monitoring Report for Taxilane S and Bradley West, Los Angeles World Airports, Los Angeles, California	Venice	No

Table 1
Previously Conducted Cultural Resources Investigations at the Airport and the Quarter-Mile Search Radius*

NADB No./ SHPO ID	Author	Date	Title	7.5-minute Quadrangle	In APE
N/A	FAA and LAWA	2005	LAX Master Plan Final EIS/EIR	Venice	Yes

* The SCCIC reported 15 additional previous investigations located on the Inglewood, CA and Venice, CA 7.5' USGS Quadrangles that are potentially within a quarter-mile radius of the Airport: LA-00105, LA-00294, LA-00542, LA-03289, LA-03494, LA-03511, LA-03556, LA-03588, LA-04323, LA-05741, LA-06903, LA-07426, LA-07826, LA-07847, and LA-11138. These reports are not mapped due to insufficient locational information.

Notes:

ID = identification
N/A = not applicable
NADB = National Archaeological Database
SHPO =State Historic Preservation Officer

5.1.2 Previously Recorded Cultural Resources within the Airport and Quarter-Mile Search Radius

The SCCIC records search results reported 131 previously recorded cultural resources (15 archaeological resources and 116 historic architecture resources) within the search area, which comprises the Airport and a quarter-mile search radius. Of the 131 resources reported by the SCCIC, 81 were listed on the Historical Resources Inventory (HRI) and have been evaluated for historical significance; however, locational maps and site forms for these resources were not provided by the SCCIC. Supplementary research revealed an inventory of the properties within the airport boundary that was conducted as part of the LAX Master Plan Final EIS/EIR (LAWA 2005), which reported eight previously recorded cultural resources (four archaeological resources and four historic architecture resources) in the search area in addition to those reported by the SCCIC. Combined, there are 139 previously recorded cultural resources in the search area.

Of the 139 previously recorded cultural resources, one cultural resource was identified as being located within the current APE: 19-000691. 19-000691 is a prehistoric shell scatter that has been evaluated as ineligible for listing in the NRHP, CRHR, or a local register due to lack of evidence found at the site and extensive disturbance of the area (FAA and LAWA, 2005).

Within airport property and quarter-mile search radius, there are no bridges listed in the Caltrans Statewide Bridge Inventory of Local Agency and State Agency Bridges for Los Angeles County that have been assigned a National Register status designation indicating it is listed on the NRHP (status designation 1), eligible for NRHP listing (status designation 2), or may be eligible for NRHP listing (status designation 3).

Information regarding the previously recorded cultural resources reported by the SCCIC and identified in supplementary research has been tabulated below in **Table 2**.

Table 2
Previously Recorded Cultural Resources at the Airport and Quarter-Mile Search Radius*

Resource Identifier	Description	Significance	Date Recorded and Evaluator	In APE
19-000066	Playa del Rey Site (no details provided)	Not Evaluated	Unknown date, R.F. Van Valkenburgh 1936, M. Farmer 1950, Rozaire and Belous	No
19-000202	Archaeological site (no details provided/site form missing)	Evaluated as ineligible for NRHP, CRHR, and Local Listing	1953, Eberhart 2005, FAA and LAWA	No
19-000203	Metates	Not Evaluated	1953, Eberhart	No
19-000214	Points	Evaluated as ineligible for NRHP, CRHR, and Local Listing	1953, Eberhart 1995, Bissell 2005, FAA and LAWA	No
19-000691	**Shell scatter**	**Evaluated as ineligible for NRHP, CRHR, and Local Listing**	**1972, Leonard** **1974, Farrell** **1995, Bissell** **2005, FAA and LAWA**	**Yes**
19-001118	Shell midden with isolated lithic debitage	Evaluated as ineligible for NRHP, CRHR, and Local Listing	1981, Stickel and Appier 1995, Bissell 2005, FAA and LAWA	No
19-001716	Two loci with weathered flakes and shell fragment	Not Evaluated	1990, Singer	No
19-002345	Large prehistoric site exposed in sand blowouts consists of hundreds of stone tools, bones, shell fragments, and thermally affected stones	Evaluated as eligible for NRHP, CRHR, and Local Listing	1995, Bissell 2005, FAA and LAWA	No
19-002385	Wide scatter of historic debris	Not Evaluated	1995, Bissell	No
19-002386	World War II-era observation bunker	Not Evaluated	1995, Bissell	No
19-004278	Historic era, c. 1940s or earlier, brick and mortar storm drain remnant	Evaluated as Eligible	2011, Hazlett	No
19-150442	Broadway Department Store/Milliron's Department Store, 8739 South Sepulveda Blvd., Los Angeles, CA, constructed 1948	Evaluated as Not Eligible (based on age at time of evaluation)	1987, Starzak	No
19-150445	Korner Deli Restaurant/Syad Realty Building, 8901-8911 South Sepulveda Blvd, Los Angeles, CA, constructed 1950	Evaluated as Not Eligible	1987, Starzak	No
19-174101	Hangar One, 5701 W. Imperial Hwy, Los Angeles/Hangar No. 1 Building, constructed 1929	NRHP-Listed, LAHCM No. 44	1996, LAHCM-listed, Unknown 1992, NRHP-listed, Unknown 2005, FAA and LAWA	No

Table 2
Previously Recorded Cultural Resources at the Airport and Quarter-Mile Search Radius*

Resource Identifier	Description	Significance	Date Recorded and Evaluator	In APE
19-186162	LAX Control Tower/Beacon Tower, Los Angeles International Airport, constructed 1951	Evaluated as Not Eligible	2006, Atwood	No
19-188793	Residence – triplex, 915 Kenwood St, Inglewood, CA, constructed 1952	Evaluated as Not Eligible	1999, Lortie	No
19-188794	Residence, 918 South Ash Ave., Inglewood, CA, constructed 1940	Evaluated as Not Eligible	1999, Lortie	No
19-188795	Residence, 920 S. Ash Ave., Inglewood, CA, constructed 1937	Evaluated as Not Eligible	1999, Boghosian	No
19-188796	Residence, 922 S. Ash Ave., Inglewood, CA, constructed 1924	Evaluated as Not Eligible	1999, Lortie	No
19-188797	Residence, 909 S. Ash Ave., Inglewood, CA, constructed 1937	Evaluated as Not Eligible	1999, Boghosian	No
19-188798	Residence, 907 S. Ash Ave., Inglewood, CA, constructed 1937	Evaluated as Not Eligible	1999, Boghosian	No
19-188799	Residence, 700 Arbor Vitae St., Inglewood, CA, constructed 1937	Evaluated as Not Eligible	1999, Boghosian	No
19-188800	Residence, 670 Arbor Vitae St., Inglewood, CA, constructed 1941	Evaluated as Not Eligible	1999, Boghosian	No
19-188801	Residence, 660 W. Arbor Vitae St., Inglewood, CA, constructed 1928	Evaluated as Not Eligible	1999, Boghosian	No
19-188802	Three residences and a commercial unit, 905, 905 ½, and 909 Kenwood St., Inglewood, CA. constructed 1940, 1942, and 1951	Evaluated as Not Eligible	1999, Boghosian	No
19-188803	Three residences, 667 W. Arbor Vitae St., Inglewood, CA, constructed 1943	Evaluated as Not Eligible	1999, Boghosian	No
19-188804	Residence, 689 West Arbor Vitae St., Inglewood, CA, constructed 1943 or 1945	Evaluated as Not Eligible	1999, Lortie	No
19-188805	Residence, 640 Buckthorn St., Inglewood, CA, constructed 1925 or 1928 or 1941	Evaluated as Not Eligible	1999, Boghosian	No
19-188806	Residence, 632 W. Buckthorn St., Inglewood, CA, constructed 1925	Evaluated as Not Eligible	1999, Boghosian	No

Table 2
Previously Recorded Cultural Resources at the Airport and Quarter-Mile Search Radius*

Resource Identifier	Description	Significance	Date Recorded and Evaluator	In APE
19-188807	Residence, 630 Buckthorn St., Inglewood, CA, constructed 1925	Evaluated as Not Eligible	1999, Lortie	No
19-188808	Residence, 626 W. Buckthorn St., Inglewood, CA, constructed 1925/1930	Evaluated as Not Eligible	1999, Boghosian	No
19-188809	Residence, 639 Buckthorn St., Inglewood, CA, constructed 1942	Evaluated as Not Eligible	1999, Lortie	No
19-188810	Residence, 705 West Buckhorn St., Inglewood, CA, constructed 1925	Evaluated as Not Eligible	1999, Lortie	No
19-188811	Residence, 709 W. Buckthorn St., Inglewood, CA, constructed 1931	Evaluated as Not Eligible	1999, Boghosian	No
19-188812	Residence, 708 Magnolia Ave., Inglewood, CA, constructed 1925	Evaluated as Not Eligible	1999, Boghosian	No
19-188813	Residence, 700 Magnolia Ave., Inglewood, CA, constructed 1948	Evaluated as Not Eligible	1999, Lortie	No
19-188814	Residence, 644 Magnolia Ave., Inglewood, CA, constructed 1928	Evaluated as Not Eligible	1999, Boghosian	No
19-188815	Residence, 705 Magnolia Ave., Inglewood, CA, constructed 1924	Evaluated as Not Eligible	1999, Lortie	No
19-188816	Residence, 706 West Spruce Ave., Inglewood, CA, constructed 1941	Evaluated as Not Eligible	1999, Lortie	No
19-188817	Residence, 702 West Spruce Ave., Inglewood, CA, constructed 1941	Evaluated as Not Eligible	1999, Lortie	No
19-188818	Residence, 644 W. Spruce Ave., Inglewood, CA, constructed 1941/1945	Evaluated as Not Eligible	1999, Boghosian	No
19-188819	Oak Street School, 633 Oak Street, Inglewood, CA, constructed 1928, 1933, 1936, 1952, 1956, 1972, and 1973	Evaluated as Not Eligible	1999, Boghosian	No
19-188852	Four Points by Sheraton, 9750 Airport Blvd., Los Angeles, CA, constructed c. 1964	Evaluated as Not Eligible	2010, Crawford	No
19-189416	Standard Aero Building, 6201 W. Imperial Highway, Los Angeles, CA, constructed c. 1946	Evaluated as Not Eligible	2010, Crawford	No

Table 2
Previously Recorded Cultural Resources at the Airport and Quarter-Mile Search Radius*

Resource Identifier	Description	Significance	Date Recorded and Evaluator	In APE
Not Provided by SCCIC	Airport Theme Building, 201 Center Way, constructed 1961	NRHP-Eligible CRHR-Eligible LAHCM No. 570 (12-18-1993)	SCCIC 2005, FAA and LAWA	No
Not Provided by SCCIC	Loyola Theatre, 8610 South Sepulveda Blvd, constructed 1948	LAHCM No. 259 (12-17-1982)	SCCIC	No
Not Provided by SCCIC	Four Isolates reported in SCCIC Records Search Results Letter	Unknown	Unknown	Unknown
CA-LAN-1118	Shell midden with lithic debitage; site extends from the western terminus of La Tijera Blvd. west 100 meters and northwest for 250 meters to a point approximately 50 meters south of a line parallel with St. Bernard St.	Evaluated as Not Eligible	1981, Stickel & Appier 2005, FAA and LAWA	No
Isolate 1	Large felsite porphyry flake tool; located immediately west of the northernmost runway at LAX.	Evaluated as Not Eligible	1996, Bissell 2005, FAA and LAWA	No
Isolate 2	Large quartzite tool; located in the dune area in the northwestern portion of LAX.	Evaluated as Not Eligible	1996, Bissell 2005, FAA and LAWA	No,
CA-LAN-*1H	Concrete, asphalt, glass, brick fragments, plaster, linoleum fragments, countertop tiles, and metal fragments; located immediately west of the northernmost runway of LAX.	Evaluated as Not Eligible	1996, Bissell 2005, FAA and LAWA	No
N/A	Intermediate Terminal Complex, constructed 1946	Evaluated as ineligible for NRHP and eligible for CRHR and LAHCM	2005, FAA and LAWA	No
N/A	International Airport Industrial District, constructed 1950-55	Evaluated as ineligible for NRHP and eligible for CRHR, LAHCM, and Los Angeles Historic Preservation Overlay Zone (HPOZ)	2005, FAA and LAWA	No

Table 2
Previously Recorded Cultural Resources at the Airport and Quarter-Mile Search Radius*

Resource Identifier	Description	Significance	Date Recorded and Evaluator	In APE
N/A	World War II (WWII) Munitions Storage Bunker, constructed 1942	Evaluated as eligible as contributor to potential NRHP Harbor Defenses of Los Angeles Program district and CRHP and Local potential thematic grouping of coastal defense properties on southern California coast. Determined ineligible for NRHP as an individual resource	2005, FAA and LAWA	No
N/A	1961 Airport Traffic Control Tower, constructed 1961	Evaluated as ineligible for NRHP, CRHR, and Local Listing	2005, FAA and LAWA	No

*In addition, the SCCIC reported that the HRI listed 81 additional previously recorded historic architectural resources that have been evaluated for historical significance within the search area; however, locational maps and site forms for these resources were not provided by the SCCIC.

Notes:

CRHR = California Register of Historic Resources
N/A = not applicable
NRHP = National Register of Historic Places

5.2 Archival Research

Investigators conducted research using the LAX Master Plan Final EIS/EIR (FAA and LAWA 2005), LAWA, the Flight Path Learning Center, the Los Angeles Public Library, and various online sources (e.g., USGS Historical Topographic Maps, etc.), in January and February 2012. As part of the research, investigators examined the historic context and land uses for the APE and vicinity, specifically, the history of Runway 7L/25R, Air Freight Building No. 8, and the temporary structures within the APE. Reproductions of historic-period maps and images are included in **Appendix E1.2**.

5.3 Native American Consultation

Consultation with the California Native American Heritage Commission (NAHC) to identify Native American Tribes that may have input or concerns that uniquely or significantly affect those Tribes related to planned and proposed airport improvements, or may have information about, or be interested in, the proposed undertaking, was coordinated by the FAA. The California NAHC responded by letter dated February 14, 2012, providing contact information for various Native American Tribes and individuals, which were subsequently contacted.

The FAA sent five letters to the following tribes and organizations: Los Angeles City/County Native American Indian Commission, Gabrielino Tongva Nation, Gabrielino Tongva Indians of California Tribal

Council, Gabrielino Tongva Tribe, and the Tongva Ancestral Tribal Nation. One email indicating a response would be forthcoming was received by the FAA; however, nothing further was received.

6.0 FIELD AND INVENTORY METHODS

All cultural resources work for the proposed Project has been conducted by personnel who meet the Secretary of Interior professional qualifications for Archaeology, History, and Architectural History. Cultural resources have been evaluated pursuant to NHPA Section 106 and its implementing regulations 36 CFR Part 800 "Protection of Historic Properties" (Section 106), and in accordance with CEQA Guidelines §15064.5(a)(2)-(3) using the criteria outlined in PRC §5024.1. The qualifications of the individuals contributing to this report are summarized in **Preparers' Qualifications**.

On January 11, 2012, a windshield reconnaissance and limited pedestrian survey of the APE was conducted. Due both to security and safety issues associated with an active runway at the time of the survey, an intensive survey of the APE was not possible. This approach was considered adequate for identifying archaeological resources because much of the ground surface is obstructed by large expanses of pavement, and the remaining unpaved portions of the APE are subject to routine maintenance, including mowing and occasional grading.

One previously recorded cultural resource, a historic shell scatter along the base of a steep sided hill (19-000691), has been recorded in the APE; however, it has been evaluated as ineligible for listing in the NRHP, CRHR, or a local register due to lack of evidence found at the site and extensive disturbance of the area (FAA and LAWA 2005). No archaeological resources were identified during the survey.

During the investigation, two newly identified historic-period resources were identified, recorded, and evaluated: Runway 7L/25R and its related features (non-historic and historic-period taxiways including Taxiways B and C, non-historic-period blast fence, and non-historic-period approach lighting systems), and Air Freight Building No.8. and related feature (building's parking apron).

7.0 DESCRIPTION OF CULTURAL RESOURCES

One previously recorded cultural resource, a historic shell scatter along the base of a steep sided hill (19-000691), has been recorded in the APE; however, it has been evaluated as ineligible for listing in the NRHP, CRHR, or a local register due to lack of evidence found at the site and extensive disturbance of the area (FAA and LAWA, 2005). No evidence of the site was observed during this investigation.

As a result of the archaeological investigation and architectural history field survey, two historic-period resources were identified in the APE (see **Table 3**), and DPR 523 series forms were prepared for the two resources. The DPR 523 series forms include changes/alterations to the resource and setting/layout, additional information, condition assessments, retention of historic integrity aspects, and determinations of eligibility for the properties within the APE. Summary descriptions are provided below.

Table 3
Newly Recorded Cultural Resources within the APE

Map Reference Number	Original Function/Name	Date of Construction	Significance
1	Runway 7L/25R (related features: non-historic and historic-period taxiways [including Taxiways B and C], non-historic-period blast fence, and non-historic-period approach lighting systems)	Between 1941 and 1946	Not Eligible
2	Air Freight Building No. 8 (related feature: building's parking apron)	Between 1964 and 1969	Not Eligible

Source: URS Corporation, 2012

7.1 Runway 7L/25R (Map Reference 1)

7.1.1 Description

Runway 7L/25R is one of two runways in the South Runway Complex (7/25 system) at LAX, which was first constructed between 1941 and 1946. Though the land had been graded for three runways in preparation for the 1928 National Air Races, the runway paths and dimensions were altered when these two runways were first paved in the 1940s. A main east-west runway was constructed to the south of the administration building in 1941 and extended 4,660 feet long and 300 feet wide (Schoneberger et al, 2009). This main runway appears to be either Runway 7L/25R or Runway 7R/25L, though it is unclear in aerial photographs. Due to the rarity of photographs during World War II, during which time the airport was concealed under a tarp camouflaged as agricultural fields, the first photographs of the current 7L/25R and 7R/25L runways were not available until 1946 (historic aerial photographs and topographic maps; Schoneberger et al, 2009). The runways were extended and reconfigured as the airport expanded to meet the growing popularity of air travel and increasing number of passengers following World War II. In 1946, these runways were extended to 6,000 feet. In 1953, the Sepulveda Boulevard underpass was constructed to allow for lengthening of the runways over the roadway because a longer stretch was now necessary for jets to land. A railroad-style crossing gate was initially used for aircraft to cross Sepulveda Boulevard, but safety concerns necessitated a grade separation. In 1957, the runways were extended again. The arrival of the Airbus A-380 in the first decade of the 21st century mandated major renovations at LAX, including a significant redesign and modification of certain runways and taxiways (Schoneberger et al, 2009).

Runway 7L/25R runs parallel to Runway 7R/25L (which was relocated southward in 2007 to add a Taxiway H between them), and extends east-west across the airfield. Runway 7L/25R is approximately 12,090 feet in length and 150 feet wide (LAX Airport Layout Plan). As a result of consistent use and wear over time, as well as runway extensions to accommodate larger aircraft and increasing air traffic, Runway 7L/25R has been built up, repaved, and improved outside of the historic period. The runways are paved with non–historic-period concrete that has been painted with striping and other locational information used by incoming pilots and has undergone minor improvements to add features such as light reflectors set within the runway. No original historic materials were observed.

Related features include a number of historic and non-historic-period taxiways, a non-historic-period blast fence, and non-historic-period approach lighting systems. Taxiway B, which runs parallel to Runway 7L/25R, appears to be have been present as early as 1952 based on a review of historic aerial photographs and historic USGS topographic maps; however, it has been extended as a result of extensions to the runway. Taxiway C, which runs parallel and north of Runway 7L/25R and Taxiway B, first appears on 1957 maps only partially complete. It is shown in its general current configuration by a 1972 map. Taxiway C has been extended and related Taxiways C1, C2, and C3 have been added and relocated as airport needs have evolved. All of the taxiways are paved with non-historic period concrete that has been

painted with striping and other locational information used by taxiing pilots. No original historic materials were observed.

Approach lighting was constructed at the east end of Runway 7L/25R by 1951 to help guide pilots onto the runways, but are no longer included on maps after 1978 (LAX Airport Layout Plans and Taxiway Designation Maps). Approach lighting systems located at the west end of Runway 7L\25R are visible in an aerial from 1980, but no additional sources pertaining to their initial construction was available (see **Appendix E1.2** for historic images and maps). The Runway 7L/25R approach lighting systems are metal structures with lightbars, used to assist pilots in visually identifying the runway and aligning the aircraft with the runway upon approach. Two approach lighting systems are located at the east end of Runway 7L/25R, one with a single-pole support and the other a horizontal series of metal mounts which resembles an exposed trellis. The single-pole structure consists of a metal pole set in a concrete footing, with a metal cross-arm and metal braces. Five lights are mounted along the cross-arm. The second structure consists of a series of metal poles supporting rectangular metal beams with protruding metal bolts, all set in a long concrete pad and connected near the base by a metal beam. Pairs of red approach lights are located at either end of the structure, also set in the concrete pad. A row of five additional approach lights on small metal poles are set in the ground just east of the second approach lighting system.

7.1.2 Significance Evaluation

The historical significance of Runway 7L/25R was determined by applying the procedure and criteria for the NRHP and the CRHR. Upon review of the site survey and historical research, Runway 7L/25R located at LAX, which was first constructed between 1941 and 1946 and considerably altered since (built up, repaved, and improved outside of the historic period, as recent as 1986), is not eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA (PRC §15064.5[a][4]).

Initial research has yielded no information indicating an association of the runway with significant historic events or people (Criteria A and B of the NRHP; Criteria 1 and 2 of the CRHR). Although the runway does appear to be associated with aviation history, it does not illustrate any significant association with aviation history, such as the development of aircraft, establishment of commercial airlines, or location of important aviation flights or events, that characterize the development of the commercial airline and airport industry in the early 20th Century. Although Runway 7R/25L may have been extended to its full length and configuration more than 45 years ago, the runway system has been redesigned and modified within the past 20 years, and does not retain its original materials, construction techniques, or appearance from the historic period. As a result, the runway is not associated with important events or people in aviation or runway engineering history.

Further, the runway does not significantly embody the distinctive characteristics of an engineering structure or architectural style, type, or period (Criterion C of the NRHP; Criterion 3 of the CRHR). The runway has been heavily altered and no longer retains its original or historic appearance, visual narrative, and characteristics from a specific period. The runway pavement has been maintained by LAWA to meet FAA airport design standards and the RSA has been maintained in order to comply with federal requirements. Overall, the runway configuration, the lengths and the widths of the runways, as well as the non–historic-period materials at LAX are common, relatively mundane examples of runway construction that can be found at most commercial airports. Research did not result in identifying any key engineers or master architects for whom the runway may illustrate their important works.

Finally, research has provided no indication that the runway has the potential to yield potentially important information (Criterion D of the NRHP; Criterion 4 of the CRHR).

In addition, in order for a property to be eligible for listing in the NRHP or CRHR, besides meeting one of the above criteria, it must also retain its historic integrity. The NRHP and CRHR traditionally recognize a property's historic integrity through seven aspects or qualities: location, design, setting, materials, workmanship, feeling, and association. In order for a property to be eligible, it must retain

some, if not most, of the aspects. Location is defined as the place where the historic-period property was constructed or the place where the historic event took place. The property has not been moved; therefore, it retains its integrity of location. However, no historic events are associated with the property. Design is defined as the composition of elements that constitute the form, plan, space, structure, and style of a property. Although the runway, originally constructed between 1941 and 1946 has generally retained its original design, the runway has been extended significantly since, negatively affecting the integrity of design. Setting is defined as the physical environment of a historic-period property that illustrates the character of the place. The runway has retained its setting north of Imperial Highway and east of Interstate 405; however, the surrounding airport buildings have been significantly altered and the airfield itself has been expanded considerably since, affecting the runway's integrity of setting. Materials are defined as the physical elements combined in a particular pattern or configuration to form the aid during a period in the past. The runway does not retain any integrity of materials. Workmanship is defined as the physical evidence of the crafts of a particular culture or people during any given period of history. The runway does not retain physical evidence of the crafts of a given period of history. Feeling is defined as the quality that a historic-period property has in evoking the aesthetic or historic sense of a past period of time. Due to the loss of historic materials and the expansion of the airfield and runway since they were originally constructed between 1941 and 1946, the runway no longer retains integrity of feeling for a mid-twentieth-century airport. Association is defined as the direct link between a property and the event or person for which the property is significant. No significant events or persons are associated with the runway, so integrity of association was not evaluated. Therefore, Runway 7L/25R does not retain its integrity of design, setting, materials, workmanship, feeling, or association.

In conclusion, Runway 7L/25R is not eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA (Per PRC §15064.5[a][4]).

7.2 Air Freight Building No. 8 (Map Reference 2)

7.2.1 Description

Air Freight Building No. 8 has historically served two functions: industrial use as a cargo storage facility for Virgin Atlantic and administrative use as an office for ASIG. The building, located just north of the eastern end of Runway 7L/25R, was constructed between 1964 and 1969 (per 1964 Venice Quadrangle USGS topographic map and 1969 Taxiway Designation Map) and is a Contemporary-style industrial/commercial warehouse. An addition was added to the building near the center of the west elevation between 1969 and 1974 (Taxiway Designation Maps). It is two-stories in height, has a long rectangular plan, and is composed of two parts. The northern section has a wider rectangular frame and features a flat roof of metal sheeting with an addition near the center of the west elevation. The southern section has a narrow rectangular frame and features a very slight side-gabled roof of metal sheeting. The building has a concrete base and is clad with corrugated sheet metal on both sections, and the west elevation addition is clad with a combination of concrete and brick facing.

The primary (west) elevation is covered with a long corrugated metal awning, supported by metal braces. Deteriorating signage over the northern section of the awning reads, "Virgin Atlantic Cargo Export". The west elevation features at least 17 large roll-top garage bays, some with additional security grates, and the center bay on the southern end is elevated up a concrete ramp with metal guardrails. Additional entrances are located at the northern and southern ends of the west elevation as well as flanking the center addition. These entrances include four single metal doors elevated up concrete ramps with metal guardrails, three single metal doors elevated above concrete stairs, and a single metal door over a concrete porch slab.

The center addition on the west elevation is clad with concrete and flanked with a stacked bond curtain wall. A row of four three-quarter aluminum-frame picture windows on the upper story and a pair of two three-quarter aluminum-frame picture windows on the ground story are separated by protruding aluminum mullions. Dividing the two stories are prefabricated modular panels adorned with a logo and

signage reading “ASIG”. Two entryways flank the ground story windows and each contain a single aluminum-frame commercial glass door with transom and long side lite.

The east elevation has no awning, but flood lights are placed at intervals along the roofline. Entryways include at least seven large roll-top garage doors, two of which are elevated up a concrete ramp with metal guardrails. The south elevation features five large aluminum-frame picture windows with sills and an additional window opening with sill (which has been boarded up). The north elevation features a metal pipe, a small vent, and signage reading “Evergreen”. Chain link fences topped with barbed wire extends from the north and south elevations, separating the two sides of the building. Overall, the building has a utilitarian and non-descript appearance, and lacks distinctive features and characteristics. The only related feature is the building apron, which is a flat, paved area covered with non-historic period concrete. The building apron appears to be have been paved as early as 1972 based on a review of historic aerial photographs; however, it appears to have been repaved since no original historic materials were observed.

7.2.2 Significance Evaluation

The historical significance of Air Freight Building No.8 was determined by applying the procedure and criteria for the NRHP and the CRHR. Upon review of the site survey and historical research, Air Freight Building No.8 located at LAX, which was constructed between 1964 and 1969, with an addition between 1969 and 1974, is not eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA (Per PRC §15064.5[a][4]).

Initial research has yielded no information indicating an association of the building with significant historic events or people (Criteria A and B of the NRHP; Criteria 1 and 2 of the CRHR). The building does not illustrate any significant association with aviation history, such as the development of aircraft, establishment of commercial airlines, or location of important aviation flights or events, that characterize the development of the commercial airline and airport industry in the early 20th Century. Although the building may have been originally constructed more than 45 years ago, additions and changes have been made outside of the historic period. The building has retained much of its original framework, but its original and historic appearance has changed through the addition of non-historic-period materials and other features (such as security grates). As a result, the building is not associated with important events or people in aviation or engineering history.

Further, the building does not significantly embody the distinctive characteristics of an architectural style, type, or period (Criterion C of the NRHP; Criterion 3 of the CRHR). The building has been heavily altered and no longer retains its original or historic appearance, visual narrative, or characteristics from a specific period. Overall, the building is a common, relatively mundane example of a cargo warehouse that can be found at most commercial airports. Research did not result in identifying any key engineers or master architects for whom the building may illustrate their important works.

Finally, research has provided no indication that the building has the potential to yield potentially important information (Criterion D of the NRHP; Criterion 4 of the CRHR).

Since the building is less than 50 years of age, the property would also have to meet Criterion Consideration G to be eligible for listing in the NRHP and CRHR. The property does not have exceptional significance, and thus does not meet Criterion G for properties that have achieved significance within the past 50 years of the NRHP. The property is not associated with a fragile class of resources, not important within any appropriate historic context, and (as a heavily altered example) is far from the best representative property of any architectural style.

In addition, in order for a property to be eligible for listing in the NRHP or CRHR, besides meeting one of the above criteria, it must also retain its historic integrity. The NRHP traditionally recognizes a property's historic integrity through seven aspects or qualities: location, design, setting, materials, workmanship, feeling, and association. In order for a property to be eligible, it must retain some, if not most, of the aspects. Location is defined as the place where the historic-period property was constructed

or the place where the historic event took place. The property has not been moved; therefore, it retains its integrity of location. However, no historic events are associated with the property. Design is defined as the composition of elements that constitute the form, plan, space, structure, and style of a property. Although the building, originally constructed between 1964 and 1969 has generally retained its original design, an addition from between 1969 and 1974 altered its overall appearance, negatively affecting the integrity of design. Setting is defined as the physical environment of a historic-period property that illustrates the character of the place. The building has retained its location within the airport property; however, the surrounding airport buildings have been significantly altered and the airfield itself has been expanded considerably since, affecting the building's integrity of setting. Materials are defined as the physical elements combined in a particular pattern or configuration to form the aid during a period in the past. The building appears to retain only some of its original materials. Workmanship is defined as the physical evidence of the crafts of a particular culture or people during any given period of history. The building does not retain physical evidence of the crafts of a given period of history. Feeling is defined as the quality that a historic-period property has in evoking the aesthetic or historic sense of a past period of time. Due to the alterations to the building and the expansion of the surrounding airfield since the building was originally constructed between 1964 and 1969, the building no longer retains its integrity of feeling. Association is defined as the direct link between a property and the event or person for which the property is significant. No significant events or persons are associated with the building, so integrity of association was not evaluated. Therefore, Air Freight Building No. 8 does not retain its integrity of design, setting, materials, workmanship, feeling, or association.

In conclusion, Air Freight Building No. 8 is not eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA (per PRC §15064.5[a][4]).

In summary, the cultural resources investigation for the proposed Project identified two historic architecture resources that are eligible for listing in the NRHP, CRHR, or considered historical resources for purposes of CEQA (per PRC §15064.5[a][4]).

8.0 RECOMMENDATIONS

The inventory efforts did not result in the identification of historic properties or historical resources within the APE defined for the proposed Project. One previously recorded cultural resource, a historic shell scatter along the base of a steep sided hill (19-000691), has been recorded in the APE; however, it has been evaluated as ineligible for listing in the NRHP, CRHR, or as a historical resource for purposes of CEQA, due to lack of evidence found at the site and extensive disturbance of the area (FAA and LAWA, 2005). The cultural resource was not relocated as part of this investigation. In addition, as a result of the archaeological investigation and architectural history field survey, two new historic-period resources were identified in the APE (Runway 7L/25R and related features [non-historic and historic-period taxiways including Taxiways B and C, non-historic-period blast fence, and non-historic-period approach lighting systems] and Air Freight Building No. 8 and related feature [building's parking apron]); however, these resources are not eligible for listing to the NRHP, CRHR, or considered historical resources for purposes of CEQA. Therefore, pursuant to the revised implementing regulations of the NHPA found at 36 CFR §800.11(d)(1) and CEQA Guidelines §10564.5(A)(2)-(3) and the criteria outlined in PRC §5024.1, a determination of no effect to historic properties and no impact to historical resources is anticipated from the proposed undertaking.

Although the inventory efforts were conducted in as thorough a manner as possible, the possibility always exists that previously unidentified archaeological resources could be discovered during project construction. Therefore, pursuant to 36 CFR §800.13(b)(3), if an inadvertent discovery is made during implementation of the proposed undertaking, the FAA and LAWA would require the construction activities in the vicinity of the discovery to stop, and take all reasonable measures to avoid or minimize harm to the property until the FAA and LAWA conclude consultation with the SHPO. It should be

reiterated herein, however, that the inadvertent exposure of intact archaeological deposits is not anticipated, given the history of site development and soil deposition within the airport.

If the Project's construction-related activities unearth potentially human bone, ground-disturbing activities in the area of the discovery would immediately be halted by the FAA and LAWA while a temporary construction exclusion zone surrounding the site is established to allow further examination and treatment of the find. The FAA and LAWA would also immediately notify the Los Angeles County Coroner's Office by telephone. By law, within two working days of being notified, the Coroner would determine whether the remains are subject to his or her authority. If the Coroner recognizes the remains to be Native American, he or she would contact the NAHC by telephone within 24 hours of the determination. The project would comply with the process in Public Resource Code 5097.98. The NAHC would then appoint a Most Likely Descendant of the human remains, and a burial treatment plan would be negotiated and implemented. The FAA and LAWA would be responsible for restricting all construction activity from the immediate vicinity of the human remains until treatment is complete.

9.0 REFERENCE LIST

Federal Aviation Administration and Los Angeles World Airports. 2005. "Historic/Architectural and Archaeological/Cultural and Paleontological Resources." *LAX Master Plan Final EIS/EIR.* http://www.ourlax.org/docs/final_eir/ part1/19_040901_HistoricArchitecturalandArchaeological CulturalResources.pdf. Accessed Jan. 10, 2012.

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10.0 PREPARER'S QUALIFICATIONS

Ms. Arleen Garcia-Herbst, URS Corporation Project Manager/Principal Investigator, has more than 13 years of experience in archaeological research, fieldwork, and publication in the American Southwest (California, Arizona, Colorado and Nevada), and Argentina (Patagonia). Ms. Garcia-Herbst is currently working on her Ph.D. in Anthropology at the University of California, Santa Barbara. She has special technical expertise in relation to compliance with Section 106 and 110 of the National Historic Preservation Act (NHPA), as well as compliance with State historic preservation and archaeological resources regulations under the California Environmental Quality Act (CEQA).

Mr. Jeremy Hollins is a Senior Architectural Historian and has performed numerous historic evaluations, context studies, and determinations of eligibility and effect for a range of resources based on local, state, and National Register criteria and through technical reports, DPR 523 series forms, HABS reports, cultural landscape reports, historic structures reports, and resolution documents. He has a detailed knowledge of the laws and ordinances that affect historic properties, such as NHPA Section 106, NEPA, CEQA, Section 4(f), California Public Resources Code, State Historic Building Code, and the Secretary of Interior Standards for the Treatment of Historic Properties. He meets the Secretary of the Interior Standards for Architectural History and History.

Ms. Sarah Provo, URS Corporation Architectural Historian, has an MA in Historic Preservation, a BA in History, and meets the Secretary of the Interior Standards for Architectural History. Since 2009, Ms. Provo has performed numerous historic assessments and determinations of eligibility and effect for a range of property types based on local, state, and National Register of Historic Places (NRHP) criteria in the form of technical reports, Environmental Impact Studies/Environmental Impact Reports, California Department of Parks and Recreation (DPR) 523 series forms, cultural landscape reports, and Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) documentation.

Ms. Melanie Lytle is an Architectural Historian and has performed numerous historic evaluations, context studies, and determinations of eligibility and effect for a range of resources based on local, state, and National Register criteria in the form of technical reports, Environmental Impact Studies, Environmental Impact Reports, DPR 523 series forms, cultural landscape reports, Historic American Building Survey/ Historic American Engineering Record/Historic American Landscapes Survey documentation, and historic structures reports. She has knowledge of the laws and ordinances that affect historic properties, such as NHPA Section 106, CEQA, and the Secretary of the Interior Standards for the Treatment of Historic Properties, and has completed work for various federal, state, and local agencies, including the Federal Emergency Management Agency, Bureau of Land Management, California Energy Commission, Federal Communications Commission, Department of Housing and Urban Development, and California Department of Transportation, as well as numerous local agencies and private clients. She meets the Secretary of the Interior Standards for Architectural History and History.

11.0 LIST OF ACRONYMS AND ABBREVIATIONS

ACHP Advisory Council on Historic Preservation
AHPA Archaeological and Historic Preservation Act
ALS Approach Lighting System
APE Area of Potential Effects
ARPA Archaeological Resources Protection Act
CEQA California Environmental Quality Act
CFR Code of Federal Regulations
CHL California Historical Landmarks
CHRI California Historical Resources Inventory
CPHI California Points of Historical Interest
CRHR California Register of Historic Resources
DPR California Department of Parks and Recreation
EDR Environmental Data Resources, Inc.
EIR Environmental Impact Report
EIS Environmental Impact Statement
EMAS Engineered Materials Arresting System
ESA Environmental Science Associates
FAA Federal Aviation Administration
GSE Ground Support Equipment
HRI Historic Resources Inventory
ID identification
ILS Instrument Landing System
LAHCM Los Angeles Historic Cultural Monuments
LAWA Los Angeles World Airports
LAX Los Angeles International Airport
MALSR Medium Intensity Approach Light Systems
NADB National Archaeological Database
NAGPRA Native American Graves Protection and Repatriation Act
NAHC Native American Heritage Commission
NEPA National Environmental Protection Act
NHPA National Historic Preservation Act of 1966
NPS National Park Service
NRHP National Register of Historic Places
PRC Public Resources Code

RSA	Runway Safety Area
SCCIC	South Central Coastal Information Center
SHPO	State Historic Preservation Officer
URS	URS Corporation
USC	United States Code
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator

APPENDIX E1.1

SHPO CONCURRENCE

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September 20, 2012

Reply In Reference To: FAA120117A

David B. Kessler, AICP
Regional Environmental Protection Specialist
Western-Pacific Region Airports Division
Federal Aviation Administration
P. O. Box 92007
Los Angeles, California 90009-2007

RE: Section 106 Consultation for the Proposed Runway 7L/25R Safety Area Improvement and Runway 7R/25L and Taxiway B Pavement Reconstruction, and Ground Support Maintenance Building Construction Project, Los Angeles International Airport, Los Angeles, Los Angeles County, California

Dear Mr. Kessler:

Thank you for consulting with me. You do so on behalf of the Federal Aviation Administration (FAA) in order to comply with Section 106 of the *National Historic Preservation Act of 1966* (16 U.S.C. 470f), as amended, and its implementing regulation at 36 CFR Part 800. In your letter of July 18, 2012, you stated that the proposed undertaking is located at the Los Angeles International Airport in Los Angeles, California. The proposed undertaking would include the following actions: (a) construction of 832 feet of runway pavement on the west end of Runway 7L/25R to be used as a displaced threshold for departures and landings to the East; (b) full reconstruction of the eastern portion of Runway 7L/25R and parallel Taxiway B pavement that was poured in the mid-1980s; (c) as part of the Taxiway C extension project, the existing Air Freight Building no. 8 (Building) will be demolished and replaced with aircraft parking apron pavement, and (d) construction of a new 2-story, 60,000 square feet Ground Support Equipment building.

You requested that I concur with your determination that the above-referenced undertaking will not affect historic properties.

As documentation for your determination, you provided a report entitled, *Cultural Resources Evaluation Report – Proposed Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements, Los Angeles International Airport*, dated July 2012. After conducting a limited (i.e., because of FAA's security reasons) pedestrian survey of the area of potential effects (APE) and a records review at the South Central Coastal Information Center, you have concluded that there were three archaeological or historical resources located within the APE. Of those three resources, one was prehistoric (i.e., 19-000691 – a prehistoric shell scatter along the base of a steep hill) and two were historic (i.e., Runway 7L/25R and its related features, and the Building proposed for demolition). The pedestrian survey failed to identify any cultural material at the recorded site of 19-000691 and noted that the site had

been extensively disturbed by construction at the airport. Runway 7L/25R and its related features were originally built in the 1940s and have been considerably altered by repaving and reconstruction since then, most recently in 1986. The Building was initially constructed between 1964 and 1969 and since then, it has been altered significantly with the addition of non-historic materials and other features such as security gates. Consequently, you concluded that none of the three resources were eligible for listing on the National Register of Historic Places.

After contacting the Native American Heritage Commission (NAHC), you contacted the tribes, identified by NAHC, in letters sent on March 12, 2012. In response to those letters, the Tongva Ancestral Territorial Tribal Nation responded in an email that it would respond fully at a later date and that it considered the project site to be located in an area that is "very sensitive with numerous cultural resources documented and some that are not". No further reply was received from the tribe nor did it request the use of Native American monitors during ground disturbing activities.

Having reviewed the information submitted with your letter, I offer the following comments:

- I concur that the description of the APE is appropriate.
- I concur with your determination that the three resources located in the APE are not eligible for listing on the National Register of Historic Places.
- I concur that the undertaking, as described, will not affect historic properties.

Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have additional future responsibilities for this undertaking under 36 CFR Part 800. Should you encounter cultural artifacts during ground disturbing activities, please halt all work until a qualified archaeologist can be consulted on the nature and significance of such artifacts.

Thank you for considering historic resources during project planning. If you have any questions or comments, please contact Tristan Tozer of my staff at (916) 445-7027 or by email at ttozer@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

STATE OF CALIFORNIA – THE NATURAL RESOURCES AGENCY
EDMUND G. BROWN, JR., *Governor*

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MAR – 7 2012
Federal Aviation Administration
Western-Pacific Region
Airports Division - AWP-600

March 05, 2012

Reply In Reference To: FAA120117A

David B. Kessler, AICP
Federal Aviation Administration
P.O. Box 92007
Los Angeles, CA 90009-2007

RE: Runway 7L/25R Safety Area Improvement, Runway 7L/25B and Taxiway B Reconstruction, and Ground Support Maintenance Construction, Los Angeles International Airport (LAX), Los Angeles County, CA

Dear Mr. Kessler:

Thank you for initiating consultation with me on behalf of the Federal Aviation Administration (FAA) in order to comply with Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470f), as amended, and its implementing regulation at 36 CFR Part 800. You are asking that I concur that the Area of Potential Effects (APE) for this undertaking has been adequately determined.

The city of Los Angeles, through its Airport's office of Los Angeles World Airports (LAWA) and the FAA, is preparing federal environmental documentation for proposed safety and other construction work at LAX. The undertaking includes the shifting of Runway 7R/25L 832 feet to the west in order to create a Displaced Threshold on the western end of the Runway 7L/25R. The eastern portion of Runway 7L/25R and the parallel Taxiway B will also be reconstructed. The anticipated depth of ground disturbance is approximately three to four feet below ground level.

As part of the Taxiway B extension project, the existing Air Freight Building No. 8 will be demolished. The area currently beneath Building No. 8 will be used as a parking apron. A new Maintenance Building will also be constructed. The anticipated depth of ground disturbance for this project component is approximately ten feet below ground level.

You define the direct APE as the construction areas and a 1,000 foot buffer zone at the end of Runway 7L/25R. The Indirect APE is the entirety of LAX.

Having reviewed your submittal, I concur that the APE, as described in your letter and depicted on the accompanying map, has been properly determined and documented pursuant to 36 CFR Parts 800.4. I understand that you will resume consultation once you have undertaken further identification efforts, including the outcome of Native American consultation and your opinion as to whether this undertaking has the potential to affect historic properties.

FAA120117A

Thank you for considering historic properties as part of the project planning process. I look forward to consulting with you on future aspects of this project. If you have any questions or comments, please contact Tristan Tozer of my staff at (916) 445-7027 or by email at ttozer@parks.ca.gov.

Sincerely,

Susan K Stratton for

Milford Wayne Donaldson, FAIA
State Historic Preservation Officer

APPENDIX E1.2

HISTORICAL PHOTOGRAPHS

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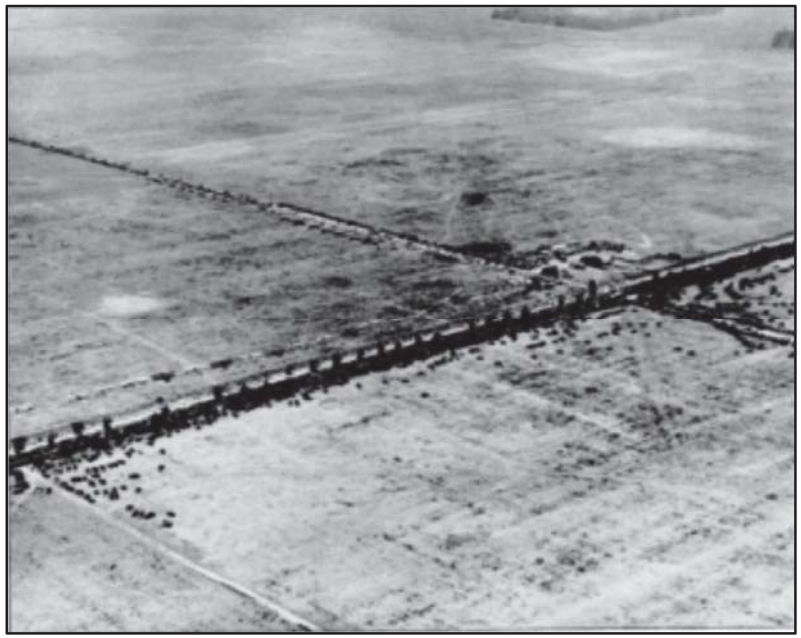
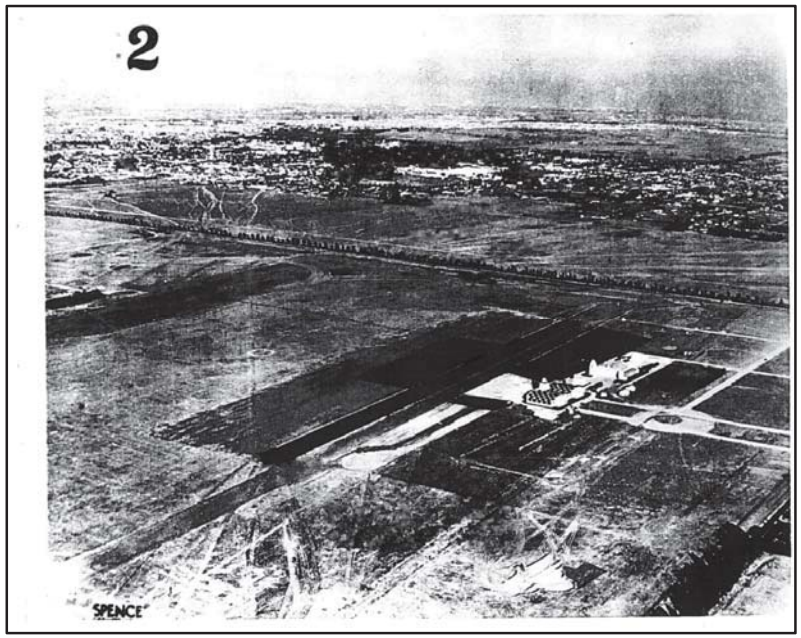
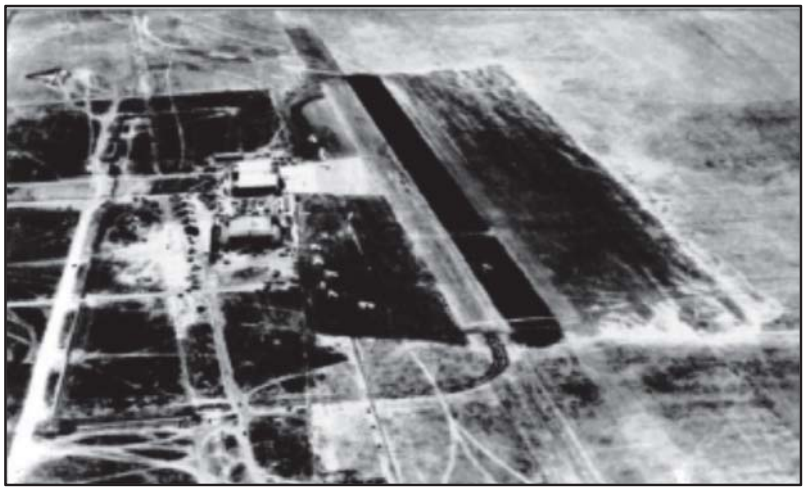


Crops were giving way to early aircraft in this 1926 photograph of Mines Field.
[Images of Aviation: Los Angeles International Airport]

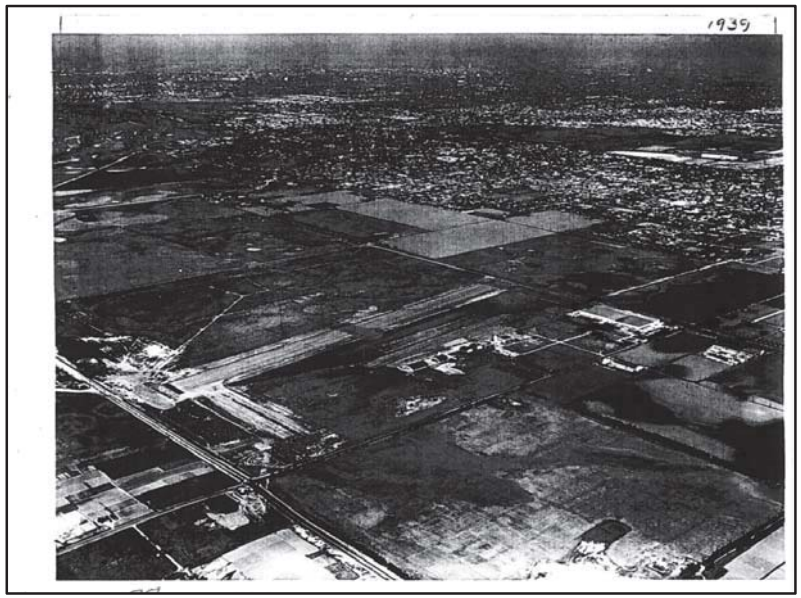
Selection of Mines Field for the 1928 National Air Races drew worldwide attention to the site.
[Images of Aviation: Los Angeles International Airport]



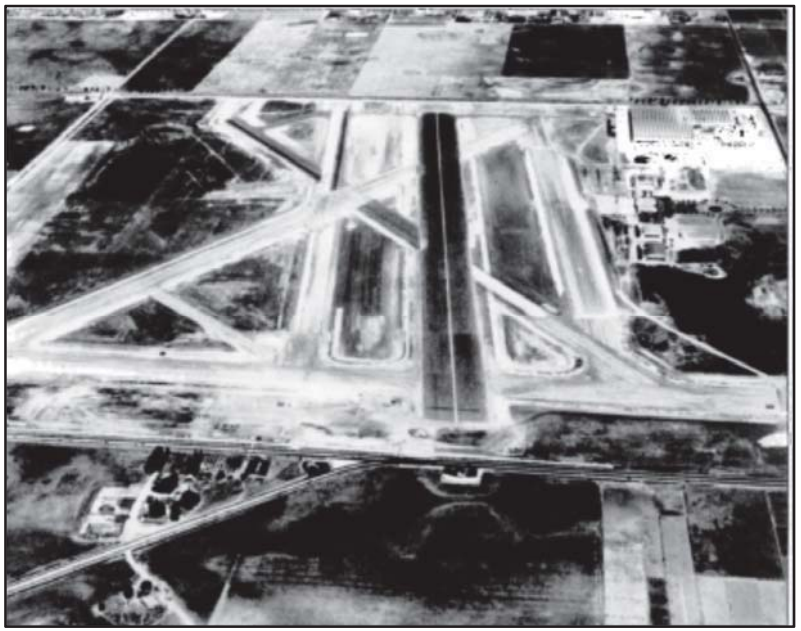
1929 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]



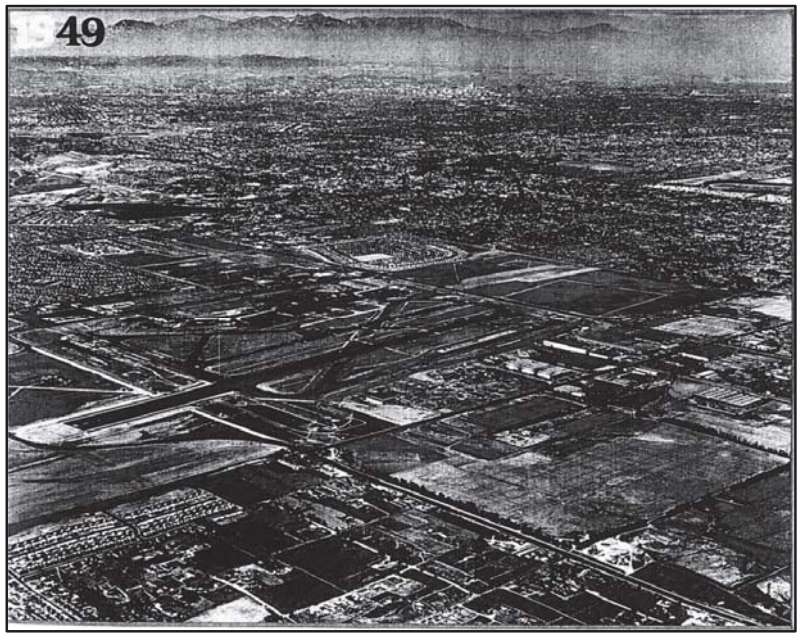
The view, looking west, shows Mines Field, officially known as Los Angeles Municipal Airport, in the 1930s.
[Images of Aviation: Los Angeles International Airport]



1939 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]



On the eve of World War II, Los Angeles Municipal Airport had a new runway system under construction, including a main east-west runway 4,660 feet long and 300 feet wide.
[Images of Aviation: Los Angeles International Airport]

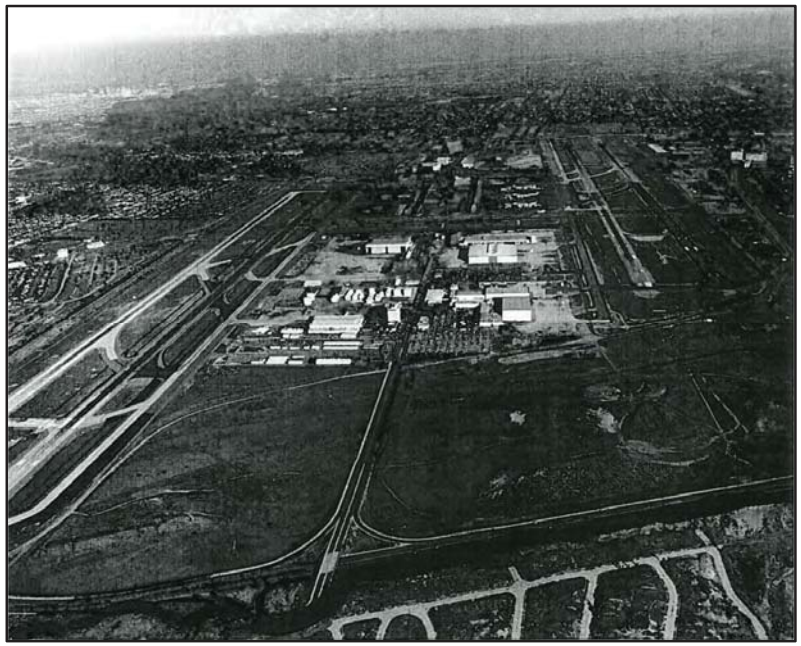


1949 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

Larger aircraft required the lengthening of runways to the extent that they crossed Sepulveda Boulevard. The result was the Sepulveda Boulevard Tunnel, the first of its kind, completed in 1953 and still in service.
[Images of Aviation: Los Angeles International Airport]

1959 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

1965 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]



1980 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

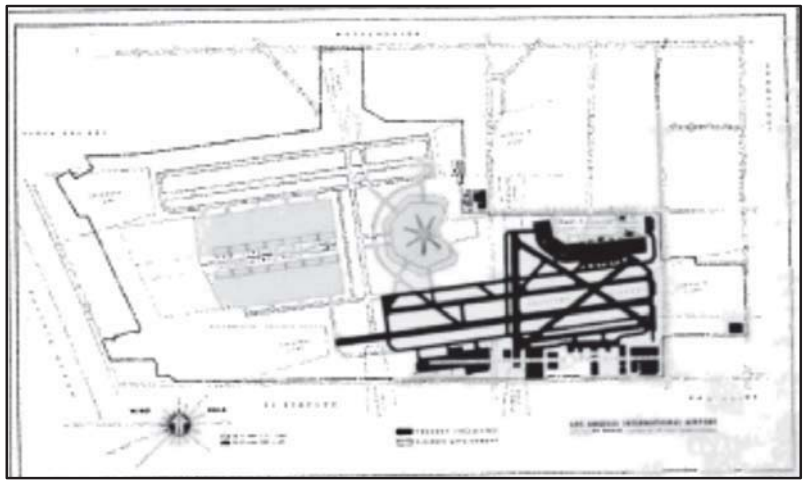
1983 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

1985 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

1988 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

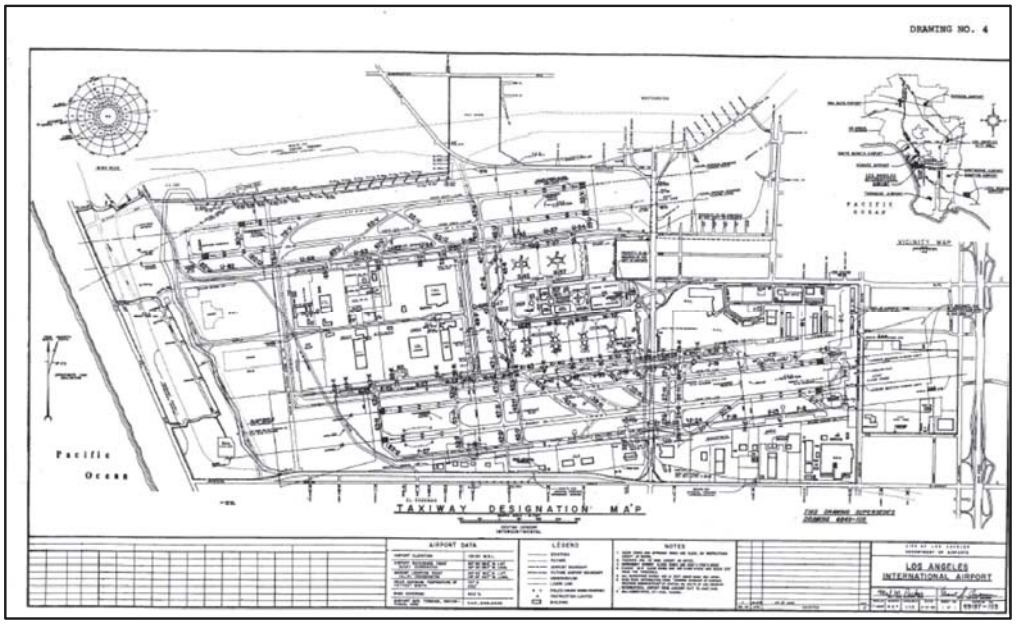
1988 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

1991 Historic Aerial Image: Los Angeles International Airport
Not to Scale [Flight Path Learning Center]

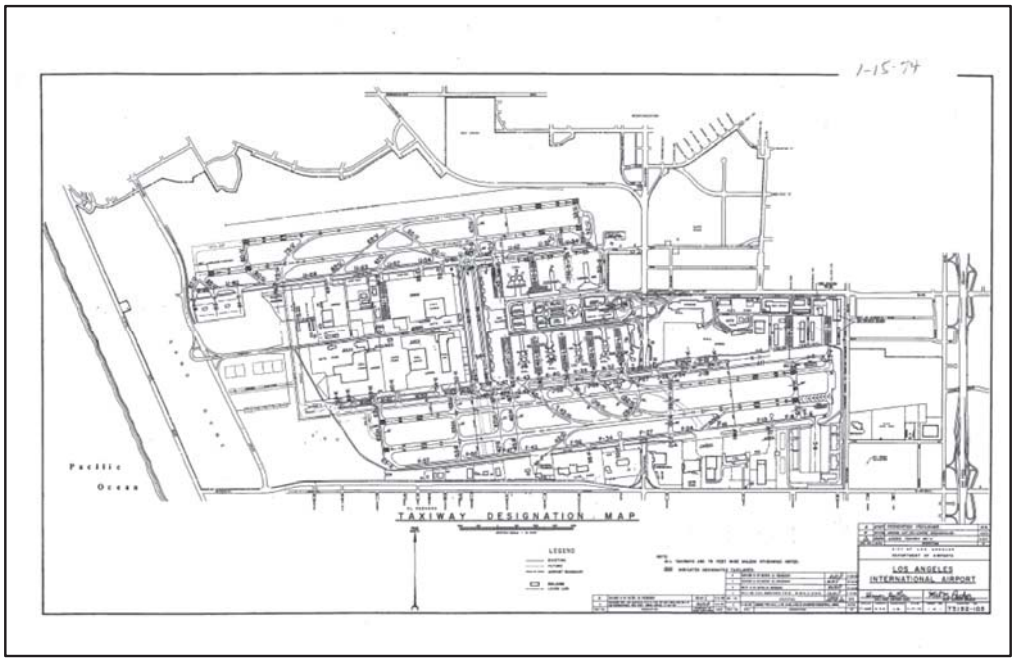


This artistic rendering was unveiled on July 18, 1955, as plans moved ahead for a newly designed Los Angeles International Airport to meet the needs of passenger jet service.
[Images of Aviation: Los Angeles International Airport]

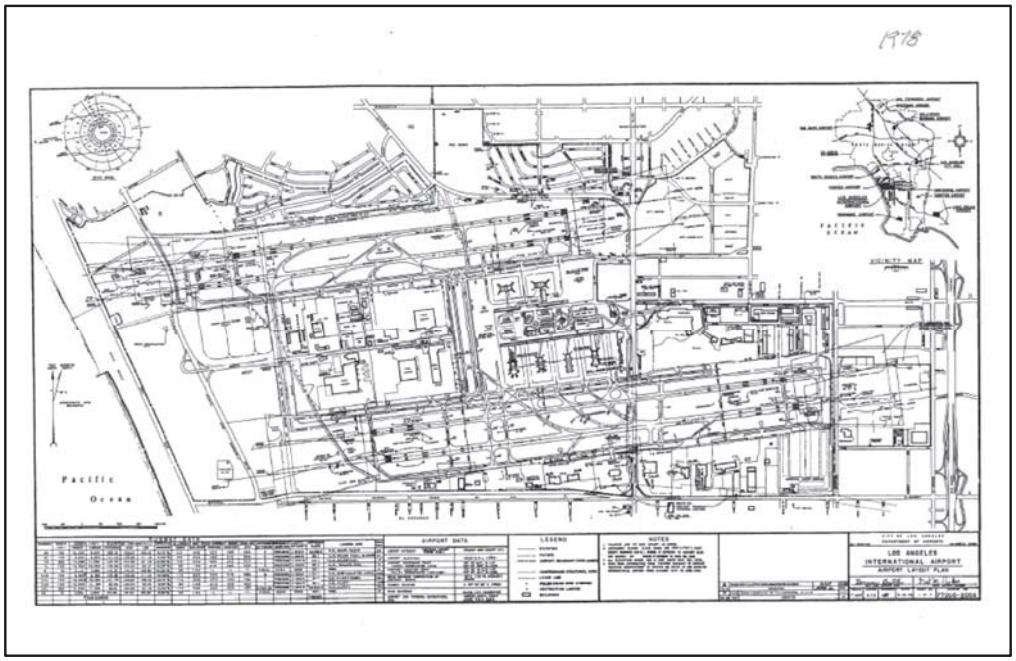
1951 Airport Layout Plan, Not to Scale. [Flight Path Learning Center]



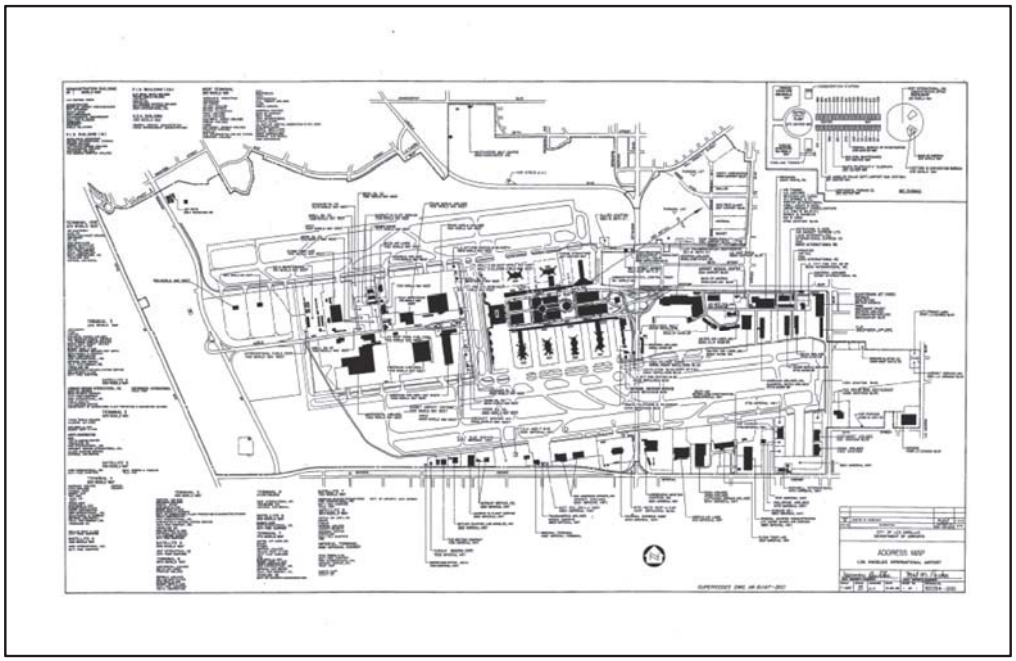
1969 Taxiway Designation Map, Not to Scale. [Flight Path Learning Center]



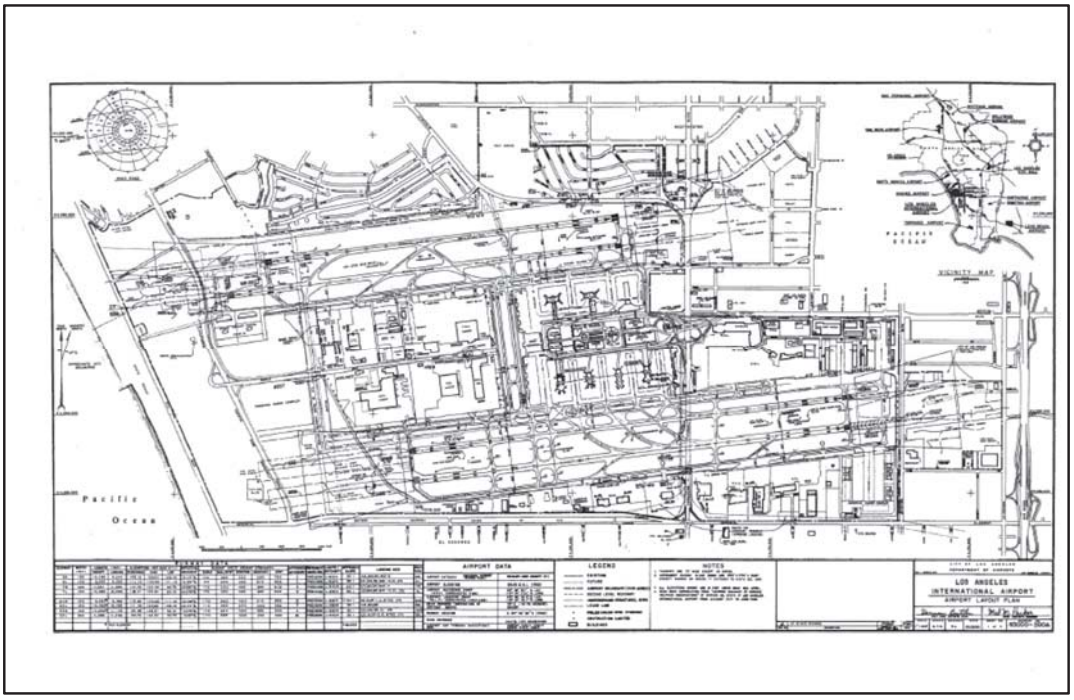
1974 Taxiway Designation Map, Not to Scale. [Flight Path Learning Center]



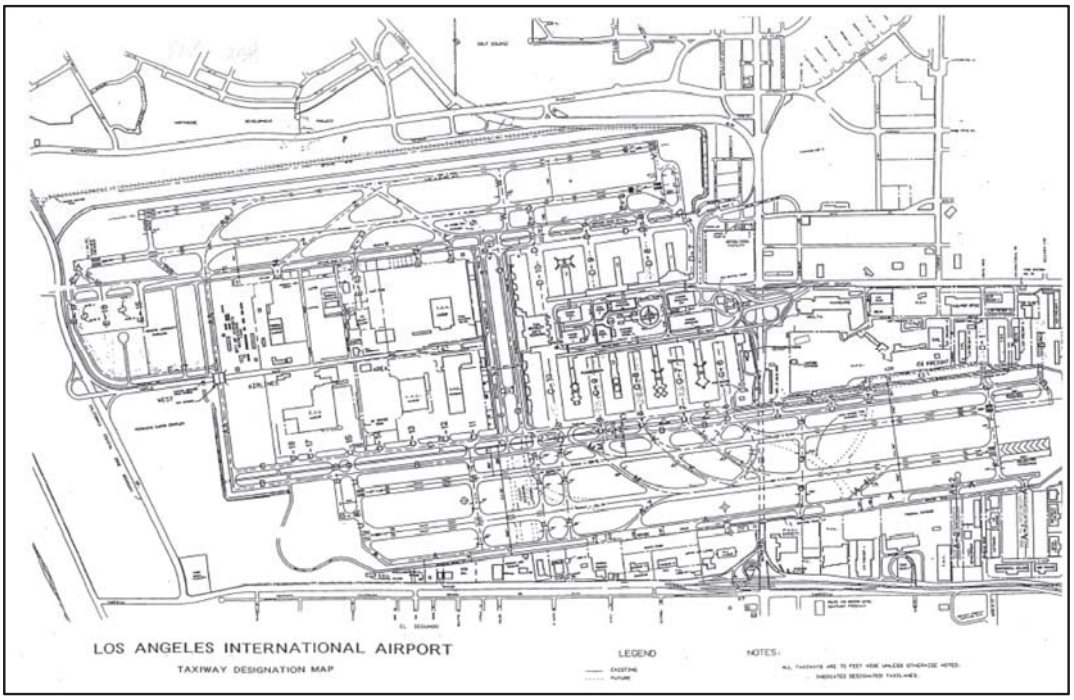
1978 Taxiway Designation Map, Not to Scale. [Flight Path Learning Center]



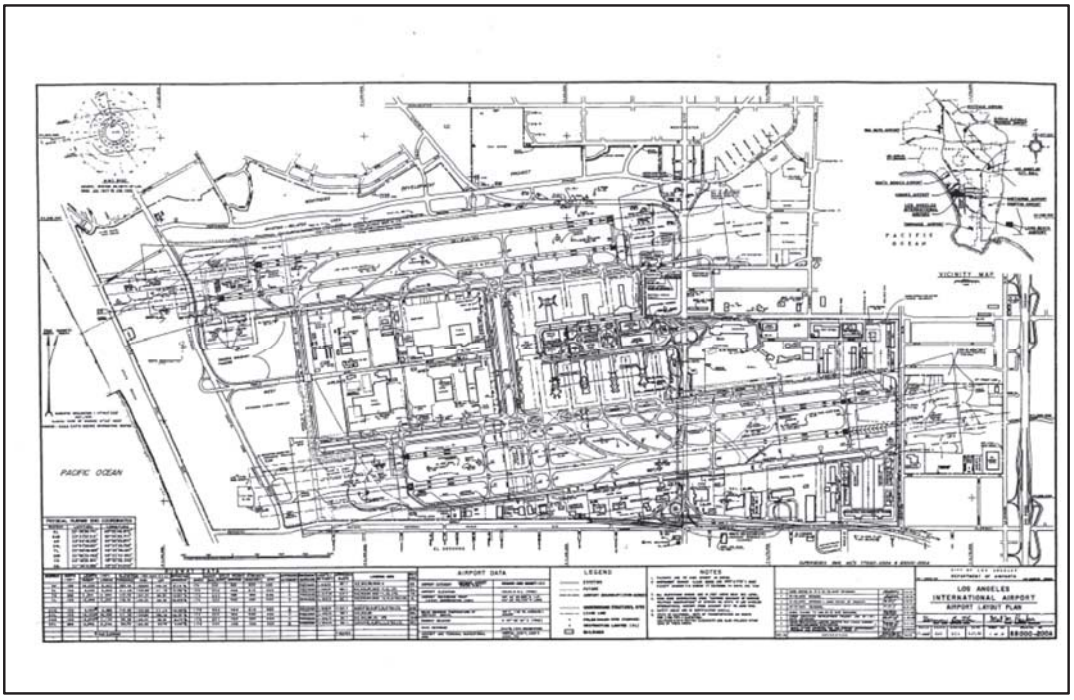
1982 Address Map, Not to Scale. [Flight Path Learning Center]



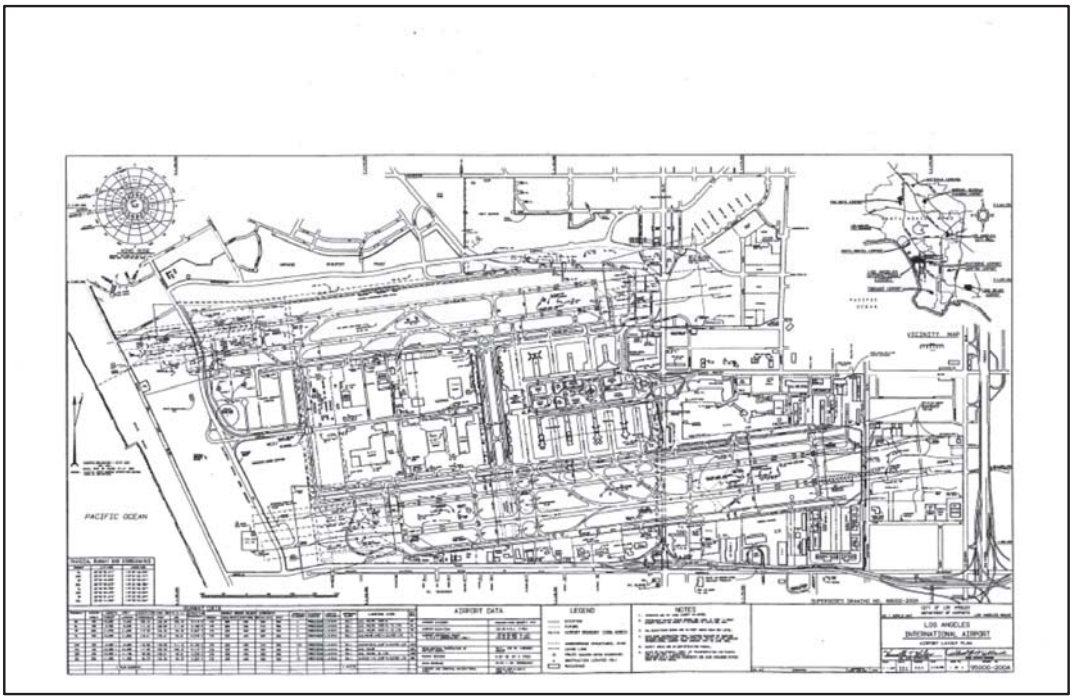
1983 Airport Layout Plan, Not to Scale. [Flight Path Learning Center]



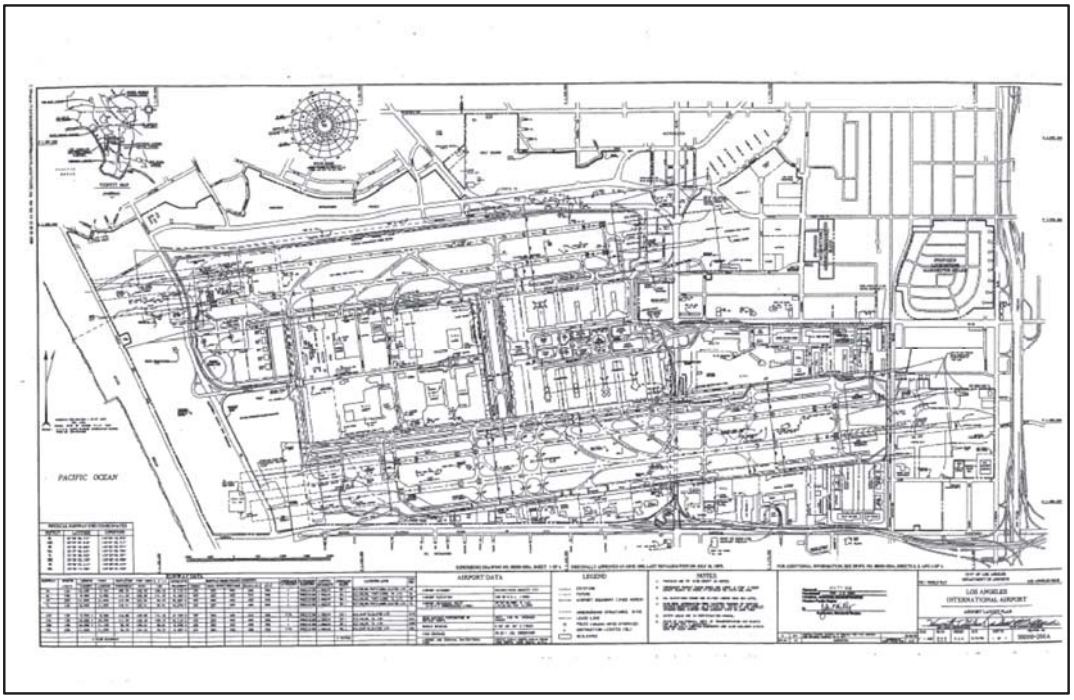
Post-1984 Taxiway Designation Map, Not to Scale. [Flight Path Learning Center]



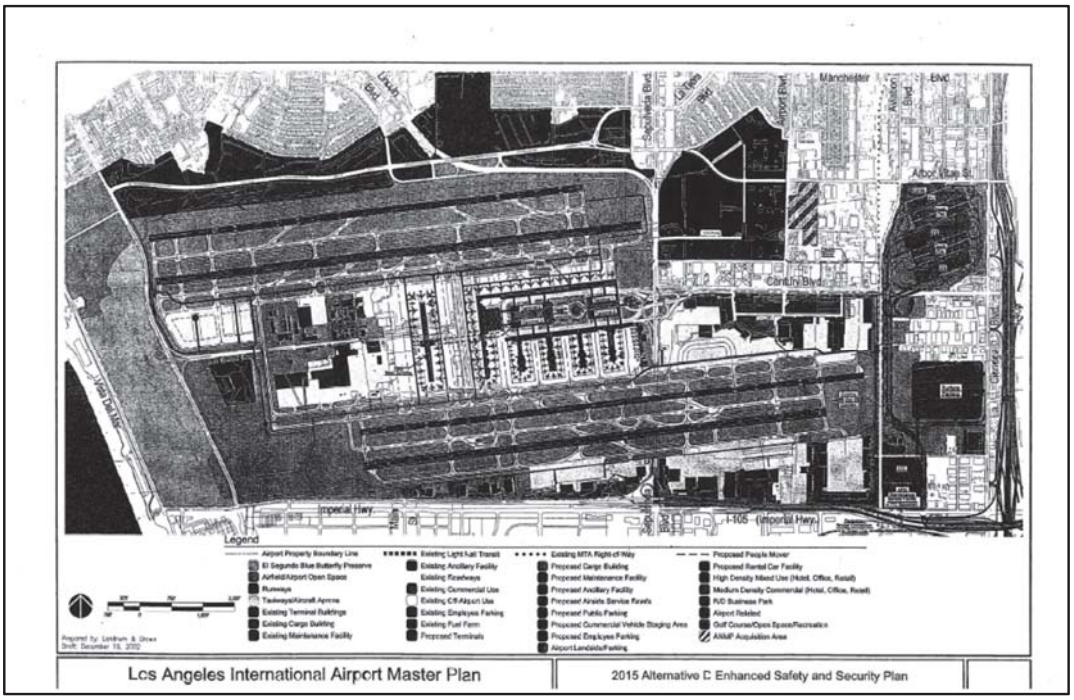
1990 Airport Layout Plan, Not to Scale. [Flight Path Learning Center]



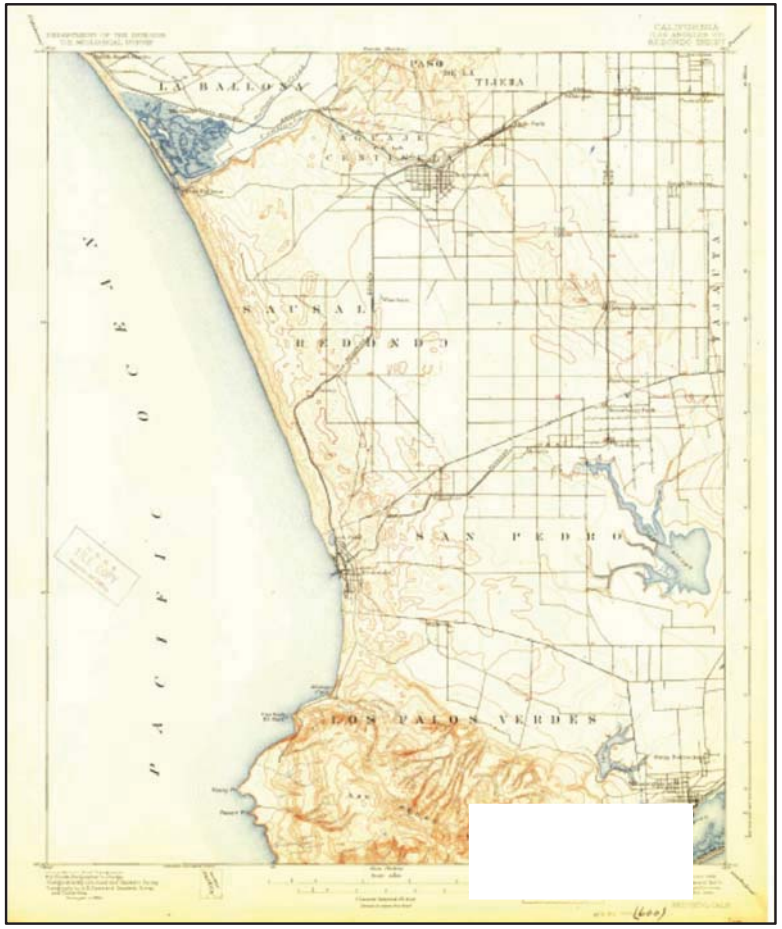
1995 Airport Layout Plan, Not to Scale. [Flight Path Learning Center]



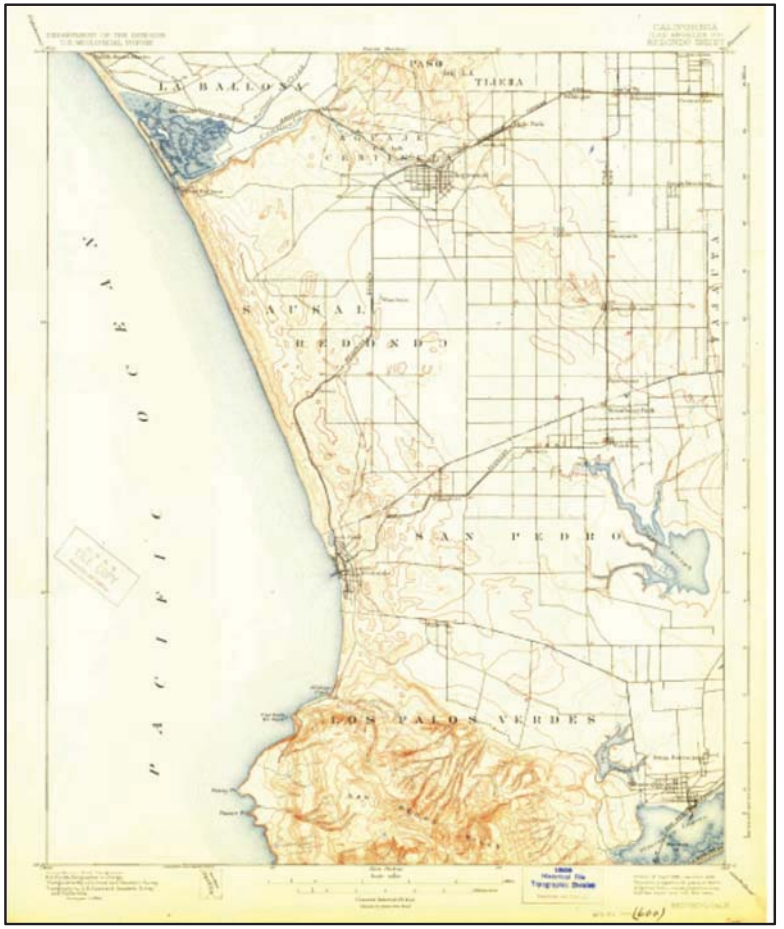
1998 Airport Layout Plan, Not to Scale. [Flight Path Learning Center]



2015 Alternative D Enhanced Safety and Security Plan, Not to Scale. [Flight Path Learning Center]



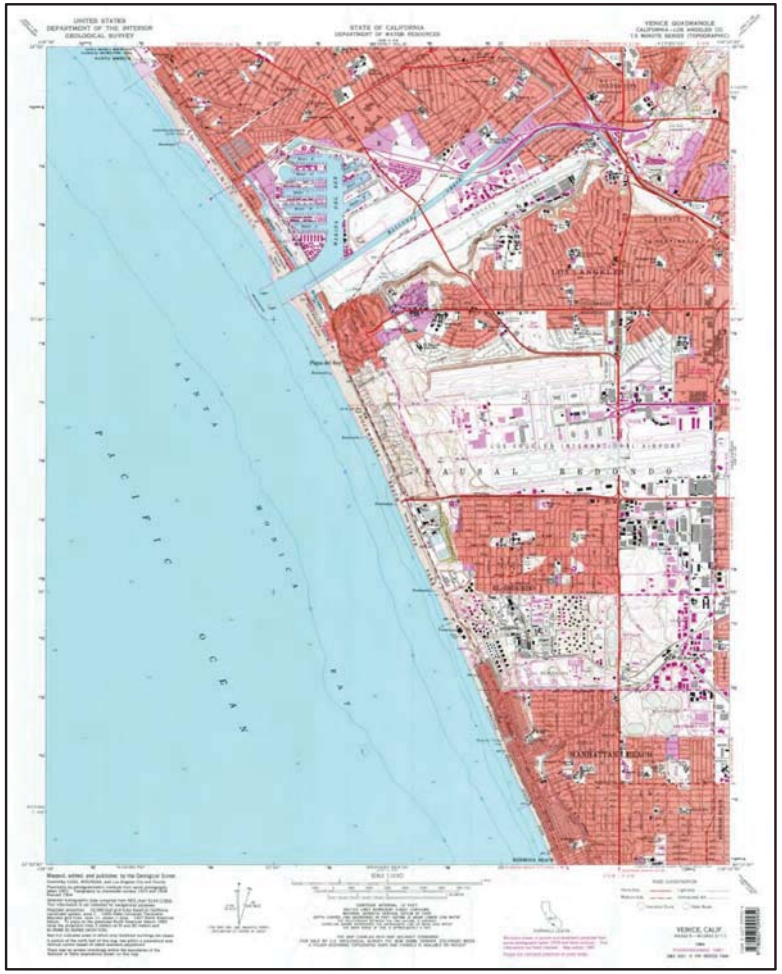
1896 USGS Historic Topographic Map: Redondo 15 x 15,
Not to Scale



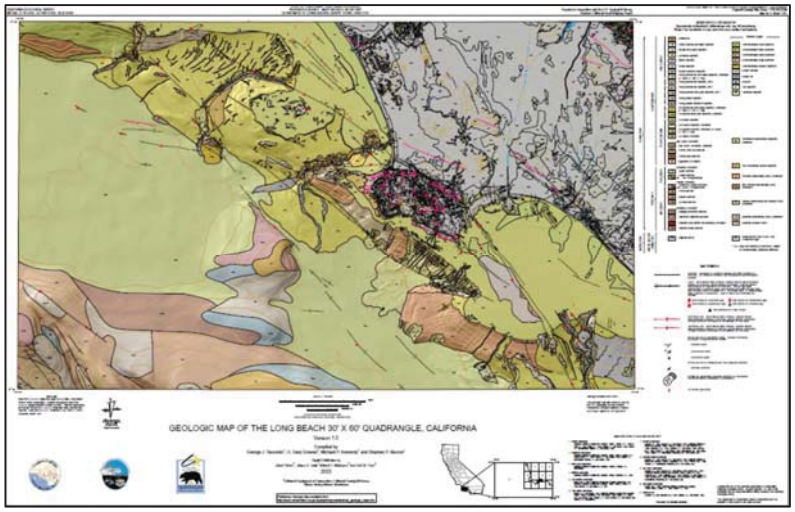
1950 USGS Historic Topographic Map: Venice 7.5 x 7.5,
Not to Scale

1964 USGS Historic Topographic Map: Venice 7.5 x 7.5,
Not to Scale

1964 [Revised 1972] USGS Historic Topographic Map: Venice 7.5 x 7.5,
Not to Scale



1964 [Revised 1981] USGS Historic Topographic Map: Venice 7.5 x 7.5,
Not to Scale



2003 USGS Topographic Map: Long Beach 30x60,
Not to scale

APPENDIX E1.3

RÉSUMÉS

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URS

Jeremy Hollins, MA

Senior Architectural Historian/ Architectural History Team Lead

Areas of Expertise

- Vernacular Architecture
- 19th – 20th century California Architecture
- Historic Preservation Treatments and Law
- Secretary of Interior Professional Qualification *Architectural History* (36 CFR Part 61)

Years of Experience

With URS: 5 years
With Other Firms: 2 year

Education

- M.A./2005/University of San Diego/Public History
- B.A./2003/Unversity of Rhode Island/ History [Environmental]

Continuing Education

- SRIF "Section 106: Principles and Practice," 2006
- FEMA Institute Independent Study Course IS-00253 "Coordinating Environmental & Historic Preservation Compliance," 2006
- FEMA Institute Independent Study Course IS-00650 "Building Partnerships in Tribal Communities," 2006
- Certificate Program, Urban Planning, UC San Diego Extension; In Completion
- Association of Environmental Professionals "Introductory and Advanced CEQA Workshop Series," 2005
- California Preservation Foundation Annual Conference, 2005

Overview

Jeremy Hollins is a Secretary of Interior Professional Qualified Architectural Historian for URS' San Diego office. Since 2003, Mr. Hollins has performed numerous historic evaluations, context studies, and determinations of eligibility and effect for a range of resources based on local, state, and National Register criteria and through technical reports, DPR 523 series forms, HABS reports, cultural landscape reports, historic structures reports, and resolution documents. He has a detailed knowledge of the laws and ordinances which affect historic properties, such as Section 106 of the NHPA, CEQA, NEPA, Section 4(f), California Public Resources Code, State Historic Building Code, and the Secretary of Interior Standards for the Treatment of Historic Properties. Additionally, two academic journals have published Mr. Hollins' work, and he was an adjunct instructor in 'World Architectural History' at the New School of Architecture before coming to URS in 2006.

Project Experience

Verizon Wireless, Telecommunication Projects – CA and NV. Architectural History Task Manager on over 95 intensive architectural history field surveys in California and Nevada for telecommunication projects' direct Areas of Potential Effect (APE) and viewshed (indirect APE). Projects completed as part of Section 106 of the NHPA and the FCC Programmatic Agreement with the California Office of Historic Preservation (OHP). Conducted and oversaw archival research, evaluated the projects' APE for eligibility for listing in the NRHP and California Register of Historic Resources (CRHR), identified effects, completed appropriate DPR 523 forms, drafted the reports for submission to OHP, and provided technical editing expertise. Resources identified and evaluated have dated from the late nineteenth century to the recent past, were located in various settings (dense urban, suburban, rural, and industrial), and have included numerous property types such as residential and commercial buildings, churches, educational institutions, hospitals, water towers, windmills, farm and ranch landscapes, an oil refinery, and irrigation canals. Responsible for scoping, budget and tasks management, client/agency interaction, and submission of compliance materials (2008-Present)

Brightsource Solar Energy, Rio Mesa Solar – Blythe, CA. Oversaw architectural history field survey and archival research as architectural history task manager for a large solar project in the Colorado Desert (partially within BLM land) in accordance with Section 106 of the NHPA, NEPA and, CEQA. Oversaw architectural history field survey of project footprint, transmission line and substation locations, and half-mile buffer. Oversaw historic research and community consultation, and the recordation and evaluation of approximately 30 cultural resources,

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including historic-age transmission lines, canals and irrigation ditches, historic roads, mines, and borrow pits. (2011)

FAA, San Francisco International Airport Runway Safety Area Program – San Francisco, CA. Task manager for reconnaissance survey of the historic-age runways, taxiways, canal, and approach-lighting trestles within the project APE; evaluated the airport facilities pursuant to Section 106 of the NHPA, NEPA, and CEQA; assessed effects and impacts from the proposed undertaking; completed DPR 523 forms; and authored the Historic Architecture Survey Report. (2011)

Los Angeles Unified School District, Alameda Transportation Relocation Project – Historical Architecture Assessment – Los Angeles, CA. Oversaw a historic architecture assessment in accordance with CEQA and according to City of Los Angeles criteria for listing as a historical or cultural monument. Managed an intensive architectural history survey, archival research, and evaluation. Authored the letter report to assess the significance of the three mid-twentieth century light industrial buildings on the site and any project impacts according to CEQA. (2011)

National Oceanic and Atmospheric Administration (NOAA), Integrated Water Resources Science and Services (IWRSS), University of Alabama Section 106 Compliance – Tuscaloosa, AL. Leader of project planning and photo guidance for a desktop evaluation of eligibility and effect pursuant to Section 106 of the NHPA for buildings associated with the mid-nineteenth century Bryce Hospital (Alabama State Hospital for the Insane) NRHP-eligible historic district. Task manager for resolution of adverse effects and completing SHPO consultation regarding the necessary HABS standards. (2011)

Caltrans and Alameda Corridor Transportation Authority, HAER, Level II, for the Commodore Schuyler F. Heim Bridge, Schuyler Heim Bridge Replacement and SR-47 Expansion Project – Long Beach, CA. Managed HAER for Commodore Schuyler F. Heim Bridge, a 1948 steel vertical lift bridge eligible for listing in the NRHP, to fulfill NHRA Section 106 mitigation requirements. The study was completed consistent to the specific guidelines and requirements of the United States Department of Interior and Library of Congress for a Level II HAER and included written historical and descriptive data, 5-by-7" large-format photographs and negatives, and 4-by-5" large-format photographic copies of as-built drawings and negatives. Oversaw project planning (client meetings, site visits, access permits, contract and engagement with photographer), facilitated field work, archival research, report drafting and editing and archival processing. . Project required extensive FHWA, Caltrans, and Port of Los Angeles-Port of Long Beach coordination and consultation. Project was nominated for a URS Pyramid Award for Technical Excellence. (2010-2011)

Caltrans and City of Santa Ana, Bristol Street HPSR and HRER, Phase 3 and Phase 4 – Santa Ana, CA. Task manager for an intensive architectural history field survey of the direct APE and a reconnaissance survey of the indirect APE in accordance with the Programmatic Agreement between the FHA, the Advisory Council on Historic Preservation, the California OHP, and Caltrans. Managed archival research, wrote a historic context, evaluated the APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded 66 resources (primarily early to mid-century residences in planned subdivisions) on the appropriate DPR 523 forms, and authored the HPSR and HRER. Adapted unique approach for recordation based on historic subdivisions and property types to facilitate and streamline compliance. (2010-2011)

Caltrans and SANDAG, Lenwood Road HPSR, ASR, and HRER – Barstow, CA.
Task manager for cultural resources studies, and preparation of HPSR, ASR, and HRER. Oversaw archival research, historic context, evaluated the project APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded forty-one resources (Historic Route 66-related commercial buildings and single-family residences) on the appropriate DPR 523 forms, and drafted the Historic Resources Evaluation Reports and Historic Properties Survey Reports. (2009-2011)

Pio Pico Energy Center, LLC, Pio Pico Energy Center, Otay Mesa – San Diego County, CA. Supervised an intensive architectural history field survey of the project survey area in accordance with CEQA and CEC guidelines. Oversaw archival research, evaluated the project APE for eligibility for listing in the CRHR or as a historical resource for purposes of CEQA, recorded two new resources (circa 1909 ranch complex and 1960 ranch-style residence) and re-recorded a third (historic road) on the appropriate DPR 523 forms, and drafted the architectural history portion of the cultural resources technical report for submission to the CEC. (2010-2011)

FEMA, Lake Valley Roof Replacement – Lake Valley Fire Protection District, CA. Managed and planned strategic tasks man tasks for preliminary NHPA Section 106 compliance evaluation of project involving hundreds of mid-twentieth century recreational residences and roof replacements. (2010-2011)

FEMA, Marcucci – Jackson, CA. Completion of Section 106 studies per the FEMA Programmatic Agreement for flood damage control (culvert replacement). Prepared Section 106 compliance materials, including findings memorandum, APE maps, DPR 523 series forms, correspondence records, and historic research (2010)

FEMA, Sutter Creek Broad Storm Drain Diversion – Sutter Creek, CA. Managed Programmatic Agreement between FEMA, the California

OHP, the California Governor's Office of Emergency Services, and the Advisory Council on Historic Preservation for proposed flood damage control (culvert drainage system alterations near a NRHP-eligible creek wall and historic district) tasks Prepared Section 106 compliance materials, including findings memorandum, APE maps, DPR 523 series forms, correspondence records, and historic research (2010)

FEMA, Fairfax Pavilion – Fairfax, CA. Completion of Section 106 studies per the FEMA Programmatic Agreement for seismic retrofit to NRHP-eligible property). Prepared Section 106 compliance materials, including findings memorandum, APE maps, DPR 523 series forms, correspondence records, and historic research (2010)

FEMA, Lake Elsinore Seismic Retrofit – Lake Elsinore, CA.
Managed Programmatic Agreement between FEMA, the California OHP, the California Governor's Office of Emergency Services, and the Advisory Council on Historic Preservation to proposed seismic retrofit tasks for preliminary NHPA Section 106 compliance evaluation of project involving the city hall buildings. (2010)

Caltrans and Riverside County Transportation Department, Clay Street Grade Separation Project – County of Riverside, CA. Task manager for cultural resources studies, and preparation of HPSR, ASR, and HRER. Oversaw archival research, historic context, evaluated the project APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded 5 resources on the appropriate DPR 523 forms, and drafted the Historic Resources Evaluation Report and Historic Properties Survey Reports. (2010)

United States Postal Service, USPS San Diego Midway Processing and Distribution Facility Property – San Diego, CA. Oversaw NRHP eligibility (including Criterion Consideration G) and effects for NHPA Section 106 compliance for the proposed disposition of the USPS San Diego Midway Processing and Distribution Facility property, which contained a large 1972 Brutalism and New Formalism-style building. Supervised a records search, Native American consultation, historic research, evaluation, integrity analysis, assessment of adverse effects, and drafting of report. (2010)

Apex Energy Group, Pio Pico Energy Center – Chula Vista, CA.
Oversaw an intensive architectural history field survey of the project's APE in accordance with CEQA and the CEC guidelines. Supervised archival research, evaluated the project APE for eligibility for listing in the CRHR or as a historical resource for purposes of CEQA, recorded three resources (1897 reservoir and 1919 dam, late-1950s public park facilities, and early twentieth-century livestock pens) on the appropriate DPR 523 forms, and drafted the architectural history portion of the cultural resources technical report for submission to the CEC. (2009-2010)

FEMA Santa Maria Seismic Retrofit–Santa Maria, CA. Supervised NRHP- and CRHR-eligibility of the Cook and Miller Court Complex, a Monterey style complex constructed in 1954, in compliance with NHPA Section 106 and the Programmatic Agreement between FEMA, California OHP, California Emergency Management Agency, and the Advisory Council on Historic Preservation. Completed DPR 523 forms. (2009)

Tessera Solar, Imperial Valley Solar (formerly Solar II) – El Centro, CA. Supervised archival research and compiled findings regarding Juan Bautista de Anza National Historic Trail and historic gravel mines in the project APE and vicinity pursuant to Section 106 of the NHPA, NEPA, and CEQA. Input archaeological field data to DPR 523 form database. (2009)

California High Speed Rail Authority, High Speed Train – Sylmar to Palmdale, CA. Task manager for field reconnaissance data analysis, records search review, and cultural resource location map revisions pursuant to Section 106 of the NHPA and CEQA. (2009)

Lost Hills Solar, Lost Hills – Kern County, CA. Facilitated research and drafted the historic context pursuant to CEQA. (2009)

Clay Street Grade Separation, Riverside County Transportation Department, Riverside County, CA.
Cultural Resources Task Manager (URS Corporation)
Performed Section 106 Compliance Study for Riverside County Transportation Department for the at-grade crossing of Clay Street with the Union Pacific Railroad. Prepared HPSR, ASR, and DPR 523 series forms for project per Caltrans/FHWA guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect. *(2010)*

Westside Extension Cultural Resources Technical Report and Historic Survey Report, Los Angeles County Metropolitan Transportation Authority (Metro), Los Angeles, West Hollywood, Beverly Hills, Santa Monica, and the County of Los Angeles, CA.
Architectural History Task Leader (URS Corporation)
Led architectural history tasks for the Los Angeles Metro Westside Extension project, which involved the planning and design of a heavy-rail subway connecting City of Los Angeles, West Hollywood, Beverly Hills, Santa Monica, and the County of Los Angeles. Responsibilities include Metro, FTA, and SHPO coordination/meetings; authoring project Programmatic Agreement; organizing field survey activities and background research; and authoring the Section 106 of the NHPA, NEPA, and CEQA technical studies. Field survey activities and background research required development of project-specific field survey forms, photograph protocols, architectural style guide, APE map delineation, stakeholder consultation, historic context development, primary and secondary source research, and impact analysis. In total, the project identified and evaluated a total of 91 NRHP-listed, -eligible, or

contributing resources, and over 200 non-significant historic-period properties. *(2009-2010)*

NHPA Section 106 Compliance for ARRA Projects Undertaken by National Railroad Passenger Corporation (Amtrak). CA, WA, NM.
Architectural Historian (URS Corporation)
West Coast lead for California, Oregon, Washington, and New Mexico National Historic Preservation Act Section 106 consultation and State Historic Preservation Office (SHPO) coordination regarding Amtrak's receipt of $1.3 billion in American Recovery and Reinvestment Act (ARRA) funds under an expediated timeline for receive ARRA funding. Responsibilities included field assessments/built environment surveys with engineering teams; development of design guidelines per project based on the Secretary of the Interior's Standards for Rehabilitation; and completion of Section 106 compliance materials (letter reports). Project required extensive coordination with SHPOs (e.g., CA, WA, and NM). SHPOs) to ensure Section 106 concurrence (No Adverse Effect to Historic Properties) was received in less than 30 days for each project. In total, project involved alterations and additions to nearly 7 NRHP-eligible and -listed properties (e.g., Los Angeles Union Station). Project was nominated for a URS Pyramid Award for Innovation. *(2009-2010)*

California High-Speed Train Project EIR/EIS-Los Angeles to Palmdale Segment, California High-Speed Rail Authority, Los Angeles County, CA.
Architectural History Task Leader (URS Corporation)
Led architectural history tasks for the CA High Speed Train Palmdale to Los Angeles Union Station. Responsibilities include sub-consultant management; organizing field survey activities and background research; and authoring the technical reports and EIR/EIS sections. Field survey activities and background research required development of project-specific field survey forms, photograph protocols, architectural style guide, APE map delineation, stakeholder consultation, historic context development, primary and secondary source research, and impact analysis. *(2009-Present)*

BNSF Tehachapi Cultural Resources Assessment, Kern County, CA.
Architectural Historian (URS Corporation)
Architectural historian for the evaluation of built environment resources and features located within APE for an eleven mile addition of a double-track in the Tehachapi area, near the Tehachapi Loop. Developed historic context and performed determination of eligibility, integrity analysis, and identification of effect. Prepared DPR 523 series forms and co-authored the technical reports per Caltrans Division of Rail CEQA-level standards. Project required complex evaluation of Cesar Chavez former office and gravesite, involving Criterion Considerations C, D, E, F G. *(2008-Present)*

California High-Speed Train Project EIR/EIS-Fresno to Bakersfield Segment, California High-Speed Rail Authority, CA.

Architectural Historian (URS Corporation)
Technical reviewer for the Section 106, NEPA, and CEQA studies for the High Speed Train Fresno to Bakersfield segment. *(2010)*

Alosta Avenue Bridge Section 106 Compliance, LADPW, Los Angeles County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for LADPW for the seismic retrofit of a 1929 Plate-Girder bridge and the California Central Railroad. Prepared HPSR and DPR 523 series forms for project per Caltrans guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect. *(2008)*

Long Beach Blvd. Bridge Section 106 Compliance, LADPW, Los Angeles County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for LADPW for the seismic retrofit of a 1932 Warren truss Bridge and the Union Pacific Railroad. Prepared HPSR and DPR 523 series forms for project per Caltrans guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect. *(2008)*

Willow Street Bridge Section 106 Compliance, LADPW, Los Angeles County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for LADPW for the seismic retrofit of a 1932 Warren truss Bridge and the Union Pacific Railroad. Prepared HPSR and DPR 523 series forms for project per Caltrans guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect. *(2007)*

Palomar Road Widening Cultural Resource Survey, County of Riverside, Riverside County, CA.
Architectural Historian (URS Corporation)
Performed historic research and CRHR and NRHP determination of eligibility for a 19th century rural (garden) cemetery (historic designed landscape) in Wildomar. NRHP evaluation required application of Criterion Consideration D: Cemeteries. Information was incorporated into DPR 523 series forms and final technical report. *(2007)*

California High-Speed Train Project EIR/EIS Methodology and Detailed Work Plan, Federal Rail Authority and High-Speed Train Authority, Statewide, CA.
Architectural Historian (URS Corporation)
Prepared Architectural History Methodologies for the completion of the state-wide Section 106, NEPA, and CEQA compliance of the High Speed Train Project EIR/EIS. Developed research, survey, identification, evaluation, and consultation methodologies for completion of the project, as well as identified possible constraints. Also prepared the Detailed Work Plan for the LA-Palmdale Segment Project EIR/EIS. *(2007)*

US-101/McCoy Lane Interchange Project ASR and HPSR, Caltrans Santa Barbara County, CA.
Architectural Historian (URS Corporation)
Prepared the Historic Context for a Section 106, NEPA, and CEQA compliance study for improvements to the US-101/McCoy Lane interchange. Performed primary and secondary sections. The historic context examined the development of oil prospecting in the Santa Maria Valley and the development and operation of the Battles Plant Facility, which was adjacent to the APE. *(2007)*

US 101/SR 46W Interchange Improvement, City of Paso Robles, Paso Robles, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Study for proposed undertaking. Survey discovered 5 previously unrecorded historic properties and evaluated the resources within 2 historic contexts. Performed determination of eligibility, identification of effect, analysis of integrity, and recommended mitigation measures for project. Completed DPR 523 series forms, HRER, and HPSR for Caltrans. *(2006)*

2701 North Harbor Drive Demolition Project EIR, San Diego Unified Port District and San Diego County Regional Airport Authority, City of San Diego, CA.
Cultural Resources Task Manager/ Architectural Historian (URS Corporation)
Served as Task Manager for CEQA-level cultural resources assessment. Performed fieldwork and authored Cultural Resources EIR section and technical report for the demolition of 50 structures at San Diego International Airport. Project considered potential effects to a National Register-eligible historic district (comprised of 17 properties). Duties included coordination of field survey, CHRIS records search, Native American consultation, primary and secondary research, development of historic context, recordation and evaluation of historic-period properties through DPR 523 series forms, and development of mitigation measures. *(2008-2009)*

Phase I Archaeological Assessment of Nuevo Business Park II, Private Client, Riverside, CA. *Architectural Historian (URS Corporation)*
Performed CEQA-level cultural resource assessment of 5 rural historic-period landscapes associated with agricultural/subsistence activities in Riverside County. Developed historic context on Riverside County's commercial agriculture industry, performed built environment survey, recorded and evaluated resources through DPR 523 series forms, and produced a technical report per County of Riverside Planning Department regulations. *(2008)*

Anaheim Historic Resource Evaluation, City of Anaheim, Orange County, CA.
Architectural Historian (URS Corporation)

Performed CEQA-level cultural resource assessment for three historic-period residences (Tudor Revival, modern ranch, contemporary style) within the City of Anaheim. Performed background research, wrote historic context on northeast Anaheim's transformation from agricultural to industry in the mid-20th century, performed built environment survey, recorded and evaluated resources through DPR 523 series forms, and produced a technical report. *(2007)*

Space Shuttle Program NEPA, Section 106, and 110 Compliance, NASA, Third Party Peer Review of Technical Reports.
Architectural Historian (URS Corporation)
Performed third party NEPA, Section 106 and Section 110 review of technical reports for NASA for the decommissioning of its Space Shuttle Program properties. Reviewed properties per Criterion Considerations B (Moved Properties) and G (Properties less than 50 years), federal government definition of personal properties, and as geographic historic districts. Space Shuttle Program properties were located at Dryden Flight Research Center (Edwards, CA), White Sands Space Harbor, and White Sands Test Facility (Las Cruces, NM). *(2007)*

Pacific Gateway Cargo Center, Ontario International Airport Construction Monitoring and Treatment Plan, Ontario International Airport, Ontario, CA
Architectural Historian (URS Corporation)
Authored construction monitoring and treatment plan for subsurface features and built environment. Plan was for the redevelopment of 96 acre site, and included monitoring guidelines for construction/grading, and a visual inspection program for surrounding historic resources. Plan encompassed entire building process from pre-construction meetings to post-construction reports. *(2006)*

West Moreland Clean Harbors Landfill Expansion Cultural Resource Assessment, Private Client, West Moreland, CA.
Architectural Historian (URS Corporation)
Performed CHRIS Center Records Search for Study Area for proposed landfill site. Results of Record Search were tabulated and used for cultural resource assessment of Study Area. *(2006)*

La Posada Hotel Engineering Contingency Plan, Private Client, Winslow, AZ.
Architectural Historian (URS Corporation)
Planned and wrote an Engineering Contingency Plan for the La Posada Hotel (within the La Posada National Register District) for the removal of oil seepage from a raised concrete foundation. Plan provided scope, costs, and recommended Rehabilitation and Restoration treatments (per Secretary of Interior Standards for the Treatment of Historic Properties). Project required informal consultation with AZ SHPO and Materials Contractors. *(2006)*

IERF Building Historic and Architectural Documentation (HABS), University of California, Irvine, Irvine, CA.
Architectural Historian (URS Corporation)
Performed equivalent of HABS Level 2 survey of a 1986 Frank Gehry-designed academic complex at the University of California – Irvine. Responsible for architectural investigation, physical history, historic context, and coordination with HABS photographer. *(2006)*

Uptown San Diego Historic Reconnaissance Survey, City of San Diego, San Diego, CA.
Architectural Historian (IS Architecture)
Historian for the identification and evaluation of 20,000 resources in San Diego. Responsible for jointly preparing survey's first volume, which included "Data Analysis, Phase Implementation, Methodology, Styles Guide/Context, and Proposed Districts/Conservation Overlays." Evaluated and grouped resources based on association to historic context, and drafted district and overlay records, contributing elements, boundaries, and integrity. *(2005-2006)*

100MW Solar/Bio-Waste Power Plant, Spinnaker Energy, Inc., Fresno County, CA
Cultural Resources Task Manager (URS Corporation)
Served as Task Manager for cultural resources assessment. Performed fieldwork and co-authored Cultural Resources AFC section and technical report for a proposed hybrid solar and bio-fuel power plant in Fresno County. Deliverables were submitted to the CEC in support of a CEQA-level assessment. Duties included coordination of field survey, CHRIS records search, Native American consultation, primary and secondary research, development of historic context, recordation and evaluation of historic-period properties through DPR 523 series forms, analysis of effects, and development of mitigation measures. *(2008)*

Carrizo Energy Solar Farm AFC Data Requests, Ausra, Inc., San Luis Obispo County, CA.
Architectural Historian (URS Corporation)
Performed additional historic research and field surveys for CEC AFC Data Requests to determine the presence of a potential cultural landscape within the northern Carrizo Plains near the vicinity of the Project Area. Research efforts included a review of primary and secondary sources, development of an evaluative context, and recordation and evaluation of 8 potential contributing resources through DPR 523 series forms. Recordation and evaluation followed National Register Bulletin 30: Guidelines for Evaluating and Documenting Rural Historic Landscapes. *(2008)*

Carrizo Energy Solar Farm AFC Supplemental Filing, Ausra, Inc., San Luis Obispo County, CA.
Cultural Resources Task Manager (URS Corporation)
Served as Task Manager for cultural resources assessment. Performed CHRIS records search and authored Cultural Resources AFC section for a

150-mile transmission line corridor intended for use as part of the 177 MW solar power project located in San Luis Obispo County, California. *(2008)*

Confidential Solar Energy Project, Confidential Private Client, Imperial County, CA.
Architectural Historian (URS Corporation)
Performed primary and secondary source research to develop a historic context for the project area in support of a CEQA-level assessment for submission to the CEC. Context focused on Imperial County transportation/circulation networks (Highway 80), local military activities, irrigation agriculture, and the San Diego-Arizona Railroad. *(2008)*

Carrizo Energy Solar Farm 177 MW Solar Plant, CEC, Ausra, Inc., San Luis Obispo County, CA.
Cultural Resources Task Manager (URS Corporation)
Served as Task Manager for cultural resources assessment. Performed fieldwork and authored Cultural Resources AFC section and technical report for a 177 MW solar power project located in San Luis Obispo County, California (640 acre solar farm; 380 acre construction laydown). Deliverables were submitted to the CEC in support of a CEQA-level assessment. Duties included coordination of field survey, CHRIS records search, Native American consultation, primary and secondary research, development of historic context, recordation and evaluation of historic-period properties, analysis of effects, and development of mitigation measures. *(2007-2008)*

Stirling Energy Systems – Solar 2 Project and Data Request 125, CEC, Imperial County, CA
Architectural Historian (URS Corporation)
Performed primary and secondary source research to develop a historic and evaluative context for the project area. Context focused on Imperial County transportation/circulation networks (Highway 80), local military activities, irrigation agriculture, and the San Diego-Arizona Railroad. Also, recorded and performed determination of eligibility, analysis of integrity, and identification of effect for six historic-period properties. Prepared for Stirling Energy Systems. *(2007-2009)*

Solar Hybrid Power Plant Cultural Resources Assessment, Bethel Energy, Imperial County, CA.
Architectural Historian (URS Corporation)
Performed CEQA-level cultural resource assessment of two early 20th century earthen and concrete-lined canals in Imperial Valley area. Performed CHRIS Center Record Search, developed historic context on Imperial Valley's irrigated commercial agriculture industry, performed built environment survey, recorded and evaluated resources through DPR 523 series forms, and produced a technical report. *(2007)*

Calnev Expansion Project, Kinder Morgan, San Bernardino County, CA.
Architectural Historian (URS Corporation)
Served as Architectural Historian for cultural resources assessment for NEPA and CEQA project. Performed fieldwork and authored technical report for a 190-mile portion of a proposed 245-mile pipeline expansion project from Colton, CA to Primm, NV. Deliverables were submitted to the BLM as the lead agency for NEPA and the County of San Bernardino as the lead agency for CEQA. Duties included coordination of field survey, CHRIS records search, primary and secondary research, development of historic context, recordation and evaluation of historic-period properties through DPR 523 series forms, analysis of effects, and development of mitigation measures. In total, recorded and evaluated 39 unrecorded historic-period properties and 17 previously recorded historic-period properties. Prepared for Kinder Morgan, Inc. *(2008)*

Carson Cogeneration Plan Expansion, BP, Inc., Los Angeles, CA.
Cultural Resources Task Manager (URS Corporation)
Served as Task Manager for cultural resources assessment for a cogeneration plant expansion. Performed fieldwork and co-authored Cultural Resources AFC section and technical reports. Deliverables were submitted to the CEC in support of a CEQA-level assessment. Duties included coordination of field survey, CHRIS records search, Native American consultation, primary and secondary research, development of historic context, recordation and evaluation of historic-period properties through DPR 523 series forms, analysis of effects, and development of mitigation measures. *(2008)*

1507 Mt. Vernon Avenue Historic Property Assessment, Patch Services Engineering, City of Pomona, Los Angeles County, CA.
Project Manager/ Architectural Historian (URS Corporation)
Project Manager/ Architectural historian for the evaluation of a 1927 paper mill located within a cogeneration power facility. Developed historic context, construction chronology, and performed determination of eligibility, analysis of integrity, and identification of effect. *(2008)*

Starwood-Midway Power Plant AFC Data Requests, Starwood Energy, Fresno County, CA.
Architectural Historian (URS Corporation)
Performed additional historic research and field surveys for CEC AFC Data Requests to determine the location of a historic farm in relation to the Project Area. Research efforts included a review of historic maps, aerial photographs, real estate and county records, and newspaper articles. The Data Requests, and associated figures and maps, were submitted to CEC via a Letter Report. *(2007)*

Revised Niland Cultural Treatment Plan and Research Design, Niland Gas Turbine Plant Project, CEC, Niland, CA
Architectural Historian (URS Corporation)

Authored the Historic Period Research Questions used in the Treatment Plan. Research questions focused on emigration, irrigation, flooding episodes, and power generation in Imperial Valley. *(2007)*

Confidential Pipeline Expansion Project Feasibility Study and Constraints Analysis, Private Client, CA and NV.
Architectural Historian (URS Corporation)
Performed CHRIS Center Records Search for 223-mile pipeline expansion. Results of Record Search were tabulated and included in Feasibility Study. Also coordinated all cultural resource mapping with GIS personnel. *(2006)*

Cultural Resource Survey and Assessment, Imperial Irrigation District, Niland and El Centro, CA.
Architectural Historian (URS Corporation)
Staff architectural historian for the evaluation of built environment resources and effect caused by alterations to power plant facilities. Evaluated resources per California Register criteria and developed recommended mitigation measures for project. Co-authored the Technical Reports, DPR 523 series forms, and Application for Certification. Identified an historic bank, eligible for the California Register of Historic Resources, related to the early development of Niland and a historic powerplant building, associated with the early development of the Imperial Irrigation District and eligible for the California Register. *(2006)*

Cook & Miller Court Complex Seismic Retrofit, FEMA, Santa Barbara County, CA.
Architectural Historian (URS Corporation)
As part of HMGP-funding, evaluated the NRHP and CRHR eligibility of the Cook & Miller Court Complex, a Monterey style complex constructed in 1954, in compliance with Section 106 and the PA Completed architectural history survey, background research, DPR 523 series forms and findings memorandum. *(2010)*

Franklin Reservoir Improvement Section 106 Compliance Project, FEMA, Los Angeles County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for LADWP for the replacement of five catch basins for a 1940s dam within the City of Beverly Hills. Prepared DPR 523 series forms and technical report for SHPO. Developed historic context, recordation and evaluation of historic-period properties through DPR 523 series forms, analysis of effects, and development of mitigation measures. *(2008-2009)*

Santa Monica City Hall MOA Seismic Retrofit, Jail-Area Adaptive Use, and ADA Improvements, FEMA, Los Angeles County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Review on behalf of FEMA for the seismic retrofit, jail-area adaptive use, and ADA improvements of the National

Register-eligible City Hall. Reviewed consultant and City prepared studies and drawings, performed integrity analysis and identification of character defining features, analyzed effects, and developed a resolution of effects plan. Coordinated with ACHP, SHPO, OES, FEMA, and City, and authored Notification Letter and Draft MOA to resolve effects. Prepared for FEMA *(2008-2009)*

Harada House Section 106 Review, FEMA, Riverside County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Review on behalf of FEMA for emergency repairs to a National Historic Landmark (Harada House) within the City of Riverside. Reviewed project through NEMIS database, and responsible for SHPO consultation, applying Section 106 Programmatic Agreement Allowances, integrity analysis, and identification of effects. Drafted Notification Letter for ACHP, SHPO, OES, FEMA, and City. *(2008)*

Ross School Flood Mitigation Assistance, FEMA, Sonoma County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Review for FEMA for a flood elevation assistance project. Performed CHRIS Center Record Search and determination of eligibility, analysis of integrity, and identification of effect. Compliance study submitted via letter report to FEMA. *(2008)*

Sonoma County Flood Mitigation Assistance, FEMA. Sonoma County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for FEMA for flood mitigation assistance project. Performed CHRIS Center Record Search and determination of eligibility, analysis of integrity, and identification of effect. Compliance study submitted via letter report to SHPO. Prepared for Sonoma County. *(2008)*

Napa County Flood Mitigation Assistance, FEMA, Napa County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for FEMA for flood mitigation assistance project. Performed CHRIS Center Record Search and performed determination of eligibility, analysis of integrity, and identification of effect. Compliance study data transmitted via letter report to SHPO. Prepared for Sonoma County. *(2008)*

Municipal Water District - Upper Feeder Line, FEMA, Riverside County, CA.
Architectural Historian (URS Corporation)
Staff architectural historian for the evaluation of built environment resources for FEMA disaster recovery project. Evaluated resources ("Pratt" truss bridge and gaging station) per National Register criteria and requirements of Section 106 of the NHPA. Performed determination of

eligibility, identification of effect, analysis of integrity, and recommended mitigation measures for project. Prepared for Riverside County. *(2006)*

San Diego Vegetative Management, FEMA, San Diego County, CA.
Architectural Historian (URS Corporation)
Assisted FEMA's Section 106 compliance for vegetative management for the San Diego County communities of Bay Terrace, Del Cerro, Encanto, Lake Murray, Marion Bear Park, Serra Mesa, Black Mountain, Carmel Valley, Los Penasquitos, Tecolote Canyon, Scripps Ranch, and Tierrasanta. Performed CHRIS Center Records Search and wrote historic contexts for communities of Bay Terrace, Del Cerro, Encanto, Lake Murray, Marion Bear Park, Serra Mesa, Black Mountain, Carmel Valley, Los Penasquitos, Tecolote Canyon, Scripps Ranch, and Tierrasanta. Part of technical reports submitted to FEMA for Section 106 Compliance. Prepared for City of San Diego. *(2006)*

Hurricane Katrina Public Assistance, DR-1604-MS, FEMA, Biloxi, MS.
Architectural Historian (URS Corporation)
Historic Preservation Specialist for NEPA review of over 100 public assistance projects. Reviewed projects through NEMIS database. Responsible for SHPO consultation, applying Section 106 Programmatic Allowances, determinations of eligibility, integrity analysis, and identification of effects. Drafted MOAs, developed mitigation measures, ensured projects met Secretary of Interior Standards for the Treatment of Historic Properties, and coordinated and led meetings between applicants, FEMA, and Mississippi SHPO. Projects included over 10 National Register Properties, 1 National Historic Landmark, and 15 Mississippi Landmarks. *(2006)*

Nevada City Fuel Reduction Project, FEMA, Deer Creek Environs, Nevada County, CA.
Architectural Historian (URS Corporation)
Assisted FEMA's Section 106 compliance for wildfire mitigation of 600 acres. Mr. Hollins participated in kick-off meetings; performed extensive background research; developed an evaluative historic context; completed architectural history surveys for the Undertaking; and, prepared DPR 523 series forms and a findings memorandum. Four previously recorded cultural resources, one previously unidentified historic-period residential camp site, and five historic-period isolates were recorded in the Area of Potential Effect (APE) - all associated with the early history of 19th and 20th century northern California gold mining. *(2006)*

Water

Calaveras Dam Staff Housing Replacement Project, San Francisco Public Utilities Commission, Sunol, Alameda County, CA.
Architectural History Task Manager (URS Corporation)
Architectural History Task Manager for the CEQA evaluation of a historic-period rural property that would be demolished to accommodate

new staff housing for the SFPUC, as part of Calaveras Dam replacement project. CEQA evaluation included preparation of a technical archaeology and architectural history memorandum, recordation of the property through DPR 523 series forms, and preparation of project area maps. Developed evaluative historic context for the Spring Valley Water Company, Sunol, and Alameda County historic-period rural properties. *(2010)*

City of Los Angeles Lower Franklin Reservoir No. 2 - Debris Basins Replacement, Los Angeles, CA.
Architectural Historian (URS Corporation)
Assisted FEMA's Section 106 compliance for LADWP's replacement of five catch basins for a 1940s dam within the City of Beverly Hills. Mr. Hollins performed extensive background research; developed an evaluative historic context; completed architectural history surveys for the Undertaking; and, prepared DPR 523 series forms and a findings memorandum. *(2009)*

MCB Camp Pendleton Bachelor Enlisted Quarters Siting Study, San Diego County, CA.
Architectural Historian (URS Corporation)
Reviewed MCB Camp Pendleton GIS layers and cultural resources records and data to identify potential direct impacts to previously recorded cultural resources located within a 500-foot radius of proposed Bachelor Enlisted Quarters at MCB Camp Pendleton. Provided cultural resources analysis as part of a preliminary NEPA constraints and siting study to support the preparation of the Project's design-build RFP for FY2008, FY2009, and FY2010. In total, 25 potential BEQ sites were analyzed for potential direct impacts to cultural resources. Prepared for MCB Camp Pendleton. *(2008)*

Desert Installation Appearance Plan and Airfield Security Study for NAF El Centro, NAS Fallon, NWS Seal Beach, NAS Lemoore, and NAWS China Lake.
Architectural Historian (URS Corporation)
Architectural Historian responsible for developing cultural resources considerations, base-wide historic contexts, design guidelines for historic structures and districts, and base-wide visual themes. Project was completed at five installations throughout California and Nevada. Within the historic district analysis, the character-defining features, visual quality and context, and historic contexts were identified to classify built environment styles and a harmonizing theme. In addition, all built environment properties within the installations were identified and categorized, in order to provide clear visual design guidance and functional and aesthetic guidance. Lastly, based on the preceding data, design guidelines (including material and construction elements) were then established for each installation. Prepared for NAVFAC. *(2008)*

Telecommunications

Historic-Period Property Evaluation Report – Twin Peaks, San Francisco Planning Department, San Francisco, CA.
Architectural History Task Manager (URS Corporation)
Architectural History Task Manager for the Section 106 of the NHPA and CEQA evaluation of a historic-period religious building (church) located within the City of San Francisco, which would be substantially altered. CEQA evaluation was completed in compliance with San Francisco Planning Department regulations, as well as the guidelines established by the Major Environmental Analysis (MEA) staff and the Planning's Department's Preservation Coordinator. Section 106 of the NHPA and CEQA evaluation included preparation of a letter report, DPR 523 series forms, APE maps, historic maps and images, records search information, and a San Francisco Planning Department Supplemental Information Form for Historic Resource Evaluation form. Historic-period property was evaluated using the Criterion Consideration A: Religious Properties, in addition to NRHP/CRHR criterion. *(2010)*

Scripps Park Historical Structures and Cultural Landscape Report, La Jolla, CA.
Project Manager (Independent Contractor)
Project Manager and lead investigator for historic context and treatment plan of site. Work entailed identifying landscape features, flora/botanical species, existing conditions, review of original drawings and plans, historic sequence of events, construction chronology, and archaeological discoveries. Responsible for assigning tasks, overseeing sub-consultants work, coordination of report, budget, and application of Secretary of Interior standards, CEQA, and Coastal Commission regulations. Project submitted to City of San Diego and Coastal Commission for Restoration and Reconstruction of site and future planning. *(2005)*

Community Involvement

Traffic and Parking Commission, City of Del Mar, Del Mar, CA. Appointed by the Del Mar City Council to serve four-year term as member of five person committee. Meet monthly and make recommendations to City Council based on public input and participation. Responsible for resolving traffic and parking issues; such as speeding, reoccurring regulatory violations, traffic congestion, parking problems, and application of new technologies. Work and meet regularly with the public, City Council, Parking Enforcement, the Fire Department, the San Diego Sheriff's officers, City Manager's office, Public Works and Planning Departments, and the City's Traffic Engineer. *(July 2005-July 2009)*

Publications

"Village Memories: A Photo Essay on La Jolla's Past," *Journal of San Diego History*, Vol. # 54, Fall 2008

"Until Kingdom Come: The Design and Construction of La Jolla's Children's Pool," *Journal of San Diego History*, Vol. # 51, Winter/Spring, 2005

Chronology

2006-Present: URS Corporation, Senior Architectural Historian, San Diego, CA

2005-2006: New School of Architecture, Adjunct Instructor, San Diego, CA

2004-2005: IS Architecture, Architectural Historian, La Jolla, CA

2003-2004: La Jolla Historical Society, Archivist and Preservation Specialist, La Jolla, CA

URS

Arleen Elena Garcia-Herbst, C.Phil., RPA

Cultural Resources Team Manager/Project Manager

Years of Experience

With URS: <1 Years
With Other Firms: 13 Years

Education

Ph.D. /In progress, ABD/Anthropology/University of California, Santa Barbara

C.Phil./2006/ Anthropology/ University of California, Santa Barbara

M.A./2000/Anthropology/ University of California, Santa Barbara

B.A./1996/Anthropology

University of Arizona

Registrations:

2007/Register of Professional Archaeologists

Overview

Ms. Garcia-Herbst has more than 13 years of experience in archaeological research, fieldwork, and publication in the American Southwest (California, Arizona, Colorado and Nevada), and Argentina (Patagonia). Ms. Garcia-Herbst is currently working on her Ph.D. in Anthropology at the University of California, Santa Barbara, with a research focus on prehistoric technological innovation and the specifics of why humans adopt new technology. She has several years of supervisory experience and is able to plan projects, write funding proposals, survey and sample, gather, organize and analyze data, as well as summarize and publish results in print and digital formats and well as review documents. She also has analytical expertise in lithic technology, specifically flaked and ground stone analysis, and stone raw material geochemical sourcing. Her experience with computing includes MS Word, MS Excel, MS PowerPoint, MS Access, MS Outlook, MS ActiveSync, Adobe Photoshop, Adobe Fireworks, Adobe Acrobat, Adobe Dreamweaver, TOPO!, ESRI ArcView 3.x and ArcGIS 9.x, ESRI ArcPad, Trimble Field Computers with GPS receiver and MS Windows Mobile software, TerraSync, GPS Pathfinder Tools SDK.

Working as an RPA-registered cultural resource management professional, she provides oversight for the initiation, development, completion and review of reporting of research, cultural resource studies, field data collection/surveys, Phase I, II and III Assessments, and mitigation studies. She has special technical expertise in relation to compliance with Section 106 and 110 of the National Historic Preservation Act (NHPA), as well as compliance with State historic preservation and archaeological resources regulations under the California Environmental Quality Act (CEQA).

Ms. Garcia-Herbst currently serves as the Cultural Resources Team Manager at URS Corporation, La Jolla, CA. In this role, she is responsible for the management of a staff of archaeologists, architectural historians, and paleontologists, and as-needed field technicians to successfully complete a variety of complex, interdisciplinary projects in California and other states. Ms. Garcia-Herbst supervises field monitors and field crews, prepares monitoring reports and cultural resource technical reports, prepares EIR/EA/EIS sections and independent technical reports and coordinates with clients and sub consultants. She also helps group and division managers to develop and market the cultural resources group for URS by preparing quick turn-around scopes and costs for projects for the purposes of marketing.

Project Specific Experience

Archaeological Monitoring for Geotechnical Borings and Proposed Trenches along State Route 76 East Corridor, Caltrans District 11,

URS

San Diego County, CA. As Cultural Resources Task Lead, supervised archaeological monitoring for 65 geotechnical borings and 8 proposed trenches. Monitoring activities included analysis, archaeological report preparation following Caltrans guidelines for monitoring reports and curation of any cultural material recovered during the monitoring of geotechnical borings, as well as coordination with the Caltrans District Archaeologist (2011-present).

Hesperia Commerce Center Industrial Park, San Bernardino County, California. As Cultural Resources Task Lead, performed a Cultural Resources Assessment of a 13-acre parcel consisting of a pre-field records search, reconnaissance survey of the site, letter report preparation, and impact analysis in compliance with CEQA and in support of an EIR (2011).

Confidential Client, Confidential Solar Energy Project, Riverside County, California. Cultural Resources Team Manager for Class III Cultural Resources assessment that covered approximately 20,000 acres and was conducted under the direction of the California Energy Commission (CEC) and The Bureau of Land Management – Palm Springs Field Office. Cultural Resources Manager responsibilities include technical review and QA/QC of archaeology, architectural history, paleontology, geomorphology and ethnography studies, coordination with BLM and CEC staff, assistance with Native American consultation (2011-present).

Marine Corps Air Station Chocolate Mountain Aerial Gunnery Range (MCAS CMAGR) Land Withdrawal Renewal, US Navy, Riverside and Imperial Counties, CA. As Cultural Resources Task Manager, supervised the preparation of the cultural resources section of a Legislative Environmental Impact Statement (LEIS) **(2011-present)**.

Marine Corps Base Camp Pendleton (MCBCP) Electrical and Communication Upgrade (MILCON P1093/P1094, US Navy, San Diego County, CA. As Cultural Resources Task Manager, coordinated with the MCBCP Environmental Security division archaeologist and NAVFAC SW project manager, as well as the URS design and engineering team, to ensure the 100% Design plans to be submitted to SHPO are in compliance with the project Final Environmental Impact Statement and the Programmatic Agreement **(2011-present)**.

Cultural Resources Survey for the Sunrise Powerlink Project, San Diego Gas & Electric, San Diego and Imperial Counties, CA. As Project Manager for Sempra Energy Utility Projects, managed an archaeological survey of the approved southern route of the Sunrise Powerlink 230-kV/500-kV transmission line project in compliance with Section 106 of the NHPA and CEQA. Managed Class III intensive field surveys, reporting of findings, as well as prepared recommendations for the utility company for avoiding impacts to cultural resources within the SDG&E easement and access roads, as well as proposed additional facilities, located on Bureau of Land Management, Cleveland National Forest, Department of Defense, County of San Diego, City of San Diego and private property. Worked directly with SDG&E staff and other contractors to ensure avoidance of impacts to archaeological sites located

near proposed structures and associated facilities through fielding activities, as well as the creation of a Historic Property Management Plan and several Historic Property Treatment Plans **(2009-2011)**.

Cultural Resources Surveys, Monitoring and Testing for SDG&E On-Call Contract, San Diego Gas & Electric, Imperial, Orange and San Diego counties, CA. As Project Manager for Sempra Energy Utility Projects, managed medium- to small-scale archaeological surveys for replacement of SDG&E wood utility poles with steel utility poles. Also managed small-scale surveys, monitoring and testing of pole or facility replacement locations related to regular operations and maintenance. This work was done to assist SDG&E in their compliance with Section 106 of the NHPA and CEQA. Managed records search requests, Class III intensive field surveys, cultural monitoring, evaluation testing and reviewed reporting of findings, as well as prepared or approved recommendations for the utility company for avoiding impacts to cultural resources within the SDG&E easement and access roads, as well as those located within Bureau of Land Management, Cleveland National Forest, Department of Defense, Bureau of Indian Affairs, County of San Diego, City of San Diego and private property. Worked directly with SDG&E staff to ensure avoidance of impacts to archaeological sites located near poles or associated facilities (**2009-2011)**.

Evaluation of the Archaeological Resources of the RMWD, Ramona Municipal Water District, San Diego County, CA. As Field Director, conducted testing of 10 prehistoric sites of unknown significance and California Register of Historic Resources eligibility, and co-authored the findings report to assist the RMWD in its compliance with CEQA (**2009)**.

Cultural Resources Survey and Extended Phase I Investigations for the Caltrans Interstate-805 South Corridor Project, Caltrans District 11, San Diego, National City and Chula Vista, CA. As Project Archaeologist, conducted full coverage survey within the proposed areas of potential effects, as well as a 15-m buffer, to assess the presence or absence of potentially significant cultural resources **(2008-2009)**.

Inventory and Evaluation of the Archaeological and Historical Resources of Yokohl Ranch, PBS&J, Tulare County, CA. As Field Director, conducted testing of 28 prehistoric and historic sites of unknown significance and California Register of Historic Resources eligibility, conducted a directed survey of an additional 650 acres, and co-authored the findings report to assist Yokohl Ranch in its compliance with CEQA (**2008)**.

Cultural Resources Survey and Extended Phase I Investigations for the Caltrans Interstate-5 North Coast Corridor Project, Caltrans District 11, San Diego County, CA. As Project Archaeologist, conducted full-coverage survey within the proposed biological mitigation parcels south of Batiquitos Lagoon, to assess the presence or absence of potentially significant cultural resources (**2008)**.

Cultural Resources Survey of 290 Acres in Palomar State Park, California Department of Parks and Recreation, San Diego County, CA. As Project Archaeologist, conducted an intensive pedestrian survey of approximately 290 acres, roughly bounded by Upper Doane Valley on the northeast, Doane Valley Road to the north and west, and State Park Road on the southwest and south, to assist California State Parks in its compliance with Section 106 of the NHPA (**2008)**.

Cultural Resources Survey of the Proposed Westfield North County Fair Expansion Project Area, City of Escondido, HELIX Environmental Planning, Inc., San Diego County, CA. As Project Archaeologist, conducted full coverage survey of an approximately 1-mile segment of the proposed offsite sewer improvement right-of-way, as well as a 15-m buffer, to assess the presence or absence of potentially significant cultural resources, to assist the client in their compliance with CEQA requirements (**2008)**.

Cultural Resources Survey of the Proposed Silverwood Lake Cell Tower Project, Mountaintop District, San Bernardino National Forest, San Bernardino County, CA. As Project Archaeologist, conducted full coverage survey of approximately 1.67-acre proposed area of potential effects (APE), as well as a 30-m buffer, to assess the presence or absence of potentially significant cultural resources, to assist the client in their compliance with Section 106 of the NHPA **(2008)**.

Cultural Resources Survey of the Proposed Tecolote Canyon Long-term Maintenance and Access Project and the Proposed Tecolote Canyon Wetland Mitigation Project, City of San Diego Metropolitan Wastewater Department, San Diego County, CA. As Project Archaeologist, conducted full coverage survey of all six project impact areas, as well as a 6-m buffer surrounding each area to assess the presence or absence of potentially significant cultural resources, to assist the client in their compliance with CEQA requirements **(2008)**.

Cultural Resources Survey of the Riverview Gateway Redevelopment Project, Dudek, National City, CA. As Project Archaeologist, conducted full coverage survey of approximately 21 acres to assess the presence or absence of potentially significant cultural resources, as a subcontractor for Dudek, to assist their client in their compliance with CEQA requirements **(2008)**.

Cultural Resources Survey of Access Roads in Palomar State Park, California Department of Parks and Recreation, San Diego County, CA. As Project Archaeologist, conducted an intensive pedestrian survey of approximately 62.5 acres on either side of the spur road that runs from Doane Valley Road to Baptist Camp, as well as on either side of the Nate Harrison Road and Boucher Road, to assist California State Parks in its compliance with Section 106 of the NHPA **(2008)**.

Cultural Resources Survey of the Veterans Village of San Diego Expansion Parcel, Veterans Village of San Diego, San Diego, CA. As Project Archaeologist, conducted full coverage survey of the parcel to assess the presence or absence of potentially significant cultural resources to assist the Veterans Village of San Diego in their compliance with CEQA requirements **(2008)**.

All-American Canal Road Reconnaissance, Kiewit Pacific Co., Imperial County, CA. As Project Archaeologist, conducted a reconnaissance of approximately 760 m of exposed asphalt road proposed for use for canal construction activities **(2007)**.

Cultural Resources Survey of Access Roads in the Chocolate Mountain Aerial Gunnery Range (CMAGR), NAVFAC Southwest, Imperial County, CA. As Project Archaeologist, conducted an intensive Class III pedestrian survey of approximately 1,000 acres, encompassing 30-m widths on either side of the selected roads in the North and South ranges of the CMAGR, totaling approximately 68 km, to assist CMAGR in its compliance with Section 110 of the NHPA. This survey was part of a continuing program of cultural resources inventory for both Section 106 and Section 110 compliance by the Marine Corps Air Station, Yuma who manage the CMAGR as part of the Bob Stump Training Range Complex (BSTRC) **(2008)**.

Cultural Resources Survey of Bureau of Land Management (BLM) Parcels In the Vicinity of the Marine Corps Air Ground Combat Center (MCAGCC), NAVFAC Southwest, Twentynine Palms, San Bernardino County, CA. As Project Archaeologist, conducted full-coverage survey of approximately 19,000 acres that identified, recorded, and inventoried all cultural resources potentially eligible for listing on the National Register of Historic Places, prehistoric and historic, to assist MCAGCC in its compliance with Section 106 of the NHPA **(2008).**

Cultural Resources Survey of the Planned Bayshore Bikeway, HELIX Environmental Planning, Inc., National City, and Chula Vista, San Diego County, CA. As Project Archaeologist, conducted full coverage survey of an approximately 4.5-mile-long portion of the planned Bayshore Bikeway along the eastern portion of San Diego Bay to assess the presence or absence of potentially significant cultural resources, prehistoric and historic, to assist the San Diego Association of Governments (SANDAG) in its compliance with CEQA and NEPA requirements **(2008**).

Cultural Resources Survey of the Horno/Ammo Burn Areas, NAVFAC Southwest, Marine Corps Base Camp Pendleton (MCBCP), San Diego County, CA. As Project Archaeologist, conducted full coverage survey of 3,500 acres within the burn area and wrote the technical report summarizing the field findings which identified, recorded, and inventoried all cultural resources, prehistoric and historic, to assist MCBCP in its compliance with Section 110 of the NHPA **(2008).**

An Evaluation of 30 Archaeological Sites in the Upper Las Pulgas Corridor, NAVFAC Southwest, Marine Corps Base Camp Pendleton (MCBCP), San Diego County, CA. As Field Director, conducted testing of 30 prehistoric sites of unknown significance and National Register of Historic Places eligibility and summarized the field findings to assist MCBCP in its compliance with Section 110 of the NHPA **(2007)**.

SDG&E Post Fire Poles Project, San Diego Gas & Electric, San Diego County, CA. As Cultural Resources Monitor, conducted survey of a 46-acre project area consisting of the existing and new power pole ROW. Monitored subsurface excavation for power pole replacement as a result of damage due to wildfires within Palomar Mountain State Park **(2007)**.

Gila River Flood Control Project, USDI Bureau of Reclamation, Yuma County, Arizona. As Field Director, conducted pedestrian survey of a 1,295-acre proposed project area to assist the U.S. Bureau of Reclamation in its compliance with Section 106 of the NHPA (**2007)**.

Santa Margarita Water District Upper Chiquita Emergency Storage Reservoir Site Survey, Dudek and Associates, Orange County, CA. As Project Archaeologist, conducted pedestrian survey of a 15-acre proposed reservoir site and prepared the technical report **(2007).**

24 Access Roads Survey, Marine Corps Base Camp Pendleton, NAVFAC Southwest, San Diego County, CA. As Project Archaeologist, conducted pedestrian Phase I linear survey of selected areas along 24 training range access roads which are in need of repair due to erosion, totaling 8 miles. Of the 24 roads, only three required survey to examine cultural resources. Additionally, a possible historic culvert was also evaluated **(2007).**

Hudson Ranch II Geothermal Project Option Power Plant Site Survey, Environmental Management Associates, Imperial County, CA. As Project Archaeologist, conducted pedestrian survey of a 65-acre proposed power plant site **(2007).**

Concord BRAC Survey-CSH, NAVFAC Southwest, Contra Costa County, CA. As Principal Investigator, prepared the work plan and final report for a survey of 5,197 acres within the non-administrative section of the Inland Area at NWS Seal Beach, Detachment Concord. The pedestrian survey was conducted using systematic vegetation clears to improve ground surface visibility and overall survey effectiveness **(2007)**.

IID All-American Canal Lining Project Data Recovery, Imperial Irrigation District, Imperial County, CA. As Field Director, coordinated between client, archaeological personnel, and other agencies and conducted the data recovery or capping of 23 prehistoric ceramic pot drop or stone quarry sites on land situated within the right-of-way for construction of a cement-lined canal **(2007)**.

Admiral Hartman Monitoring, San Diego Military Family Housing, San Diego County, CA. As Field Director, coordinated between client, archaeological personnel, and Navy staff and managed the monitoring of the replacement of gas lines that run through archaeological site SDI-5017, a large Native American village, La Rinconada de Jamo, located within and adjacent to the Admiral Hartman Family Housing area, as part of its privatization. Prepared the resulting technical report for submission to the City of San Diego **(2007)**.

Siempre Viva Industrial Park Property Testing, Kearny Real Estate Company, San Diego, CA. As Project Archaeologist, prepared a technical report based on testing conducted by ASM staff at archaeological site CA-SDI-7208/CA-SDI-7857 for submission to the City of San Diego. The site is a sparse lithic scatter that appears to have functioned primarily as a prehistoric camp or lithic workshop **(2007)**.

Caltrans Interstate-5 Extended Phase I and Phase II Testing, Caltrans District 11, San Diego, CA. As Field Director, managed the testing of two archaeological sites located west of I-5 (SDI-13484 and -17928), on land proposed for highway widening and sound barrier construction outside the right-of-way but within the highway project's APE. SDI-13484 contains a meager and disturbed archaeological deposit. SDI-17928 is a substantial Early to Middle Holocene site, primarily focused on shellfish processing but also with vertebrate faunal, ground stone, flaked stone, and shell bead cultural remains **(2006)**.

Monte Cristo Survey, Enviroscientists, Inc., Esmeralda County, Nevada. As GIS Analyst, created GIS-based site and project location maps **(2006)**.

Canyon Trails Phase II, City of Hemet, Riverside County, CA. As Project Archaeologist, conducted archaeological testing and evaluation of 13 archaeological sites located north of Highway 74. The sites comprised an extensive series of bedrock milling features and associated artifacts and are situated near the mouth of Reinhardt Canyon, on a property proposed for residential development **(2006)**.

BLM Eastern San Diego Archaeology GIS, Bureau of Land Management, El Centro, Imperial County, CA. As GIS Analyst, located GIS information for client **(2006)**.

Arboretum Specific Plan Survey, David Evans and Associates, Fontana, San Bernardino County, CA. As Project Archaeologist, conducted pedestrian survey of 485 acres proposed for residential development within historic Grapeland Irrigation District **(2006)**.

North-South Julian Parcels Survey, ERS, Descanso, San Diego County, CA. As Project Archaeologist, conducted pedestrian survey of residential parcels containing trees marked for removal **(2006)**.

Lincoln Clark Navy PPV, San Diego Military Family Housing, San Diego County, CA. As Project Archaeologist, assisted with preparing archaeological background section of a determination of effect on a known, significant archaeological site in Pacific Beach. As GIS Analyst, created associated stratigraphic profile and GIS-based maps **(2006).**

Pankey Property Survey, Pardee Homes, Pala, San Diego County, CA. As Project Archaeologist, conducted pedestrian survey of proposed road construction rights-of-way near a known, significant archaeological site located east of Interstate 15 in northeastern San Diego County **(2006)**.

SR-76 Extended Phase I, Caltrans District 11, Bonsall, San Diego County, CA. As Project Archaeologist, conducted Phase I pedestrian survey and shovel test pit testing of prehistoric site SDI-12155, situated within the proposed road construction right-of-way **(2006).**

National Exploration Survey, Gold Summit Corporation, Nevada. As GIS Analyst, created GIS-based site and location maps **(2006)**.

Julian VMP, California Department of Forestry and Fire Protection, San Diego County, CA. As Project Archaeologist, conducted pedestrian survey of CDF vegetation management projects near the Palomar Observatory on Palomar Mountain and on the Sunrise Fuel Break-South near Julian. Also prepared the state park permit application. As GIS Analyst, created GIS-based site and location maps **(2006)**.

Archaeological Investigations at Early Village Sites in the Middle Santa Cruz Valley, City of Tucson, Pima County, Arizona. As Field Technician, was member of Michael Lindeman and Dr. Jonathan Mabry's field crew, carrying out excavations at the Sunset Mesa site (Hohokam period), and the Las Capas site (Early Agricultural Period) **(1998).**

Historic Preservation Database for Paleoindian and Archaic Sites in Arizona, Arizona State Historic Preservation Office. As Data Entry, was Research Assistant to Dr. Jonathan Mabry. Maintained a database of all the Paleo-Indian and Archaic period sites in Arizona, through data entry and quality control of archaeological site card information from the Arizona State Site File, various museums, educational institutions, and National Park Service offices in Arizona into a Microsoft FoxPro database **(1997)**.

Additional Education or Training:

CULTURAL RESOURCES:

- AEP Advanced CEQA Workshop/2011
- Identification and Management of Traditional Cultural Places, National Preservation Institute/2010
- Section 106: Agreement Documents, National Preservation Institute/2010

- The Section 106 Advanced Seminars, Advisory Council on Historic Preservation/2009
- Section 106: An Introduction, National Preservation Institute/2007
- Typology and Technology of Flaked Stone Artifacts, Dept. of Natural Sciences, Universidad Nacional deLa Plata, La Plata, Argentina/2006
- Field Course on Geomorphology and Quaternary Geology of Tierra del Fuego, Quaternary Geology Laboratory, Centro Austral de Investigaciones Científicas (CADIC-CONICET), Ushuaia, Argentina/2003

OTHER:

- OSHA 8-HourHAZWOPER Renewal, 29 CFR 1910.120(e)/2011
- OSHA 8-HourHAZWOPER Renewal, 29 CFR 1910.120(e)/2010
- Anti-Terrorism Level 1 Awareness Training, U.S. Department of Defense/2010
- Adult CPR, Emergency University/2009
- First Aid, Emergency University/2009
- OSHA 8-Hour HAZWOPER Renewal, 29 CFR 1910.120(e)/2009
- Burlington Northern Santa Fe Railroad Contractor Safety Certification/2008
- OSHA 8-Hour HAZWOPER Renewal, 29 CFR 1910.120(e)/2008
- Non-Live Fire Range Safety Officer Training, MCB Camp Pendleton/2007
- OSHA 40-Hour HAZWOPER, 29 CFR 1910.120(e)/2007
- OSHA 10-Hour Outreach Training Program: Construction Safety/2007
- Adult CPR, Emergency University/2007
- First Aid, Emergency University/2007
- TOPCON total station training seminar, UCSB Dept. of Anthropology/2001
- Technical Issues in Geographic Information Systems, UCSB Dept. of Geography/2000
- Lab in Geographic Information Systems I, UCSB Dept. of Geography/2000
- GIS and Archaeology, UCSB Dept. of Anthropology/2000
- Introduction to Geographic Information Systems, UCSB Dept. of Geography/1999

Publications:

Garcia-Herbst, Arleen

2010 The Society for American Archaeology News Report. *Society for California Archaeology Newsletter* 44(3): 12.

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2009f The Society for American Archaeology News Report. *Society for California Archaeology Newsletter* 43(4): 7.

2009e Fire on the Mountain: Archaeology in Palomar Mountain State Park before and after the 2007 Witch/Poomacha Fires. *Proceedings of the Society for California Archaeology* 23. Available Online at: http://www.scahome.org/publications/proceedings/Proceedings.23Garcia.pdf.

2009c The Society for American Archaeology News Report. *Society for California Archaeology Newsletter* 43(3): 11.

2009b The Society for American Archaeology News Report. *Society for California Archaeology Newsletter* 43(2): 12.

2009a Conservation of a Significant Prehistoric Archaeological Site in Urban San Diego. *Proceedings of the Society for California Archaeology* 22. Available Online at: http://www.scahome.org/publications/proceedings/Proceedings.22Garcia.pdf.

2007a Review of Tafonomía Regional y Estudios Arqueofaunísticos de Cetáceos en Tierra del Fuego y Patagonia Meridional, by Florencia Borella. *Latin American Antiquity* 18(1):118-119.

Garcia-Herbst, Arleen E., and Michael Garnsey

2009 Recent Archaeological Investigation at Border Fields State Park: a brief report on 5,000 years of unchanged history. *Proceedings of the Society for California Archaeology* 21: 169-176. Available Online at: http://www.scahome.org/publications/proceedings/Proceedings.21Garcia.pdf

Garcia-Herbst, Arleen E., Charles R. Stern, Hector Neff, José Luis Lanata, and Luis Garcia Albarido

2007 Laser ablation ICP-MS analysis of black obsidian nodules from Pampa del Asador and archaeological samples from southernmost Patagonia. In *Arqueología de Fuego-Patagonia. Levantando piedras, desenterrando huesos... y develando arcanos*, edited by Flavia Morello, Mateo Martinic, Alfredo Prieto y Gabriel Bahamonde, pp. 235-246. Fundación CEQUA, Punta Arenas, Chile.

Lanata, José Luis, Silvana Buscaglia, Marcelo Cardillo, Sebastián Luis Frete, María Marschoff, Arleen Garcia, George Herbst, Victoria Nuviala, and Clara Otaola

2004 Cazadores recolectores en Puerto San Julián, Santa Cruz. Primeros resultados. In *Contra viento y marea. Arqueología de Patagonia*, compiled by María Teresa Civalero, Pablo Marcelo Fernández and Ana Gabriela Guráib, pp. 745-754. Instituto Nacional de Antropologia Pensamiento Latinoamericano, Buenos Aires, Argentina.

Lanata, José Luis, Luis Martino, Ana Osella, and Arleen Garcia-Herbst

2008 Demographic Conditions Necessary to Colonize New Spaces: The Case for Early Human Dispersal in the Americas. *World Archaeology* 40(4):520-537.

Presentations:

Garcia-Herbst, Arleen

2010 *Soaring over Sunrise: Managing Cultural Resources and Gaining an Understanding of Regional Prehistoric and Historic Human Behavior.* Public lecture presented at the San Diego County Archaeological Society, San Diego (28 August).

2009b Peninsular Range Foragers: San Diego County's Prehistoric Mountain Sites. Public lecture presented at the San Diego Archaeological Center Second Saturday Lecture Series, Escondido (10 October).

2009a Fire on the Mountain: Archaeology in Palomar Mountain State Park before and after the 2007 Witch/Poomacha Fires. Paper presented at the 74th Annual Meeting of the Society for American Archaeology, Atlanta (22-26 April).

2008 Conservation of a Significant Prehistoric Archaeological Site in Urban San Diego. Paper presented at the 42nd annual meeting of the Society for California Archaeology, Burbank (17-20 April).

2004b Late Holocene coastal hunter-gatherers in Southern Argentina. Paper presented at the "Ancient Sites, Modern Maps: Remote Sensing Applications in Archaeology" workshop, Geographic Information Science Center and the Archaeological Research Facility at UC Berkeley (29-30 October, www.gisc.berkeley.edu).

2004a Becoming Involved in Anthropology through the National Association for Student Anthropologists (NASA) and the American Anthropological Association (AAA). Paper presented at the 1st Annual Meeting of the California Undergraduate Anthropology Conference, Santa Barbara (15-16 May).

Garcia-Herbst, Arleen E., and Michael Garnsey

2007 Recent Archaeological Investigation at Border Fields State Park: a brief report on 5,000 years of unchanged history. Paper presented at the 41st annual meeting of the Society for California Archaeology, San Jose (22-25 March).

Garcia-Herbst, Arleen E., and José Luis Lanata

2006 Explaining Ancient Technological Innovation in Coastal Southern Argentina. Paper presented at the 71st Annual Meeting of the Society for American Archaeology, San Juan, Puerto Rico (26-30 April).

Garcia-Herbst, Arleen, Dave Iversen, Brian Williams and Don Laylander

2010 *Energy and persistence conquer all things: assessing the cultural resources along Sunrise Powerlink transmission line corridor.* Paper presented at the 44th annual meeting of the Society for California Archaeology, Riverside (17-20 March).

Garcia-Herbst, Arleen E., Don Laylander, Sherri Andrews, and Alice Brewster

2007 Archaeological Reconstruction of Ancient Lake Cahuilla Settlement Patterns Using GIS. Paper presented at the 27th Annual ESRI International User Conference, San Diego (18-22 June).

Garcia-Herbst, Arleen E., Hector Neff, José Luis Lanata, Luis Garcia Albarido, and Charles R. Stern

2005 Laser ablation ICP-MS analysis of black obsidian nodules from Pampa del Asador and archaeological samples from southernmost Patagonia. Paper presented at the VI Jornadas de Arqueología de la Patagonia, Magallanes, Chile (24-28 October).

Garcia-Herbst, Arleen E., Charles R. Stern, Hector Neff, José Luis Lanata, Luis Garcia Albarido, Ana M. Albornoz, Eduardo A. Crivelli Montero, Mabel Fernández, Adam Hajduk, Alberto E. Pérez, Lisandro G. López, Isabel Pereda, Alicia H. Tapia and John Dudgeon

2007 Laser ablation TOF-ICP-MS analysis of obsidian nodules from obsidian sources and archaeological samples from the southern Pampas and northern Patagonia. Paper presented at 72nd Annual Meeting of the Society for American Archaeology, Austin (25-29 April).

Garcia, Arleen E.

2001 Travels and Archaeology in South Chile and Argentina. Paper presented at the UCSB Anthropology Brown Bag Talk Series, Santa Barbara (4 June).

1998 Ground Stone Artifacts Associated with Paleoindian Sites: The Lindenmeier Site, A Case Study. Poster presented at the 63rd Annual Meeting of the Society for American Archaeology, Seattle.

Anderson, David G., Jose Luis Lanata, J. Christopher Gillam, and Arleen Garcia-Herbst

2008 Modeling Paleoindian Sites and Assemblages: PIDBA (Paleoindian Database of the Americas) and Other Approaches. Session organized at 73rd Annual Meeting of the Society for American Archaeology, Vancouver (26-30 March).

Craig, Nathan, Elizabeth Klarich, George Herbst, Nicolas Tripcevich, and Arleen E. Garcia

2001 Organizing archaeological geophysical survey and surface mapping data in ArcView. Paper presented at the 21st Annual ESRI International User Conference, San Diego (9-13 July).

Lanata, José Luis, and Arleen E. Garcia

2005 Environmental corridors and early human dispersal in South America. Paper presented at the 70th Annual Meeting of the

Society for American Archaeology, Salt Lake City (30 March-3 April).

2002 Metapopulations and the Colonization of Space. Paper presented at Human Global Dispersal, British Academy International Networks Workshop, Southampton, UK (27-28 June).

2001 Population Dynamic and the Peopling of the Americas. Paper presented at the 66th Annual Meeting of the Society for American Archaeology, New Orleans (18-22 April).

Lanata, José Luis, and Arleen E. Garcia-Herbst

2007 Exploring the Tempo and Mode of America's Human Dispersal. Paper presented at 72nd Annual Meeting of the Society for American Archaeology, Austin (25-29 April).

Lanata, José Luis, Arleen Garcia-Herbst, Luis Garcia Albarido, Cristian Crespo, Natalia Cirigliano, and Ivana Ozán

2008 Cazadores recolectores en Bahía San Julián, Santa Cruz. Paper presented at the VII Jornadas de Arqueología de la Patagonia, Ushuaia, Argentina (21-25 April).

Lanata, José Luis, Luis Martino, Ana Osella and Arleen Garcia-Herbst

2006 Ambiente y Demografía Durante la Dispersión Humana Inicial en Sudamérica. Paper presented at the IV annual meeting of the Congreso de Arqueología en Colombia, Pereira (5-7 December).

Lanata, José Luis, Silvana Buscaglia, Marcelo Cardillo, Sebastián Luis Frete, María Marschoff, Arleen Garcia, George Herbst, Victoria Nuviala, and Clara Otaola

2002 Cazadores recolectores en Puerto San Julián, Santa Cruz. Primeros resultados. Paper presented at the V Jornadas de Arqueología de la Patagonia, Buenos Aires, Argentina (27-31 May).

Professional Memberships or Affiliations:

Society for California Archaeology/Southern Vice President/2011-present
Society for California Archaeology/Liaison to the Society for American Archaeology/2009-present
Society for California Archaeology/UCSB campus student representative/2007-2009
Society for California Archaeology/member/2006-present
Lambda Alpha National Honor Society for Anthropology/member/2004-present
National Association of Student Anthropologists/Web Editor and Web Development Committee Chair/2004
Society for American Archaeology/member/1998-present

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Sarah Provo

Architectural Historian

Areas of Expertise

Secretary of Interior Professional Qualification *Architectural History* and *History* (36 CFR Part 61)
Historic Preservation Treatments and Law
Recent Past/19th – 20th Century California Architecture
Large-Scale Surveys and Evaluations for Linear Projects

Years of Experience

With URS: <1 Year
With Other Firms: 1+ Years

Education

M.A./History (Historic Preservation)/2011/University of California-Riverside

B.A./History/ 2006/San Diego State University

Chronology

2011-Present: URS, Architectural Historian/San Diego, CA

2010-2011: City of Riverside Planning Division, Historic Property Surveyor/Riverside, CA

2010: Old Town San Diego State Historic Park, Historic Preservation and Interpretation Intern/San Diego, CA

2009-2011: University of California at Riverside, Graduate Teaching Assistant/Riverside, CA

Overview

Since 2010, Ms. Provo has performed numerous historic assessments and determinations of eligibility and effect for a range of property types based on local, state, and National Register of Historic Places (NRHP) criteria in the form of technical reports, Environmental Impact Studies/Environmental Impact Reports, California Department of Parks and Recreation (DPR) 523 series forms, cultural landscape reports, and Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) documentation. Ms. Provo is a Secretary of Interior Professional Qualified Architectural Historian and Historian for URS' La Jolla (San Diego) office.

Ms. Provo has expert knowledge of the laws and ordinances that affect historic properties, such as Sections 106 and 110 of National Historic Preservation Act (NHPA), the National Environmental Protection Act (NEPA), the California Environmental Quality Act (CEQA), and the Secretary of Interior Standards for the Treatment of Historic Properties. She has completed work for various Federal, state, and local agencies, including the Federal Emergency Management Agency (FEMA), Federal Communications Commission (FCC), Department of Housing and Urban Development (HUD), California Department of Transportation (Caltrans), as well as numerous local agencies and private clients.

Project Experience

Verizon Wireless, Telecommunication Projects – CA and NV. Evaluated telecommunication projects in California and Nevada, both for the projects' direct Areas of Potential Effect (APE) and viewshed (indirect APE) to the requirements of Section 106 of the NHPA and the FCC Programmatic Agreement with the California Office of Historic Preservation (OHP). Evaluated projects' APE for eligibility for listing in the NRHP and California Register of Historical Resources (CRHR), identified effects, drafted the reports for submission to OHP, and provided technical editing expertise. Resources identified and evaluated have dated from the late nineteenth century to the recent past, were located in various settings (dense urban, suburban, rural, and industrial), and have included numerous property types such as residential and commercial buildings, military buildings, airport hangars, and educational institutions. (2011-Present)

Santa Ana-Garden Grove Fixed Guideway Project– Santa Ana and Garden Grove, CA. Assisted with the survey and reporting for the architectural review of historic properties older than 1966 for a proposed streetcar project that is situated within the APE of a proposed streetcar route from Santa Ana to Garden Grove, California. Conducted archival research, contributed toward historic context, evaluated the project APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), recorded over 100 properties in the field (twentieth-century commercial, institutional, and residential buildings and districts) on the appropriate DPR 523 forms, evaluated project effects

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by alternative, proposed mitigation measures, and drafted the technical report. (2011-Present)

Caltrans District 8 and Riverside County Transportation Department, Clay Street Grade Separation – County of Riverside, CA. Assisted with the Section 106 Compliance Study for the Riverside County Transportation Department for the roadway and railroad track grade separation at the Clay Street rail crossing. Prepared map of amendment to previous APE following relocation of water, sewer, and utility facilities on project plans per Caltrans/FHWA guidelines. (2011)

BNSF Mojave Subdivision, Tehachapi Pass, Second Main Track-Bena to Marcel HRER, ASR, and HRCR – Kern County, CA. Assisted the cultural resources task lead with preliminary project planning for the addition of a second main track adjacent to the existing track through the Tehachapi Pass. Prepared photo guidance for architectural history field survey of property and completed preliminary desktop survey of surrounding properties associated with events in local and state history. (2011)

Naval Air Facility El Centro Fire Station – El Centro, CA. Assisted design team by performing background research to evaluate eligibility of historic-age utilitarian industrial buildings at Naval Air Facility El Centro. Assisted with evaluation and architectural history description for technical report for fire station project. (2011)

Confidential Client, Confidential Soil Remediation Project – Los Angeles County, CA. Assisted with cultural resources investigation for confidential soil remediation project in Los Angeles County. Requested records search, reviewed records search results, completed background research to develop historic context statement, and drafted report for CEQA Addendum. (2011)

HUD, Section 106 Consultations – Los Angeles County, CA. Task Manager for several HUD apartment projects in Los Angeles County. Assisted with project planning, client consultation, and financial management work. (2011)

HUD, Highland Park Transit Village – Los Angeles, CA. Assisted with project planning for a mixed-use development consisting of multi-family residential dwelling units and public parking areas on three adjacent blocks in Los Angeles. Tabulated records search results, reviewed records search results maps, requested NAHC Sacred Lands File search, followed up with Native American tribal contacts, and completed Section 106 compliance reports. (2011)

HUD, Santa Cecilia Housing Development – Los Angeles, CA. Assisted with project planning for mixed-use housing consisting of apartments and retail space in Los Angeles. Tabulated records search results, reviewed records search results maps, requested NAHC Sacred Lands File search, followed up with Native American tribal contacts, and completed Section 106 compliance reports. (2011)

HUD, Brooklyn Heights Housing Development – Los Angeles, CA. Assisted with project planning for mixed-use housing consisting of apartments and retail space in Los Angeles. Tabulated records search results, reviewed records search results maps, requested NAHC Sacred Lands File search, followed up with Native American tribal contacts, and completed Section 106 compliance reports. (2011)

FEMA, Fairfax Seismic Retrofit – Fairfax, CA. Assisted with Section 106 Compliance Study for FEMA for an earthquake damage mitigation assistance project involving structural modifications to upgrade the Main Lateral Force Resisting System of the NRHP-eligible Fairfax Pavilion. Provided photo-documentation guidance and prepared survey records and research to evaluate the impact of structural modifications on the historic integrity of the building in accordance with the Secretary of the Interior Standards. (2011-Present)

FEMA, San Anselmo Town Hall Flood Mitigation – San Anselmo, CA. Assisted with preliminary Section 106 Compliance Study for FEMA for a flood damage mitigation assistance project involving the repair of the Town Hall Complex, an early 19th century building which houses the Public Library, Fire Station, and Town Hall Offices. Completed historic research to assist in evaluation methods and application of Secretary of the Interior Standards. (2011-Present)

FEMA, East Bay Hills Hazardous Fire Risk Reduction – Alameda and Contra Costa Counties, CA. Assisted with preliminary Section 106 Compliance Study for FEMA for a fire damage mitigation assistance project involving the removal of vegetation from potentially hazardous areas throughout the East Bay Region. Assisted with historic research, identification and evaluation methods, effects analysis, and application of the Secretary of the Interior Standards for Rehabilitation of historic properties. (2011-Present)

City of Riverside Planning Division Riverside, CA. Historic Property Surveyor. Compiled research to produce DPR 523 series documents evaluating individual and multiple properties for eligibility on the National Register of Historic Places based on the Secretary of the Interior's Standards for Registration. Surveyed existing cultural resources within historic context statement to determine significance and architectural integrity for possible inclusion in a CLG grant project. Collaborated with University of California staff, the City of Riverside Planning Department, and the Riverside Metropolitan Museum to research land use, property histories, and relevant individuals related to local and national themes of racial exclusion in the early 20th century. (2011)

Old Town San Diego State Historic Park San Diego, CA. Historic Preservation and Interpretation Intern. Assessed historic accuracy of current interpretive activities demonstrated in the park and compiled references on period-appropriate processes for these activities. Compiled furniture assessment for furnishing/interpretation plan for the adobe dwelling and National Historic Landmark, Casa de Estudillo. Participated

in living history activities in the park for the education of the public. (2010)

National City Living History Farm Preserve, Inc. National City, CA. Collections Archivist. Photographed, researched, and documented Stein Farm's collection of early 20th century farming equipment. Documented acquisition information and traced purchase details for farming vehicles. Catalogued equipment and vehicle inventory using object and condition reports. (2010)

Riverside Metropolitan Museum. Riverside, CA. Collections Preservation and Exhibit Installation. Compiled object reports and condition reports on pieces selected for exhibition. Researched garment styles from fashion plates and patterns to appropriately prepare mannequins Selected, prepared, and arranged objects on display for "Adornment" exhibit. (2010)

Professional Societies/Affiliates

San Diego History Center
Save Our Heritage Organisation
Phi Alpha Theta, History Honor Society

Awards

Presidential Scholarship, University of San Diego, 2003.

Chancellor's Distinguished Fellowship, University of California, Riverside, 2009.

Contact Information

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Sarah_Provo@URSCorp.com

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Melanie Lytle, M.A.

Architectural Historian

Areas of Expertise

Historic Preservation Treatments and Law
Recent Past/19th – 20th Century California Architecture
Telecommunications Projects
Large-Scale Surveys and Evaluations for Linear Projects

Years of Experience

With URS: 2 Years
With Other Firms: 3 Years

Education

MA Historic Preservation/ Goucher College/2011

BA History (French Minor)/ California State University, Sacramento/2006

Registration/Certification

Secretary of Interior Professional Qualification *Architectural History* and *History* (36 CFR Part 61)

Overview

Melanie Lytle is a Secretary of Interior Professional Qualified Architectural Historian and Historian for URS' La Jolla (San Diego) office. Since 2006, Ms. Lytle has performed numerous historic assessments and determinations of eligibility and effect for a range of property types based on local, state, and National Register of Historic Places (NRHP) criteria in the form of technical reports, Environmental Impact Studies/Environmental Impact Reports, California Department of Parks and Recreation (DPR) 523 series forms, cultural landscape reports, and Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) documentation.

She has expert knowledge of the laws and ordinances that affect historic properties, such as Sections 106 and 110 of National Historic Preservation Act (NHPA), the National Environmental Protection Act (NEPA), the California Environmental Quality Act (CEQA), and the Secretary of Interior Standards for the Treatment of Historic Properties. She has completed work for various Federal, state, and local agencies, including the Federal Emergency Management Agency (FEMA), Bureau of Land Management (BLM), California Energy Commission (CEC), Federal Communications Commission (FCC), Federal Aviation Administration (FAA), Department of Housing and Urban Development (HUD), California Department of Transportation (Caltrans), as well as numerous local agencies and private clients.

Project Experience

California High Speed Rail Authority, High Speed Train, Palmdale to Los Angeles Union Station Segment – Los Angeles County, CA.
Architectural Historian (URS Corporation)
Serving as lead author of the Historic Architecture Survey Report and cultural resources sections of the Environmental Impact Report/Environmental Impact Study for the Palmdale to Los Angeles Union Station segment of the California High Speed Train project pursuant to Section 106 of the NHPA and CEQA. Assisting with APE delineation, archival research, and task management. *(Ongoing)*

FAA, Los Angeles International Airport Runway Safety Area Program – Los Angeles, CA.
Architectural Historian (URS Corporation)
Completing an assessment of the historic-age runways, taxiways, and buildings within the project APE for runway safety area improvements required by the FAA at the Los Angeles International Airport. Evaluating the airport facilities pursuant to Section 106 of the NHPA, NEPA, and CEQA; assessing effects and impacts from the proposed undertaking; completing DPR 523 series forms; and assisting with the drafting of the Historic Architecture Survey Report, Environmental Assessment cultural resources section, and Environmental Impact Report cultural resources section. *(Ongoing)*

URS

Yosemite National Park, Mariposa Grove Restoration – Yosemite National Park, CA.
Architectural Historian (URS Corporation)
Drafting the architectural history section of the Environmental Impact Statement for the National Register-listed Mariposa Grove Historic District. Task includes the summary of technical cultural resources reports and analysis of effects. *(Ongoing)*

FEMA, Lake Elsinore City Hall and Cultural Center Seismic Retrofit – Lake Elsinore, CA.
Architectural Historian (URS Corporation)
Performing Section 106 Compliance Study for FEMA for an earthquake damage mitigation assistance project involving the seismic retrofit of three early twentieth century public buildings. Performing determination of eligibility, analysis of integrity, and identification of effect. Drafting DPR 523 series forms and finding memo. *(Ongoing)*

Verizon Wireless Telecommunication Projects, Section 106 Compliance – CA and NV.
Architectural Historian (URS Corporation)
Performed over 75 Section 106 Compliance Studies for the FCC on behalf of Verizon Wireless for new tower support structures and collocated towers throughout California and Nevada. Completed determination of eligibility, analysis of integrity, and identification of effect. Resources identified and evaluated have dated from the late nineteenth century to the recent past, were located in various settings (dense urban, suburban, rural, and industrial), and have included numerous property types (residential and commercial buildings, churches, educational institutions, hospitals, water towers, windmills, farm and ranch landscapes, an oil refinery, and irrigation canals). Prepared FCC Form 620 or 621, DPR 523 series forms, viewshed photographs, and letter reports. *(Ongoing)*

Marine Corps Recruit Depot (MCRD), Cultural Resources Internal Audit – San Diego, CA
Architectural Historian (URS Corporation)
Conducted an internal audit of the MCRD cultural resources program. Task included review of Marine Corps and Department of Defense cultural resource policies and NHPA Section 106 requirements against MCRD records. Produced a report detailing the compliance status of each requirement and presented solutions for the resolution of out-of-compliance items. *(2011)*

FEMA, Ennis-Brown House Restoration – Los Angeles, CA.
Architectural Historian (URS Corporation)
Evaluated the recent major restoration of the Frank Lloyd Wright-designed Ennis-Brown House for compliance with Section 106. Performed identification of effect and drafted the finding of no effect to historic properties. *(2011)*

TAVA Development Company, TAVA Development Company Project – Santa Ana, CA
Architectural Historian (URS Corporation)
Reviewed previously completed significance evaluations of a 1910s farmhouse and associated citrus orchard for technical soundness and subsequently prepared a supplemental technical cultural resources memorandum and revised EIR section that reassessed impacts from the proposed undertaking based on the reevaluation that the property is eligible for listing in the Santa Ana Register of Historical Properties (SARHP) as an orchard cultural landscape. The orchard landscape is associated with the citrus orchard business, which was once common in the City but is now rare due to the conversion of most of the City's historic orange orchards to residential and commercial use by the mid- to late twentieth century. *(2011)*

FAA, Oakland International Airport Runway Safety Area Program – Oakland, CA.
Architectural Historian (URS Corporation)
Completed an assessment of the historic-age runways, taxiways, and canal, within the project APE for runway safety area improvements required by the FAA at the Oakland International Airport. Evaluated the airport facilities pursuant to Section 106 of the NHPA, NEPA, and CEQA; assessed effects and impacts from the proposed undertaking; completed DPR 523 series forms; and authored the Historic Architecture Survey Report. *(2011)*

BNSF Mojave Subdivision, Tehachapi Pass, Second Main Track-Bena to Marcel – Kern County, CA.
Architectural Historian (URS Corporation)
Assisted with desktop evaluation of properties in the Project Area Limits (PAL) associated with events in local and state history such as the National Register of Historic Places-listed Nuestra Señora Reina de La Paz, associated with labor rights leader Cesar Chavez. Revised the Historical Resources Evaluation Report (HRER), Archaeological Survey Report (ASR), and Historical Resources Compliance Report (HRCR) in response to reviewer comments. *(2011)*

Caltrans and Los Angeles County Metropolitan Transportation Authority, Interstate 710 Corridor Project between Ocean Boulevard and the State Route 60 Interchange – Los Angeles County, CA.
Architectural Historian (URS Corporation)
As Independent Technical Reviewer, performed a critical review of the Historic Property Survey Report (HPSR) and Historical Resources Evaluation Report (HRER) prepared by Galvin Preservation Associates in compliance with Section 106 of the NHPA and Caltrans's Section 106 PA. The review focused on the content of the work product including, but not limited to the following: overall presentation; appropriate use of charts and graphics, adequacy of supporting calculations and data, and appropriate use of language; adequate Statement(s) of Limitations; compliance with applicable codes and standards; consistency with requirements in the proposal and Project Execution Plan (PXP);

consistency with the project work plan, if one is developed for the project; and validity of the technical approach. A total of 172 historic-period (45 years of age or older) resources were documented and evaluated in the project APE. *(2011)*

BASF Professional Turf and Ornamentals, 10- acre Agricultural Field Office Kekaha Environmental Assessment (EA) – Waimea Ahupua'a, District of Waimea, Island of Kauai, HI.
Architectural Historian (URS Corporation)
Assisted with the drafting of the cultural resources section of the project EA. *(2011)*

Agua Caliente Band of Cahuilla Indians, Research Design and Historic Preservation Management Plan (HPMP) – Palm Springs, CA.
Architectural Historian (URS Corporation)
Assisted with the preparation of an HPMP for tribal lands by peer-reviewing the historic context, drafting the table of built environment property types, and writing management guidelines for those resources. *(2011)*

US Navy, Marine Corps Air Station Chocolate Mountain Aerial Gunnery Range (MCAS CMAGR) Land Withdrawal Renewal – Riverside and Imperial Counties, CA.
Architectural Historian (URS Corporation)
Conducted historic research to identify potential cultural resources in the project APE for the cultural resources section of the Legislative Environmental Impact Statement (LEIS). *(2011)*

BrightSource Energy, Rio Mesa Solar Energy Project – Riverside County, CA.
Architectural Historian (URS Corporation)
Served as the field survey and archival research task lead for an approximately 20,000 acre solar project in the Colorado Desert. Completed determination of eligibility, analysis of integrity, and identification of effect for 30 resources in accordance with the NHPA, NEPA, CEQA, and CEC guidelines. Field survey activities and background research required APE map delineation, stakeholder consultation, historic context development, primary and secondary source research, and impact analysis. Architectural history resources recorded included historic-age transmission lines, canals and irrigation ditches, roads, mines, and borrow pits. Author of architectural history portion of cultural resources section of the project Application for Certification (AFC). *(2011)*

Santa Ana and Garden Grove Fixed Guideway – Orange County Transit Authority and Cities of Santa Ana and Garden Grove, CA
Architectural Historian (URS Corporation)
Serve as the field survey task lead, archival research task lead, and technical report and EIS/EIR section author for an approximately four mile proposed streetcar line in the City of Santa Ana. Completing determination of eligibility, analysis of integrity, and identification of effect for approximately 100 resources in accordance with the NHPA,

NEPA, CEQA, and FTA guidelines. Field survey activities and background research required APE map delineation, stakeholder consultation, historic context development, primary and secondary source research, field map and field form creation, and impact analysis. Architectural history resources recorded included a wide range of resources from late nineteenth to late-1970s commercial, residential, institutional, and industrial properties, including an NRHP-eligible steel-truss bridge and two NRHP-listed historic districts as well as numerous locally landmarked and individually NRHP-eligible buildings. *(2011)*

FAA, San Francisco International Airport Runway Safety Area Program – San Francisco, CA.
Architectural Historian (URS Corporation)
Completed an assessment of the historic-age runways, taxiways, canal, and approach-lighting trestles within the project APE for runway safety area improvements required by the FAA at the San Francisco International Airport. Evaluated the airport facilities pursuant to Section 106 of the NHPA, NEPA, and CEQA; assessed effects and impacts from the proposed undertaking; completed DPR 523 series forms; and authored the Historic Architecture Survey Report. *(2011)*

Los Angeles Unified School District, Alameda Transportation Relocation Project, Historical Architecture Assessment – Los Angeles, CA.
Architectural Historian (URS Corporation)
Completed a historic architecture assessment in accordance with CEQA and according to City of Los Angeles criteria for listing as a historical or cultural monument for the proposed relocation of Los Angeles Unified School District facilities (three mid-twentieth century light industrial buildings) in downtown Los Angeles. Performed an intensive architectural history survey, archival research, evaluation, and impact analysis. Authored the letter report. *(2011)*

National Oceanic and Atmospheric Administration (NOAA), Integrated Water Resources Science and Services (IWRSS), University of Alabama Section 106 Compliance – Tuscaloosa, AL.
Architectural Historian (URS Corporation)
Assisted with field methodology planning and photo guidance for a desktop evaluation of eligibility and effect pursuant to Section 106 of the NHPA for buildings associated with the mid-nineteenth century Bryce Hospital (Alabama State Hospital for the Insane) NRHP-eligible historic district. *(2011)*

Caltrans and Alameda Corridor Transportation Authority, HAER, Level II, for the Commodore Schuyler F. Heim Bridge, Schuyler Heim Bridge Replacement and SR-47 Expansion Project – Long Beach, CA.
Architectural Historian (URS Corporation)
Task lead for the HAER Level II photo-documentation and written documentation of Heim Bridge within the Port of Los-Angeles-Long Beach to fulfill NHRA Section 106 mitigation requirements. The 1948 steel vertical lift bridge is eligible for listing in the NRHP as one of the

largest vertical lift bridges in the western United States. Project met all Standards and Guidelines of HAER Level II for submission to the Library of Congress and required extensive FHWA, Caltrans, and Port of Los Angeles-Port of Long Beach coordination and consultation. Tasks included project planning (client meetings, site visits, access permits, and contract and engagement with photographer), field work, archival research, report drafting and editing, and archival processing. Project was nominated for a URS Pyramid Award for Technical Excellence. *(2010-2011)*

Caltrans and City of Santa Ana, Bristol Street, Phase 3 and Phase 4 – Santa Ana, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for the City of Santa Ana Public Works Agency for the roadway widening at Bristol Street from Civic Center Drive and Seventeenth Street and from Warner Avenue to Saint Andrew Place. Adapted unique approach for recordation by recording 87 different properties on 43 DPR 523 series based on historic subdivisions and property types to facilitate and streamline compliance. Prepared HPSR, HRER, and DPR 523 series forms for project per Caltrans/FHWA guidelines. Tasks included the development of project-specific field survey forms, photograph protocols, architectural style guide, APE map delineation, stakeholder consultation, historic context development, primary and secondary source research, and impact analysis. *(2010-2011)*

Caltrans and SANDAG, Lenwood Road – Barstow, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for the San Bernardino Associated Governments for the roadway and railroad track grade separation at the Lenwood Road rail crossing. Prepared HPSR, ASR, HRER, and DPR 523 series forms for project per Caltrans/FHWA guidelines. Developed historic context and performed determination of eligibility, analysis of integrity, and identification of effect on forty-one residential and commercial properties associated with Historic Route 66 in San Bernardino County. *(2009-2011)*

Pio Pico Energy Center, LLC, Pio Pico Energy Center, Otay Mesa – San Diego County, CA.
Architectural Historian (URS Corporation)
Performed a historic architecture assessment for a proposed gas plant in San Diego County in accordance with CEQA and CEC guidelines. Conducted archival research, evaluated the project APE for eligibility for listing in the CRHR or as a historical resource for purposes of CEQA, recorded two new resources (circa 1909 ranch complex and 1960 ranch-style residence) and re-recorded a third (historic road) on the appropriate DPR 523 series forms, and drafted the architectural history portion of the cultural resources technical report for submission to the CEC. *(2010-2011)*

Caltrans and Riverside County Transportation Department, Clay Street Grade Separation Project – County of Riverside, CA.

Architectural Historian (URS Corporation)
Assisted with the Section 106 Compliance Study for the Riverside County Transportation Department for the roadway and railroad track grade separation at the Clay Street rail crossing. Prepared HPSR and ASR for project per Caltrans/FHWA guidelines, requested records search, tabulated and evaluated the records search results, conducted historic research, and completed DPR 523 forms. *(2009-2011)*

Bethel Energy, L.L.C., Bethel 10 – Imperial County
Architectural Historian (URS Corporation)
Assisted with historic context research and drafting for the environmental review of an alternative energy project in Imperial County. *(2010)*

FEMA, Burbank Library – Burbank, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for FEMA for an earthquake mitigation assistance project involving a library building. Performed determination of eligibility, analysis of integrity, and identification of effect. Drafted the finding of no historic properties. *(2010)*

FEMA, Marcucci – Jackson, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for FEMA for a flood damage mitigation assistance project involving the replacement of a culvert adjacent to NRHP-eligible historic districts. Performed determination of eligibility, analysis of integrity, and identification of effect. Drafted DPR 523 series forms and finding memo. *(2010)*

FEMA, Sutter Creek Broad Storm Drain Diversion – Sutter Creek, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for FEMA for a flood damage mitigation assistance project involving the replacement of a culvert and historic-age retaining walls potentially contributors to an NRHP-eligible historic district. Performed determination of eligibility, analysis of integrity, and identification of effect. Drafted finding memo. *(2010)*

FEMA, Sonoma County Flood Elevation Program – Sonoma County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for FEMA for a flood damage mitigation assistance project involving the elevations of early twentieth century residences in Sonoma County. Performed determination of eligibility, analysis of integrity, and identification of effect. Drafted the finding of no historic properties. *(2010)*

FEMA, Napa County Flood Mitigation Assistance, Napa County, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for FEMA for a flood mitigation assistance project involving the elevations of early twentieth century residences in Napa County. Performed determination of

eligibility, analysis of integrity, and identification of effect. Drafted the finding of no historic properties. *(2010)*

FEMA, North Tahoe Roof Replacement – North Tahoe Fire Protection District, CA.
Architectural Historian (URS Corporation)
Prepared a preliminary Section 106 Compliance Study for FEMA for a fire damage mitigation assistance project involving the roof replacements of hundreds of mid-twentieth century recreational residences near Lake Tahoe. Authored a memo for FEMA recommending a project approach, including APE delineation, identification and evaluation methods, Native American consultation and involvement, and specific application of the Secretary of the Interior Standards for Rehabilitation for any identified historic properties. *(2010)*

FEMA, Lake Valley Roof Replacement – Lake Valley Fire Protection District, CA.
Architectural Historian (URS Corporation)
Prepared a preliminary Section 106 Compliance Study for FEMA for a fire damage mitigation assistance project involving the roof replacements of hundreds of mid-twentieth century recreational residences near Lake Tahoe. Authored a memo for FEMA recommending a project approach, including APE delineation, identification and evaluation methods, Native American consultation and involvement, and application of the Secretary of the Interior Standards for Rehabilitation for any identified historic properties. *(2010)*

FEMA, Fairfax Pavilion – Fairfax, CA.
Architectural Historian (URS Corporation)
Assisted with Section 106 Compliance Study for FEMA for an earthquake damage mitigation assistance project a memorial pavilion in Fairfax. Assisted with the determination of eligibility, analysis of integrity, and identification of effect. *(2010)*

FEMA, Lake Elsinore Seismic Retrofit – Lake Elsinore, CA.
Architectural Historian (URS Corporation)
Performed preliminary Section 106 Compliance Study for FEMA for an earthquake damage mitigation assistance project involving the NRHP-eligible Lake Elsinore City Hall buildings. Crafted guidance for the project based on the Secretary of the Interior's Standards for the Treatment of Historic Properties. *(2010)*

FEMA, Cook & Miller Court Complex Seismic Retrofit – Santa Maria, CA.
Architectural Historian (URS Corporation)
Performed preliminary Section 106 Compliance Study for FEMA for earthquake damage mitigation assistance project involving the Cook & Miller Court Complex, a Monterey style complex constructed in 1954. Completed desktop evaluation based on photographs, background research, DPR 523 series forms and findings memorandum. *(2010)*

Caltrans, I-405 Widening – Los Angeles and Orange Counties, CA.

Architectural Historian (URS Corporation)
Assisted the cultural resources task lead with preliminary project planning for the I-405 Widening project in Lose Angeles and Orange Counties. Tabulated records search results, reviewed records search results maps, requested NAHC Sacred Lands File search, and followed-up with Native American tribal contacts. *(2010)*

United States Postal Service, USPS San Diego Midway Processing and Distribution Facility Property – San Diego, CA.
Architectural Historian (URS Corporation)
Performed Section 106 Compliance Study for the proposed disposition of the USPS San Diego Midway Processing and Distribution Facility property, which contained a large 1972 Brutalism and New Formalism-style building. Tasks included the determination of eligibility (including Criterion Consideration G), analysis of integrity, identification of effects, records search, historic research, and drafting of report. *(2010)*

Los Angeles County Metropolitan Transportation Authority (Metro), Westside Subway Extension, Historic Survey Report–Los Angeles, CA.
Architectural Historian (URS Corporation)
Assisted with the architectural history tasks for the Los Angeles Metro Westside Extension project, which involved the planning and design of a heavy-rail subway connecting City of Los Angeles, West Hollywood, Beverly Hills, Santa Monica, and the County of Los Angeles. Conducted archival research, contributed toward historic context, evaluated the project APE for eligibility for listing in the NRHP and the CRHR (or as historical resources for purposes of CEQA), identified and evaluated a total of 91 NRHP-listed, -eligible, or contributing resources, and over 200 non-significant historic-period properties (twentieth-century commercial, institutional, and residential buildings and districts) on DPR 523 series forms, evaluated project effects by alternative, proposed mitigation measures, and drafted the technical report. *(2009-2010)*

National Railroad Passenger Corporation (Amtrak), Amtrak Security Enhancement and Police Radio – Sacramento, CA; San Diego, CA; Stockton, CA; Los Angeles, CA, Fullerton, CA; Portland, OR; Seattle, WA; Albuquerque, NM.
Architectural Historian (URS Corporation)
Assisted the West Coast task lead for California, Oregon, Washington, and New Mexico National Historic Preservation Act Section 106 consultation and State Historic Preservation Office (SHPO) coordination regarding Amtrak's receipt of $1.3 billion in American Recovery and Reinvestment Act (ARRA) funds under an expedited timeline for receive ARRA funding. Responsibilities included field assessments/built environment surveys with engineering teams; record searches; development of design guidelines per project based on the Secretary of the Interior's Standards for Rehabilitation; and completion of Section 106 compliance materials (letter reports). Project required extensive coordination with SHPOs (e.g., CA, WA, and NM SHPOs) to ensure Section 106 concurrence (No Adverse Effect to Historic Properties) was received in less than 30 days for each project. In total, project involved

alterations and additions to nearly 7 NRHP-eligible and -listed properties (e.g., Los Angeles Union Station). Project was nominated for a URS Pyramid Award for Innovation. *(2009-2010)*

Apex Energy Group, Pio Pico Energy Center – Chula Vista, CA.
Architectural Historian (URS Corporation)
Performed an intensive architectural history field survey of the project's APE in accordance with CEQA and the CEC guidelines for a proposed gas plant in Chula Vista. Conducted archival research, evaluated the project APE for eligibility for listing in the CRHR or as a historical resource for purposes of CEQA, recorded three resources (1897 reservoir and 1919 dam, late-1950s public park facilities, and early twentieth-century livestock pens) on the appropriate DPR 523 forms, and drafted the architectural history portion of the cultural resources technical report for submission to the CEC. *(2009-2010)*

Kinder Morgan, Calnev Expansion Project – San Bernardino County, CA.
Architectural Historian (URS Corporation)
Revised the architectural history report including creating an architectural style and property type chronology for the project area pursuant to Section 106 of the NHPA and CEQA. *(2009)*

Tessera Solar, Imperial Valley Solar (formerly Solar II) – El Centro, CA.
Architectural Historian (URS Corporation)
Conducted archival research and compiled findings regarding Juan Bautista de Anza National Historic Trail and historic gravel mines in the project APE and vicinity pursuant to Section 106 of the NHPA, NEPA, and CEQA. Input archaeological field data to DPR 523 form database. (2009)

California High Speed Rail Authority, High Speed Train – Sylmar to Palmdale, CA.
Architectural Historian (URS Corporation)
Assisted with field reconnaissance data analysis, records search review, and cultural resource location map revisions pursuant to Section 106 of the NHPA and CEQA for the high-profile California High Speed Train project. *(2009)*

Lost Hills Solar, Lost Hills – Kern County, CA.
Architectural Historian (URS Corporation)
Researched and drafted the historic context pursuant to CEQA for a solar energy project in Kern County. (2009)

Projects Performed at another Firm

City of San Diego, Barrio Logan Community Plan Update Historical Resources Survey – San Diego, CA.
Historian (Brian F. Smith and Associates, Inc.)
Historian and Task Manager for a 480-property historic reconnaissance survey for the Barrio Logan planning area in the City of San Diego.

Developed historic context, surveyed the project area for all resources older than 1965, collected lot information, evaluated the properties for integrity and historical significance based on City of San Diego and CRHR criteria, assessed the presence of historic districts, identified a Mexican American Cultural Landscape, completed DPR 523 forms, developed a community walking tour, and presented findings in a community meeting. Information was used to update the Barrio Logan Community Plan. *(2009)*

Historic Structure Assessments of the Buildings at 9030 and 9036 La Jolla Shores Lane – San Diego, CA. *Historian (Brian F. Smith and Associates, Inc.)*
Performed historic structure assessments of the residential buildings on two lots in the La Jolla neighborhood of San Diego by conducting field work, archival research, and analysis of integrity. Resulted in a preliminary significance evaluation based on City of San Diego Historical Resources Guidelines and recommendations for further study. (2009)

Rancho Santa Fe Community Association, Osuna Adobe County of San Diego Landmark Nomination – Rancho Santa Fe, CA.
Historian (Brian F. Smith and Associates, Inc.)
Successfully nominated the Osuna Adobe, a Mexican Rancho Period adobe residence, constructed circa 1831, to the County of San Diego Landmark list based on all four County of San Diego cultural resources criteria. Project included field work, photography, literature review, historic title search, archival research, oral interviews, historic context development, determination of eligibility, analysis of integrity, and identification of effect. (2009)

Milley Property Project Cultural Resources Assessment – San Diego, CA.
Historian (Brian F. Smith and Associates, Inc.)
Performed historic structure assessment of the buildings at the Milley Project, which included an early twentieth century Craftsman-style residence, a historic cistern, and landscape features such as stone walls and historic trees. Determined the property to be significant based on architectural value and recommended mitigation measures according to County of San Diego criteria and guidelines. (2008)

Phase II Significance Evaluation of Site CA-RIV-6380H for the Gabrych Pit Project – Riverside County, CA.
Historian (Brian F. Smith and Associates, Inc.)
Served as historian on a team of cultural resource specialists that updated documentation regarding a historic 1920s water trench and associated features that may be associated with the first historic water conveyance system in the Palm Springs area. Conducted archival research and drafted recommendations of significance based on County of Riverside guidelines and mitigation recommendations. (2008)

Historical Resource Research Report for the Klemm Residence Project – San Diego, CA.

Historian (Brian F. Smith and Associates, Inc.)
Completed a historic structure research report of a mid-century Modern Ranch-style residence in the La Jolla neighborhood of San Diego, California. Property was owned by architect William Lumpkin, renown for his southwestern adobe-style designs. Conducted field work, archival research, historic title search, and determination of integrity and significance. Report submitted to the City of San Diego Historical Resources Board. (2007)

Mitigation Supplement for the Kelly Ranch House on the Robertson Ranch Project, Modified HABS – Carlsbad, CA.
Historian (Brian F. Smith and Associates, Inc.)
Modified HABS study of the Kelly Ranch House, a late nineteenth century Folk Victorian residence, associated with the Kelly Ranch in Carlsbad, California. Photographs, sketches of the four elevations, archival research, and architectural descriptions were completed, as requested by the City of Carlsbad. (2007)

Concordia Lutheran Church Project Redesign Impacts – Chula Vista, CA.
Historian (Brian F. Smith and Associates, Inc.)
Completed a historic structure research report of a mid-century Contemporary-style church and associated buildings in Chula Vista, California. Conducted field work, archival research, and determination of integrity and significance. (2007)

Mitigation Monitoring Report for the Breeza Project – Downtown San Diego, CA.
Historian (Brian F. Smith and Associates, Inc.)
Co-author of the Breeza Project mitigation monitoring report. Reviewed monitoring findings, completed DPR 523 series forms, identified two early twentieth century Chinese-style hearths associated with a Chinese laundry previously on the site, and drafted text of the report. (2007)

Cultural Resources Study for the SDSU 2007 Campus Master Plan Revision – San Diego, CA.
Historian (Brian F. Smith and Associates, Inc.)
Performed field survey and architectural study of several San Diego State University campus buildings to be affected by Master Plan revisions. Drafted recommendations for treatment of the historic properties. (2007)

Cultural Resource Report for the Frulla-Fallbrook Ranch Project – County of San Diego.
Historian (Brian F. Smith and Associates, Inc.)
Completed a historic structure research report of a mid-century Spanish Colonial Revival residence and associated landscape in Fallbrook, California. Reviewed field work data, conducted archival research, developed historic context and architectural description, and determined integrity and significance. (2007)

Employment History

2009 to Present	URS Corporation, Architectural Historian
2006 to 2009	Brian F. Smith and Associates, Inc., Historian

Specialized Training

Maryland State Highway Administration, "Section 4(f) Overview," 2011

California Preservation Foundation, "Historic Context Statements Workshop," 2011

California Preservation Foundation, "Historic American Landscape Survey (HALS) Training," 2010

National Trust for Historic Preservation, Annual Conference, 2009

City of San Diego, "Best Practices in Historic Preservation Seminar," City of San Diego, 2008

Speaking Engagements

History Colorado and National Park Service, Cultural Landscapes in the Western United States Workshop, "Preserving the Barrio: Identification and Evaluation of the Mexican American Cultural Landscape in San Diego, California," 2011

Goucher College, Master of Arts in Historic Preservation Symposium, "Fundamental Transformation: The Management of South Africa's Heritage for Nation Building in the Post-Apartheid Era," 2011

Heritage South Africa Symposium, "Research Topics in Post-Apartheid South African Cultural Heritage Policy," 2010

Goucher College, Master of Arts in Historic Preservation Symposium, "Preservation of the Barrio: A Mexican American Cultural Landscape in Barrio Logan, San Diego, California," 2009

Publications

"The Civilization Fund Act of 1819," *Clio* 17 (2007): 187-208. California State University, Sacramento, Department of History. 2007.

Awards

Stephen K.F. and Katharine W. Lee Thesis Prize, 2011**.** "A Fundamental Transformation: The Management of South Africa's Heritage for Nation Building in the Post-Apartheid Era." Goucher College.

Stephen K.F. and Katharine W. Lee Prize, 2009**.** "Preservation of the Barrio: A Mexican American Cultural Landscape in Barrio Logan, San Diego, California," Goucher College, 2008.

History Department Undergraduate Scholarship, 2004**.** California State University, Sacramento.

Professional Societies / Affiliates

National Trust for Historic Preservation

Vernacular Architecture Forum
Preservation Action
California Preservation Foundation
San Diego History Center
Save Our Heritage Organisation
Phi Alpha Theta, History Honor Society
Phi Kappa Phi, Honor Society
Golden Key, Honor Society

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APPENDIX E2

MAY 2013 SUPPLEMENTAL REPORT

Appendix E2.1 – SHPO Concurrence

Appendix E2.2 – Public Comment Letter from Mr. Michael Davison

Appendix E2.3 – Project Photographs

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SUPPLEMENTAL CULTURAL RESOURCES EVALUATION REPORT

PROPOSED RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) AND ASSOCIATED IMPROVEMENTS PROJECT

(RSA IMPROVEMENTS AND PAVEMENT RECONSTRUCTION OF PORTIONS OF RUNWAY 7L/25R AND TAXIWAY B)

Los Angeles International Airport
Los Angeles, Los Angeles County, California

Prepared for:

LOS ANGELES WORLD AIRPORTS

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
As lead Federal Agency pursuant to the National Environmental Policy Act of 1969

Prepared by:

URS Corporation
Los Angeles, CA

May 2013

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1.0 SUMMARY OF FINDINGS

This Supplemental Cultural Resources Evaluation Report has been prepared to document identification, recordation, and evaluation efforts for known or previously unrecorded archaeological and historic architecture resources, such as buildings, structures, objects, districts, landscapes, sites, and linear features. Cultural resources have been evaluated pursuant to Section 106 of the *National Historic Preservation Act* and its implementing regulations 36 CFR Part 800 "Protection of Historic Properties" (Section 106), *National Environmental Policy Act of 1969* (NEPA) Section (§) 102(2)(c). This Supplemental Cultural Resources Evaluation Report is intended to serve the Federal Aviation Administration's (FAA) need for Section 106 Consultation with the California State Historic Preservation Officer (SHPO).

In June 2012, the FAA and the City of Los Angeles, through its aviation department Los Angeles World Airports (LAWA), submitted to the SHPO Section 106 of the National Historic Preservation Act (Section 106) compliance documentation for the Runway 7L/25R Safety Area Project and Associated Improvements (proposed Project) at Los Angeles International Airport (LAX 2012; **FAA120117A**; URS 2012). In a letter dated March 5, 2012 (**Appendix E2.1**), SHPO concurred with the delineation of the Area of Potential Effect (APE) that was established for the proposed Project in the Draft Environmental Assessment (EA). As a result of the archival research and field surveys originally conducted for the Draft EA, two historic-period resources were identified in the proposed Project's APE: Runway 7L/25R and Air Freight Building No. 8. A Cultural Resources Evaluation Report was then prepared for the Draft EA which concluded that these two resources did not meet the eligibility criteria for listing in the National Register of Historic Places (NRHP). The proposed Project would not result in an adverse effect on historic properties. In a letter dated September 20, 2012 (**Appendix E2.1**), SHPO concurred: 1) with the description of the APE; 2) with the findings that no previously recorded or newly identified built environment and archaeological resources within the APE is eligible for listing in the NRHP; and, 3) that the undertaking will not have adverse effects to historic properties. Copies of the SHPO concurrence letters are included in **Appendix E2.1**.

During the Draft EA public review period, LAWA received public comments that warranted a second look to the proposed Project as described. To address those comments received, LAWA performed further analysis that resulted in the proposed Project being refined. The refinements to the proposed Project included the disturbance of areas that were outside the APE, different from the concurrence SHPO had provided in the letters dated March 5, 2012 and September 20, 2012. Furthermore, on November 1, 2012 during the public workshop and hearing held for the Draft EA, a stakeholder identified a portion of Coast Boulevard, now part of the airfield, as potentially being a built environment resource in the APE of the proposed Project. This potentially built environment resource had not been identified in the Draft EA. The stakeholder's oral comment was documented and subsequently he submitted it in writing. A copy of the comment letter is included in **Appendix E2.2**. After further evaluation, an expansion of the project APE was warranted and as a result, this Supplemental Cultural Resources Evaluation Report has been prepared by the FAA as Section 106 compliance documentation to: 1) identify the changes in the APE due to refinement of the proposed Project; 2) identify and evaluate built environment and archaeological resources in the expanded APE; and 3) assess adverse effects to those resources, if any, in the expanded APE. In addition, due to the public comment received during the Draft EA review period regarding Coast Boulevard, the FAA prepared an evaluation, included in this Report and in attached DPR 523 series forms for the portion of Coast Boulevard within the APE. The portion of Coast Boulevard within the APE was found to be ineligible for listing to the NRHP or the CRHR and, therefore, the refined proposed Project is not anticipated to have adverse effects to historic properties in the expanded APE. The following analysis details the methods and evaluation that has led to this determination.

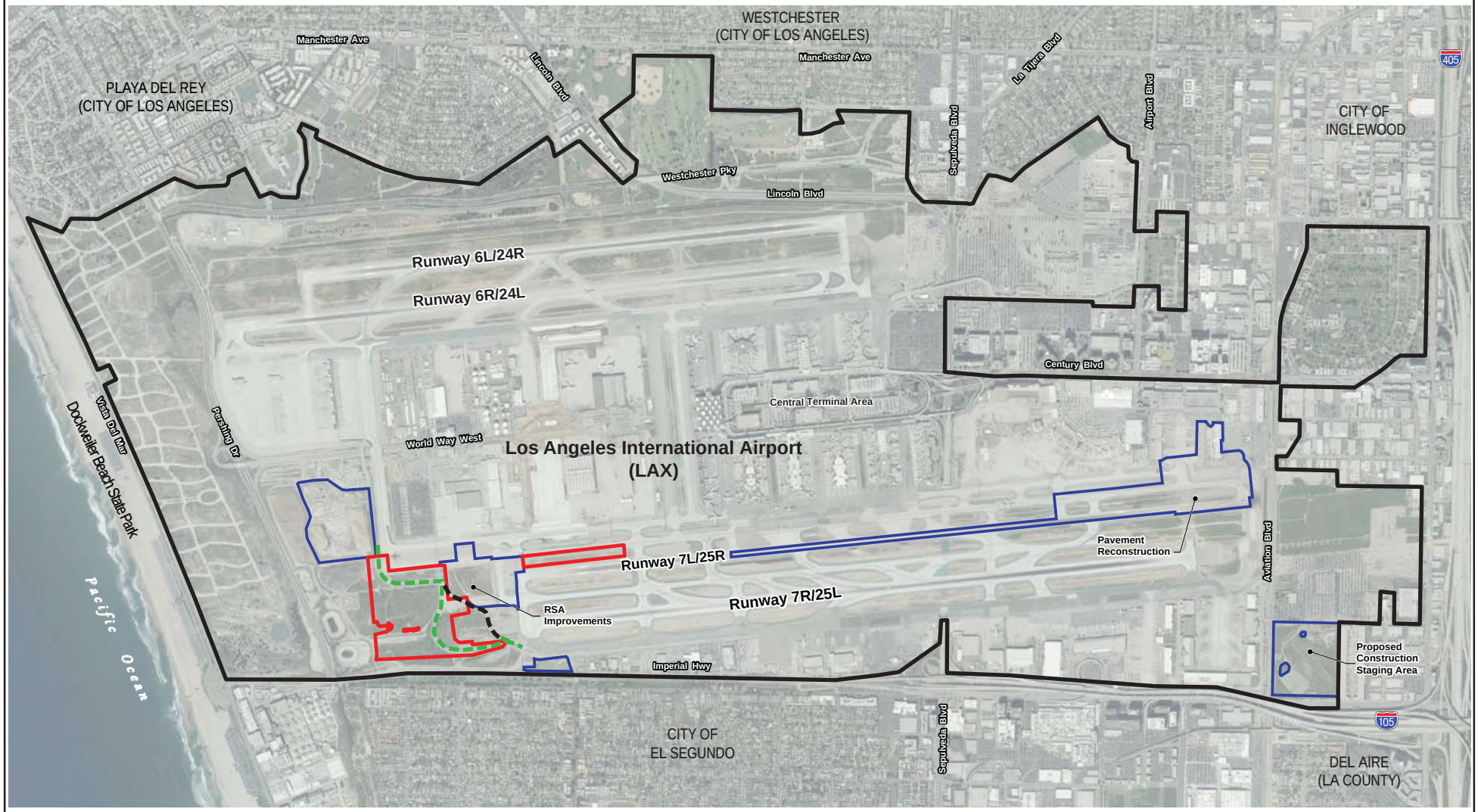
2.0 REVISIONS TO AREA OF POTENTIAL EFFECT

As a result of public comments received during the public review period of the Draft EA, the proposed Project was refined. The refined proposed Project includes elements that require construction in areas that were not part of the APE defined in the September 2012 Cultural Resources Evaluation Report. Consequently, an expanded APE now includes two new additional noncontiguous areas that are adjacent to the original APE shown in red in **Figure 1** and **Figure 2**.

Area 1, along the western edge of the original APE encompasses approximately 48.5 acres. This area is now included in the expanded APE because the refined proposed Project would grade a portion of it to RSA quality, realign an existing service road, relocate the localizer antenna and shelter, relocate other FAA equipment, and do drainage work. This area is presently used as a non-historic period service road (portions of it were formerly Coast Boulevard), access to the western limits of Runway 7R/25L and Runway 7L/25R (near Taxiways AA, B, C, and U), and construction staging and storage (**Figure 2**). The southwest portion of this area has vegetation, a varied topography, and has been disturbed by road, utility, and other infrastructure construction. Existing condition photographs of Area 1 are included in **Appendix E2.3**.

Area 2 is located immediately east of the original APE, along Taxiway B between Taxiway U and Taxiway T. This area encompasses approximately 6.9 acres and is currently used as a taxiway and is constructed of non-historic period concrete and asphalt. This area is part of the expanded APE because of work associated fillet improvements for Taxiway U for large (Group VI) aircraft taxiing north on Taxiway U and turning east onto Taxiway B (**Figure 2**). Existing condition photographs of Area 2 are included in **Appendix E2.3**.

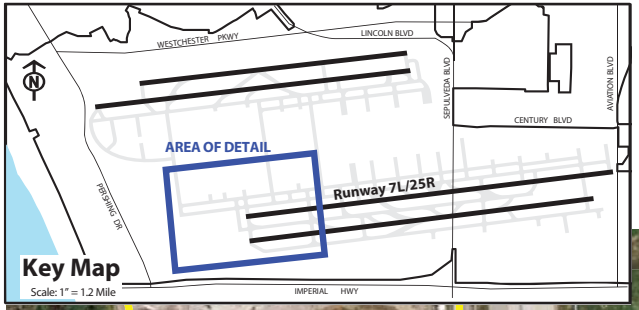
Overall, the expanded APE includes the boundaries of the entire area that will have physical disturbance due to construction of the proposed Project, such as various demolition, construction, and navigational aid work described in the original Section 106 compliance documentation, which can include runway shifts, repaving, relocating and constructing service roads and taxiways, modifications to existing navigation aids, and construction staging areas. As the proposed Project would not increase the operational capacity of LAX, the indirect APE will remain the same as noted in the March 5, 2013 SHPO concurrence letter which identifies the indirect APE as the entirety of LAX to consider potential indirect impacts from increased noise, vibration, or atmospheric intrusions.



Sources: LAWA, 2013; URS, 2013; ESRI Maps & Data, May 2013; Prepared by: URS Corporation.

FIGURE 1	**Revisions to the Area of the Potential Effects**	**Supplemental Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project**

Los Angeles International Airport



Legend

- Proposed RSA Extension
- Area to be Graded to RSA Quality
- Runway 7L Extension
- Taxiway Improvements
- Existing Runway Safety Area
- Proposed Jet Blast Pad
- Proposed Service Road Realignment
- Airport Property Boundary
- Direct Area of Potential Effect (Concurrence Received May 2012)
- Changes to Direct Area of Potential Effect 2013
- Current Portion of Coast Boulevard
- Pre-Airport Portion of Coast Boulevard

north

0 550 ft.

1" = 550 feet

TAXIWAY C
TAXIWAY B
TAXIWAY B17
TAXIWAY B16
TAXIWAY U
TAXIWAY T
TAXIWAY H
AREA 1
AREA 2
S. PERSHING DR
IMPERIAL HWY
7L
7R

Sources: *Runway 7L-25R Safety Area (RSA) Practicability Study for Los Angeles International Airport* (Ricondo & Associates, December 2009); ESRI Maps & Data May 2013 ; Prepared by: URS Corporation.

FIGURE 2

Detail of Revisions to the Area of the Potential Effects

Supplemental Cultural Resources Evaluation Report Runway 7L/25R RSA and Associated Improvements Project

3.0 RESEARCH METHODS

3.1 Prior Research and Field Work

As part of the original Section 106 compliance, in January and February 2012, URS Corporation investigators conducted research with/at the South Central Coastal Information Center (SCCIC), the Native American Heritage Commission (NAHC), the LAX Master Plan Final EIR/EIS (FAA and LAWA 2005), LAWA consultation, the Flight Path Learning Center, the City of Los Angeles Public Library, and various online resources (e.g., USGS Historical Topographic Maps, etc.). As part of the evaluation presented in this Evaluation Report, further research was conducted with the Flight Path Learning Center, and a private collection provided by Mr. Mike Davison in May 2013 was also utilized for the evaluation. The following provides information from this research as it relates to the expanded APE.

On January 20, 2012, a record search and literature review from the SCCIC of the California Historic Resource Information System (CHRIS) at California State University, Fullerton was received for the proposed Project (SCCIC File No. 12067.8789). The CHRIS search identified no previously recorded cultural resources and four previously-conducted investigations within portions of the expanded APE: LA-3673 (1987), LA-4910 (1995), LA-6239 (2000), LA-6240 (2000). **Table 1** below provides more information regarding the four previously-conducted investigations.

Table 1
Previously Conducted Cultural Resources Investigations within the Expanded APE

NADB No./ SHPO ID	Author	Date	Title
LA-3673	Myra L. Frank & Associates	1987	Historic Property Survey Report North Outfall Relief Sewer
LA-4910	Raschke, Rod	1995	Paleontological and Archaeological Resources Reconnaissance of the Los Angeles International Airport (LAX) Property, Los Angeles County, California
LA-6239	Wesson, Alex, Bryon Bass and Brian Hatoff	2000	El Segundo Power Redevelopment Project Cultural Resources (Archaeological Resources) Appendix J of the Application for Certification
LA-6240	Bunse, Meta and Stephen D. Mikesell	2000	El Segundo Power Redevelopment Project Historic Resources (Built Environment) Appendix K of Application for Certification

Notes:
NADB: National Archeology Database
SHPO: California State Historic Preservation Officer

Source: SCCIC CHRIS, 2012

3.2 Supplemental Archival Research

Investigators also conducted research using the LAX Master Plan Final EIR/EIS (FAA and LAWA 2005), other LAWA project documents, the Flight Path Learning Center, the City of Los Angeles Public Library, a private collection owned by Mr. Mike Davison, and various online sources (e.g., USGS Historical Topographic Maps, etc.), in May 2013. As part of the required research to evaluate historic resources, investigators examined the historic context and former uses of the expanded APE, specifically the former Coast Boulevard, now used, in part, as an airport service road.

Consultation with the NAHC to identify Native American Tribes that may have input or concerns that uniquely or significantly affect those Tribes related to planned and proposed airport improvements, or may have information about, or be interested in, the proposed undertaking, was coordinated by the FAA.

The California NAHC responded by letter dated January 5, 2012, providing contact information for various Native American Tribes and individuals, which were subsequently contacted. In addition, the FAA sent letters to the tribes identified by the NAHC on March 12, 2012 to solicit responses or concerns regarding the proposed Project. In response to those letters, the Tongva Ancestral Territorial Tribal Nation responded in an email dated March 12, 2012 that it would respond fully at a later date and that it considered the Project site to be located in an area that is "very sensitive with numerous cultural resources documented and some that are not." No further reply was received from the tribe nor did it request the use of Native American monitors during ground disturbing activities. No written responses were received by the FAA from Native American tribes. No additional Native American contact has occurred.

3.3 Supplemental Field Survey

All cultural resources work for the proposed Project has been conducted by personnel who meet the Secretary of Interior professional qualifications for Archaeology, History, and Architectural History (36 CFR Part 61). Cultural resources have been evaluated pursuant to NHPA Section 106 and its implementing regulations 36 CFR Part 800 "Protection of Historic Properties (Section 106), and in accordance with CEQA Guidelines Section 15064.5(a)(2)-(3) using the criteria outlined in PRC Section 5024.1.)."

On May 16, 2013, a windshield reconnaissance and limited pedestrian survey of the APE was conducted. Due to both security and safety issues associated with an active runway at the time of the survey, an intensive survey of the expanded APE was not possible, specifically for the new portions of the APE located north of Runway 7L/25R (this area is covered in hardscape). However, in the areas where hardscape was not located, primarily within the expanded APE area along the western edge of the original RSA, transects no greater than 10 meters apart were employed, as required by SHPO for evaluation of historic resources.

During the investigation, one newly identified built environment resource was identified, recorded, and evaluated: a portion of Coast Boulevard. No other built environment resources, and no archaeological resources were identified in the expanded APE. The portion of Coast Boulevard identified in the expanded APE is described in detail on the California DPR 523 series form,[1] and the following is a description and evaluation of the resource.

4.0 ENVIRONMENTAL AND CULTURAL SETTING

The Cultural Resources Evaluation Report dated October 2012 included a detailed historic context which focused on the growth and development of LAX, and the history of the original APE. The expanded APE shares a similar historic context due to the fact that it is located adjacent to the original APE and was developed as part of the LAX environs. Therefore, the environmental and cultural setting presented in the Cultural Resources Evaluation Report dated October 2012, generally applies to the expanded APE. For the evaluation of Coast Boulevard, its historic setting is presented in detail below.

5.0 EVALUATION OF COAST BOULEVARD

5.1 Historic Setting

Within the boundaries of the expanded APE, the former Coast Boulevard is included. This roadway connected Santa Monica and Redondo Beach and was developed between 1912 and 1918. On the 1912 AAA Map "Automobile Routes from Los Angeles to Neighboring Beach Cities," Coast Boulevard is not

[1] The DPR forms were submitted to SHPO for concurrence. SHPO provided concurrence on the DPR Forms in the letter dated August 2, 2013. The DPR forms are confidential because they contain information about potential cultural resources which are protected under the National Historic Preservation Act. The DPR forms are not part of the document released to the public, but are part of the document record and can be accessed by those authorized to do so.

present. The first mapped evidence of Coast Boulevard is found on the 1918 AAA Map "Automobile Routes from Santa Monica to San Pedro and Long Beach via Coast Boulevard." Coast Boulevard was also present on the 1921 Baist's Real Estate Survey map, the 1932 AAA map "Map Service of the Automobile Club of Southern California," the 1933 to 1939 WPA Land Use Map, and the 1943, 1949, and 1961 Renie Maps (Davison 2013).

When reviewing historic aerial and topographic maps, the 1949 LAX Historical Aerial shows a roadway in the vicinity of the west end of Runway 7L/25R (The black dashed line in **Figure 1** and **Figure 2**). This roadway matches the alignment of the road labeled as "Coast Boulevard" in the 1950 USGS Venice topographic map and as "Pershing Drive" in the 1964 USGS Venice topographic map. On the 1950 USGS Venice topographic map, this roadway is depicted in vicinity of the west end of Runway 7L/25R and labeled as "Coast Boulevard." This roadway follows the alignment of the road labeled as "Pershing Drive" in the 1964 USGS topographic map (however, this is not the alignment of the current south Pershing Drive). On the 1957 Long Beach topographic map, the roadway is depicted in vicinity of the west end of Runway 7L/25R but is not labeled; it is located to the east of the current alignment of Pershing Drive. The 1964 USGS Venice topographic map depicts the roadway in the vicinity of the west end of Runway 7L/25R and is labeled as "Pershing Dr.," located to the east of present day Pershing Drive. The 1963 Teledyne Aerial Photograph depicts the same findings as the 1964 USGS Venice topographic map, but the roadway is paved.

Based on construction photographs available at the Flight Path Learning Center, Coast Boulevard was removed from public use by 1972, following construction of the improved Pershing Drive in 1971. By then, it was being used as a service road by LAX, and was no longer used to connect the beach communities. On the LAX Taxiway Designation Maps, from 1974, 1978, 1982, and 1983, the roadway is depicted in the vicinity of the west end of Runway 7L/25R and is unlabeled and no longer a public road, located to the east of the current alignment of Pershing Drive. After 1984, as evidenced on the 1990 LAX Taxiway Designation Map, the present-day curvilinear alignment of Coast Boulevard is visible, and the former Coast Boulevard alignment has been completely bypassed, segmented, and absorbed into the runway and taxiway (the green dashed line in **Figure 1** and **Figure 2**). Therefore, Coast Boulevard first appears on maps, drawings, and photographs as early as 1918, and has had major alterations between 1969 and 1972, and after 1984, which has effectively bypassed and removed from public use the historic alignment of the roadway. **Table 2** below details the major changes that have occurred to Coast Boulevard based on the research conducted to date.

Table 2
Major Changes to Coast Boulevard

Year/Source	Notes
1918 AAA Map "Automobile Routes from Santa Monica to San Pedro and Long Beach via Coast Boulevard"	Coast Boulevard first appears on map connecting Santa Monica to Redondo Beach.
1969 LAX Engineering Drawing 1972 Flight Path Learning Center Construction Photographs	Original alignment of Coast Boulevard absorbed into LAX operations. Future Pershing Drive identified to the west (Construction initiated 1971). Coast Boulevard is no longer accessible to the public and only used as an airport service road.
Post-1984 LAX Taxiway Designation Maps	First depictions of present-day curvilinear alignment of former Coast Boulevard, which is located west of the bypassed portion now and presently used as an airport service road.

Source: Davison, 2013; Flight Path Learning Center of Southern California, 1929-1991; LAWA 1951-2002

5.2 Existing Resource Description

The portion of Coast Boulevard within the APE is an approximately 1,000-foot segment of a former larger linear roadway, which connected the City of Santa Monica to the City of Redondo Beach. It runs north to south, with a slight bend to the west, and bisects the west portion of the APE. Within the APE, Coast Boulevard is primarily a two-lane built-up asphalt paved road. There is evidence, from the field survey and historic photographs, that the majority of the remnants of Coast Boulevard have been widened, realigned, resurfaced, and re-striped. Towards the southern portion within the APE are older asphalt and concrete portions, however, they are not part of the original Coast Boulevard.

The portion of Coast Boulevard within the APE exhibits considerable wear from environmental effects (sun/heat exposure and rainwater) and has been "built-up" or received new layers of asphalt within the past 20 years. Much of the portion of Coast Boulevard within the APE is cracked, split, or fragmented, and exhibit numerous non-historic period superficial repairs. Several areas feature recently widened shoulders and the installation of security gates and other Department of Homeland Security, FAA, and LAWA control structures. There are also recently constructed water diversion features, such as culverts, sluiceways, and outlets. There are no distinctive engineering features or structures, such as bridges or water crossings, and the portion of Coast Boulevard within the APE does not retain its historic viewsheds due to recent development along the surrounding areas of the airport and to the south.

Overall, the addition of non-historic materials and elements, as well as the property's poor physical condition has disrupted the feeling, setting, and visual narrative of the portion of Coast Boulevard within the APE. In its present state, overall effects from neglect and non-historic period alterations to the portion of Coast Boulevard within the APE have affected its ability to convey a specific time, theme, and context. As part of the proposed Project, LAWA would fill the area which contains the historic alignment of Coast Boulevard. However, no demolition of the existing pavement remnants would be demolished or removed.

5.3 Resource Evaluation

The portion of Coast Boulevard within the expanded APE was evaluated for eligibility for listing in either the NRHP or the CRHR based on the established evaluation criteria as shown below:

- **NRHP Criteria A and B; CRHR Criteria 1 and 2**

  NRHP Criterion A and CRHR Criteria 1 require that the property be associated with an event, or series of events that have made a significant contribution to the broad pattern of history. NRHP Criterion B and CRHR Criterion 2 require that the property have an association with the lives of people significant in the past. Coast Boulevard was constructed between 1912 and 1918 as a roadway running parallel to the ocean. Initial research has yielded no information indicating an association of Coast Boulevard with significant historic events or people. Although Coast Boulevard is an earlier road in this area of the County of Los Angeles, it does not illustrate any significant association with automotive history, such as the growth and development of Los Angeles as an automobile center, or the location of important automotive events, that characterize the development of the automotive industry in the early 20th Century. Since it is no longer a public roadway and is presently used as a restricted airport service road, it has experienced a change of use and character which affects its ability to convey its historic purpose and character. The portion of Coast Boulevard within the APE also does not retain its original materials, construction techniques, or appearance from the historic period, due to alterations such as widening, realignment, and resurfacing. As a result, the portion of Coast Boulevard within the APE is not associated with important events or people in automotive history.

- **NRHP Criterion C and CRHR Criterion 3**

  NRHP Criterion C and CRHR Criterion 3 require that the property embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possesses high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction. The portion of Coast Boulevard within the APE does not significantly embody the distinctive characteristics of an engineering structure or architectural style, type, or period as it no longer retains its historic use and has been heavily altered. Furthermore, it no longer retains its original or historic appearance, visual narrative, or characteristics from a specific period. The configuration and non–historic-period materials of the portion of Coast Boulevard within the APE are common and relatively mundane examples of roadway construction that can be found on any roadway. As noted earlier, the portion of Coast Boulevard within the APE does not exhibit any distinctive engineering or architectural details, and it is no longer an intact public roadway. Research did not identify any key engineers or master architects for whom the roadway may illustrate their significant achievement or work.

  - **NRHP Criterion D and CRHR Criterion 4**

  NRHP Criterion D and CRHR Criterion 4 require that the property have yielded or may be likely to yield information important in prehistory or history. Research conducted as part of this evaluation has provided no indication that the portion of Coast Boulevard within the APE has the potential to yield potentially important information in prehistory (as it not prehistoric) or history (as it is not associated with important events or people in automotive history).

Based on the criteria for eligibility in listing in either the NRHP or the CRHR, the portion of Coast Boulevard within the APE is not eligible for listing.

Additionally, in order for a property to be eligible for listing in the NRHP or CRHR, besides meeting one of the above criteria, it must also retain its historic integrity. The NRHP and CRHR traditionally recognize a property's historic integrity through seven aspects or qualities: location, design, setting, materials, workmanship, feeling, and association. In order for a property to be eligible, it must retain some, if not most, of these aspects. The portion of Coast Boulevard within the APE does not retain its historic integrity as detailed below:

- Location is defined as the place where the historic-period property was constructed or the place where the historic event took place. The portion of Coast Boulevard within the APE has been realigned and segmented since it became part of the airport property; therefore, it does not retain its integrity of location. Also, no historic events are associated with the portion of Coast Boulevard within the APE.
- Design is defined as the composition of elements that constitute the form, plan, space, structure, and style of a property. The portion of Coast Boulevard within the APE, originally constructed between 1912 and 1918, primarily does not retain its original design elements or arrangement, negatively affecting the integrity of design.
- Setting is defined as the physical environment of a historic-period property that illustrates the character of the place. The portion of Coast Boulevard within the APE has not retained its historic setting of connecting several beach communities since it is now used as a restricted airport service road.
- Materials are defined as the physical elements combined in a particular pattern or configuration to form a historic property. The portion of Coast Boulevard within the APE does not retain adequate integrity of materials, due to alterations from widening, realignment, and resurfacing.
- Workmanship is defined as the physical evidence of the crafts of a particular culture or people during any given period of history. The portion of Coast Boulevard within the APE does not retain physical evidence of the crafts of a given period of history.

- Feeling is defined as the quality that a historic-period property has in evoking the aesthetic or historic sense of a past period of time. Due to the loss of historic materials and change of character and use of the property, the portion of Coast Boulevard within the APE no longer retains integrity of feeling for a twentieth century road.
- Association is defined as the direct link between a property and the event or person for which the property is significant. No significant events or persons are associated with the portion of Coast Boulevard within the APE, so it does not have integrity of association.

Therefore, the portion of Coast Boulevard within the APE is not eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA as an individual resource or as a contributor to a larger linear resource (i.e., the larger Coast Boulevard) and does not retain its integrity of location, design, setting, materials, workmanship, feeling, or association.

6.0 CONCLUSIONS

Due to a refinement of the proposed Project, the APE has been expanded to include two additional non-contiguous areas adjacent to the original APE. As a result of the background research and field survey, one additional built environment resource was identified in the expanded APE: a portion of Coast Boulevard. This resource is not eligible for listing to the NRHP, CRHR, or considered a historical resource for purposes of CEQA as an individual resource or as a contributor to a larger linear resource (i.e., the larger Coast Boulevard). The resource has been documented in the DPR 523 forms. As part of the proposed Project, LAWA would fill the area which contains the historic alignment of Coast Boulevard and realign another portion. However, no demolition or removal of the existing pavement remnants is planned. Therefore, the refinements to the proposed Project are not anticipated to have adverse effects on historic properties in the expanded APE. No other built environment resources, and no archaeological resources were identified in the expanded APE.

In conclusion, pursuant to the revised implementing regulations of the NHPA found at 36 CFR 800.11(d)(1) and CEQA Guidelines Section 10564.5(A)(2)-(3) and the criteria outlined in PRC Section 5024.1, a determination of no effect to historic properties and no impact to historical resources is anticipated from the refinements to the proposed Project.

7.0 REFERENCES

Davison, Mike. 2013. Comment letter sent to Herb Glasgow dated November 5, 2012.

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APPENDIX E2.1

SHPO CONCURRENCE

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RECEIVED
AUG - 2 2013
Federal Aviation Administration
Western-Pacific Region
Airports Division - AWP-600

August 02, 2013

Reply In Reference To: FAA120117A

David B. Kessler, AICP
Regional Environmental Protection Specialist
Western-Pacific Region Airports Division
Federal Aviation Administration
P. O. Box 92007
Los Angeles, California 90009-2007

RE: Proposed Runway 7L/25R Safety Area Improvement and Runway 7R/25L and Taxiway B Pavement Reconstruction, and Ground Support Maintenance Building Construction Project, Los Angeles International Airport, Los Angeles, Los Angeles County, California

Dear Mr. Kessler:

Thank you for consulting with me. You do so on behalf of the Federal Aviation Administration (FAA) in order to comply with Section 106 of the *National Historic Preservation Act of 1966* (16 U.S.C. 470f), as amended, and its implementing regulation at 36 CFR Part 800. You are requesting my comments on the undertakings Area of Potential Effects (APE) and my concurrence with a finding of No Historic Properties Affected.

In our previous round of consultation I offered no objections to the delineation of this undertaking's APE. I also concurred that three resources sited in the APE were ineligible for listing on the National Register of Historic Places and that the project, as described, would not affect historic properties. Since this time, the FAA has revised the project description and the APE. Changes include the following:

- Grading the Runway Safety Area (RSA) west of the end of Runway 7L-25R to meet FAA Airport Design Standards and provide the minimum 1,000 foot long extended safety area
- Placement of fill material over a roadway segment
- Reconstruction of a portion of Taxiway B at the west end of the Airport

The APE has been expanded to include approximately 48.5 acres to the west of the original APE and 6.9 acres of paved taxiway to the east, as depicted on the map included with your submittal.

The FAA and Los Angeles World Airports solicited comments on the APE revisions in a public meeting. A member of the public noted that the portion of the APE described as a "small valley area" is a 1,000 foot long remnant of the Coast Boulevard, a roadway constructed between 1912 and 1918. The commenter, having no objections to this project, asked Los Angeles World Airports and the FAA to photograph and measure the roadway for posterity. In response to this request, and with the knowledge that the remnant might be eligible for listing on the NRHP, the FAA evaluated the property. The results of this study are summarized in the following report:

- *Supplemental Cultural Resources Evaluation Report: Proposed Runway 7L/25R Runway Safety Area Project and Associated Improvements, Los Angeles International Airport, Los Angeles, Los Angeles County, California* (URS Corporation: June 2013)

Renewed identification efforts consisted of records searches of both public and private archives, windshield surveys, and Native American consultation. The only resource identified was the road segment. The segment lacks integrity due do realignment, paving, restriping. The consulting historian is of the opinion that this resource is ineligible for listing on the NRHP under any applicable criteria.

The FAA notified tribes. The only response came from the Tongva Ancestral Territorial Tribal Nation. Their representative responded in an email, stating that the Tongva would respond fully at a later date and that the Tribe considered the project site to be located in an area that is "very sensitive with numerous cultural resources documented and some that are not". No further reply was received from the tribe nor did it request the use of Native American monitors during ground disturbing activities.

Having reviewed the information submitted with your letter, I offer the following comments:

- I have no objections to the delineation of the APE.
- I concur that the road segment is not eligible for listing on the National Register of Historic Places.
- I concur that the undertaking, as described, will not affect historic properties.

Be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, you may have additional future responsibilities for this undertaking under 36 CFR Part 800. Should you encounter cultural artifacts during ground disturbing activities, please halt all work until a qualified archaeologist can be consulted on the nature and significance of such artifacts.

Thank you for considering historic resources during project planning. If you have any questions or comments, please contact Tristan Tozer of my staff at (916) 445-7027 or by email at Tristan.Tozer@parks.ca.gov.

Sincerely,

Carol Roland-Nawi, Ph.D.

Carol Roland-Nawi, Ph.D.
State Historic Preservation Officer

APPENDIX E2.2

PUBLIC COMMENT LETTER
FROM MR. MICHAEL DAVISON

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November 5, 2012
8033 Denrock Avenue
Los Angeles, CA 90045

Mr. Herb Glasgow
Los Angeles World Airports, Facilities Division
1 World Way, Room 218B
Los Angeles, CA 90045

Dear Mr. Glasgow,

This concerns the "Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements." I believe there is an uninventoried cultural resource west of Runway 7L that will be destroyed by this project. I do not suggest that project be stopped or even delayed; rather, that this cultural resource be photographed and documented before it is obliterated by the project.

The cultural resource to which I refer are the remaining roadway segments of Coast Boulevard, which from c. 1918-1932 was the original north-south coastal route in Los Angeles. Prior to this, a person driving from Santa Monica to Redondo Beach would, at Playa Del Rey, have to drive east through Inglewood to continue south.

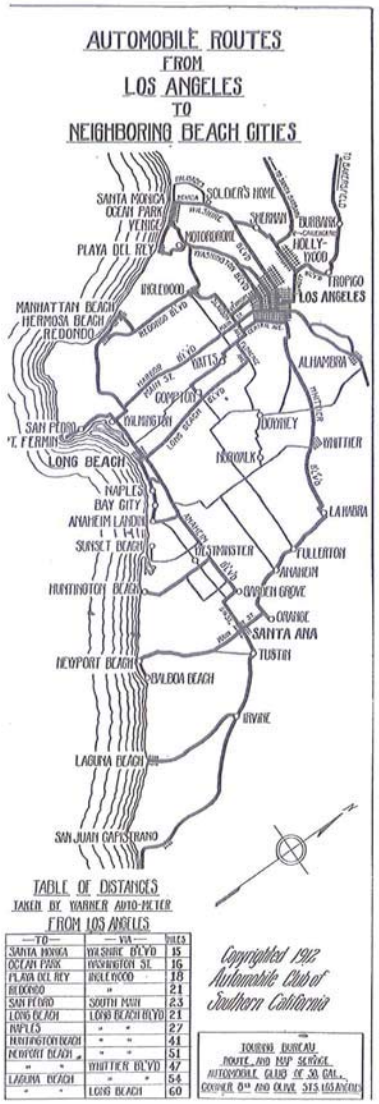
Attached are maps and photos to support my contention that small portions of the original 1918 Coast Blvd. still exist at LAX. Ten years ago, more of the roadway was extant, and LAWA's proposal to extend runway 7L seems likely to wipe out what little of the road remains.

I would like to mention that a portion of the original 1915 Ridge Route over the Tehachapis was added to the National Register of Historic Places in 1997, and there is a nationwide association devoted to the 1913 Lincoln Highway, the country's first transcontinental highway. Given the importance of the automobile to the growth and culture of Southern California, I think the last unimproved remnant of the original coastal route in Los Angeles deserves to at least be photographed for posterity – and those photographs be made available to the public, perhaps via the Los Angeles Public Library website -- before it is removed in connection with the runway project. Little of the road is left, so I doubt that photographing and documenting it would take more than an hour.

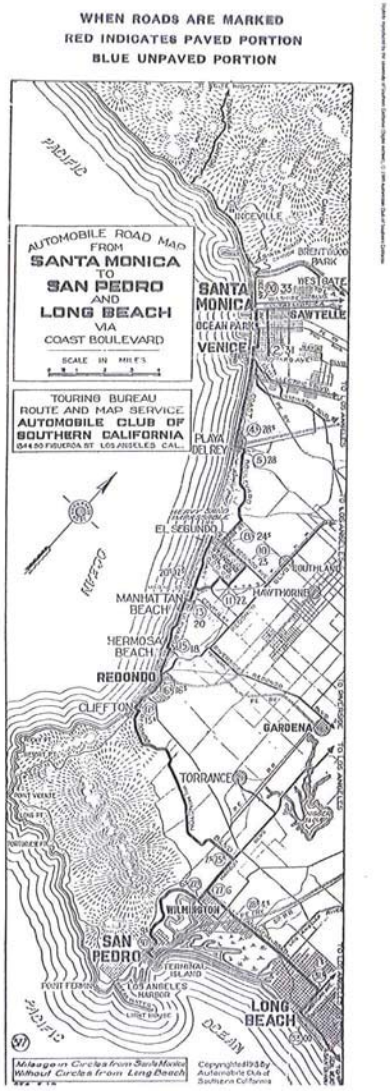
Thank you for your consideration,

Mike Davison
424-789-1534

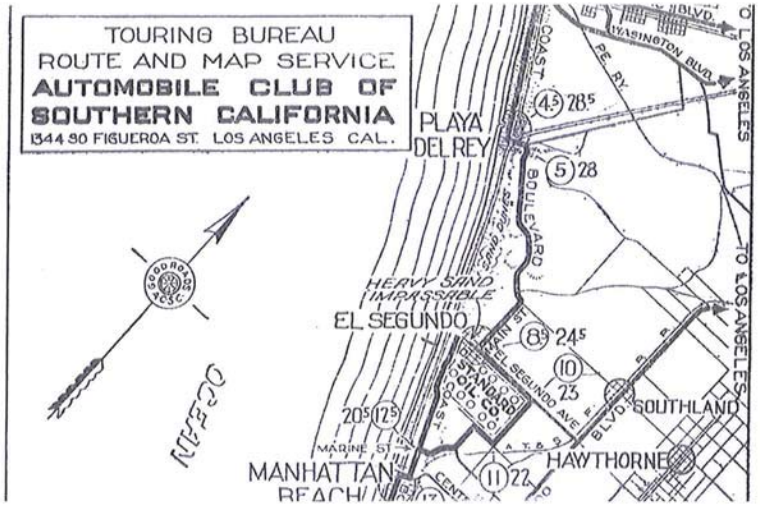
Attachments - 12



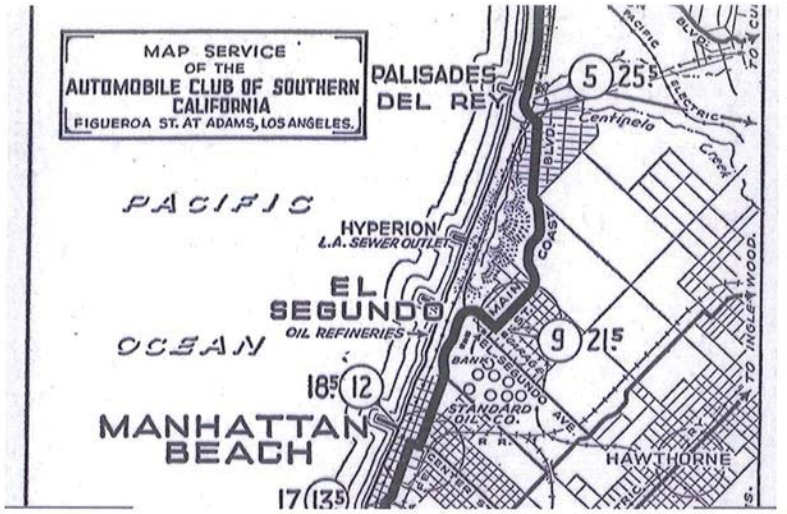
1912 AAA Map: No Coast Blvd. yet.



1918 AAA Map: First evidence of Coast Blvd.

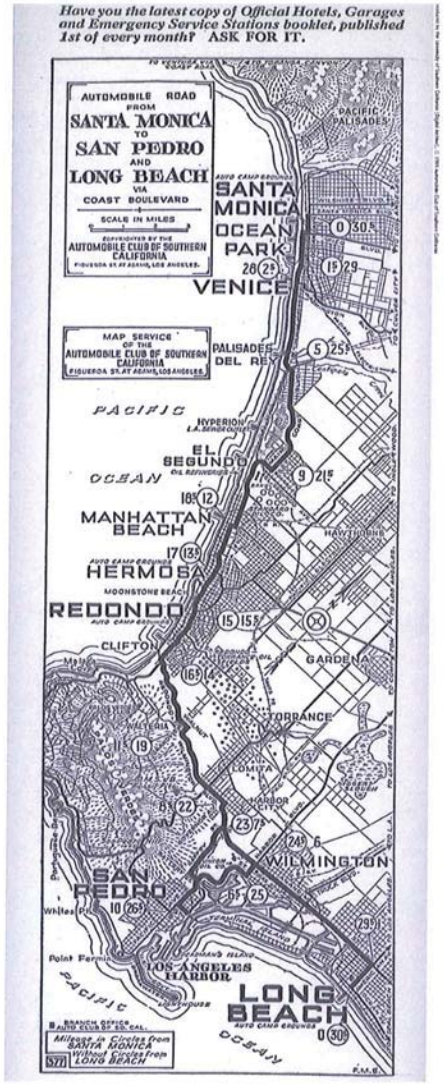


1918 AAA Map Close Up



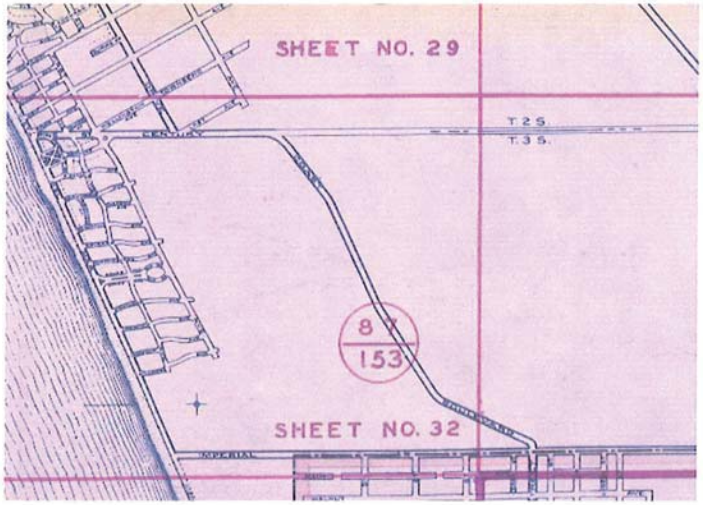
1932 AAA Map Close up

1921 Baist's Real Estate Survey
[San Antonio = Century; Collingwood = Imperial; Arizona = Sepulveda; Defiance = Manchester]

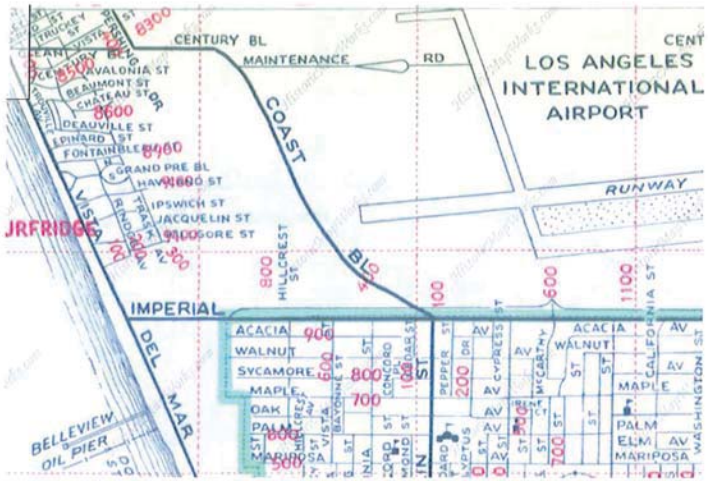


1932 AAA Map

1943 Renie Map



1933-39 WPA Land Use Map



1961 Renie Map: Even with the approach of the runway from the east, Coast Blvd. hasn't moved.

1949 Renie Map

Digitally reproduced by the University of Southern California (Digital Archive). © 1999 Automobile Club of Southern California

"Death Curve" on Coast Road at north city limits of El Segundo, from center line of Main Street south of Collingwood Avenue [Imperial Hwy], El Segundo, looking north, Los Angeles County, 1928

Mid 1950s: Coast Boulevard is visible at top left of the photo.

2002: The intersection of Imperial and Main is at the extreme lower right. Given how the old route is depicted on the maps, it seems like Coast Blvd. is clearly traceable, starting at the sharp left turn just across Imperial (seen from the ground in the 1928 picture). The roadway stops at the two east-west taxiways that are north of the two runways, but from the taxiways to World Way West, the edge of the paved area seems to follow the old roadway. Perhaps the road was slightly raised or sunken in that area, so as the area was developed from east to west, the pavement stopped along the line of the old road?

Also, the area on the old maps where Century Blvd. drops down to Pershing from the small triangle-shaped property atop the dunes can be seen at top left of the 2002 photo. Using the old maps as a guide, it sure looks like you can see where Century Blvd would have continued east and connected with Coast Blvd as it continued north past what is now World Way West. The point where they would have connected seems to line up where the old maps show they did, more or less north of the developed northwest corner of El Segundo.

2006: Again, the intersection of Main and Imperial is at extreme lower right. Runway 7R has not yet been extended west, and the old roadway is clearly visible from north of the building on the north side of Imperial and west of Main (and north of the modern service road), up to where it stops at the taxiway, west of the end of runway 7L.

2011: What's left now looks to be a small portion of old roadway just north of the building on the north side of Imperial and west of Main, as well as what's west of runway 7L and the taxiway to its south. Because runway 7R has been extended to the west (paving with "chevron" pattern), there's a dirt road connecting the two old segments.

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APPENDIX E2.3

PROJECT PHOTOGRAPHS

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View to the North, Expanded APE, Near Northwest Corner of Runway 7L/235R

View of Coast Boulevard facing West

View of Recent Water Conveyance Structure along Coast Boulevard

View of Coast Boulevard, Facing South

View of Coast Boulevard, Exiting the APE, Facing North

View of Culvert System Along Coast Boulevard, Facing East

Current Conditions in Expanded APE Area, Located Southwest of Coast Boulevard

Current Conditions in Expanded APE Area, Located Southwest of Coast Boulevard

APPENDIX F

BIOLOGICAL TECHNICAL REPORT

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BIOLOGICAL TECHNICAL REPORT

LAX RUNWAY 7L/25R RUNWAY SAFETY AREA (RSA) AND ASSOCIATED IMPROVEMENTS PROJECT

(RSA IMPROVEMENTS, PAVEMENT RECONSTRUCTION OF PORTIONS OF RUNWAY 7L/25R AND TAXIWAY B)

Los Angeles International Airport
Los Angeles, Los Angeles County, California

Prepared for:
LOS ANGELES WORLD AIRPORTS
One World Way
Los Angeles, CA 90045

Prepared by:

URS Corporation
Los Angeles, CA

September 2013

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APPENDIX

Appendix A: Photograph Log

LIST OF ACRONYMS

BRSA	Biological Resources Study Area
CDFW	California Department of Fish and Wildlife
CNPS	California Native Plant Society
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
LAX	Los Angeles International Airport
MBTA	Migratory Bird Treaty Act
MMRP	Mitigation Monitoring and Reporting Program
RSA	Runway Safety Area
URS	URS Corporation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1.0 INTRODUCTION

This report documents the findings of an evaluation of biological resources conducted by URS Corporation (URS) for the proposed Los Angeles International Airport (LAX) Runway 7L/25R Runway Safety Area (RSA) Project and Associated Improvements, including the Pavement Reconstruction of the Eastern Portions of Runway 25R and Taxiway B (hereafter referred collectively to as the proposed Project). For the purposes of this analysis, "biological resources" refers to the plants, wildlife, and habitats that occur, or have the potential to occur, within the proposed Project's Biological Resources Study Area (BRSA). The BRSA is a discontiguous area which includes the proposed Project's anticipated ground disturbance footprint (Project footprint) and a 250-foot buffer, to the maximum extent practical (**Figures 1** and **2**). Field observations included a site visit to the Project footprint. Where complete pedestrian coverage of the BRSA was not possible due to limited access (e.g., fenced private property, or other physical barriers [vegetative cover, health and safety concerns, etc.]), field observations were made with binoculars from the nearest appropriate vantage points, and/or by aerial photographic interpretation.

The RSA Project would:

- Extend Runway 7L 832 feet to the west. The Runway 7L threshold will remain at its current location for landings, resulting in an 832-foot displaced threshold;
- Implement declared distances to maintain existing take-off run available and take-off distance available;
- Grade and compact the RSA, approximately 500 feet wide by 168 feet long, beyond the new Runway 7L runway end;
- Grade but not pave an additional area approximately 500 feet wide by 957 feet long to RSA standards beyond the Runway 7L safety area;
- Construct a blast pad west of the Runway 7L extension;
- Extend parallel Taxiway H 832 feet to the west;
- Construct a new taxiway connector (B17) from Taxiway H to Taxiway C;
- Decommission Taxiway B16 from Taxiway H to Taxiway B;
- Reconstruct a portion of Taxiway B at the intersection with new Taxiway B17;
- Reconstruct a portion of Taxiway U from Taxiway B to Runway 7L/25R;
- Relocate the existing Runway 25R Localizer Antenna and equipment shelter to the west;
- Relocate other Federal Aviation Administration (FAA) equipment shelters west of Taxiway B17;
- Relocate existing service road west, beyond the proposed 957- foot grading extension and provide access roads to navaids and equipment shelters;
- Replace existing Approach Lighting System (ALS) towers where the new runway pavement would be constructed with in-pavement lights; and
- Modify the existing Runway and Taxiway lighting and markings in the newly constructed pavements.

The Pavement Reconstruction Project elements include:

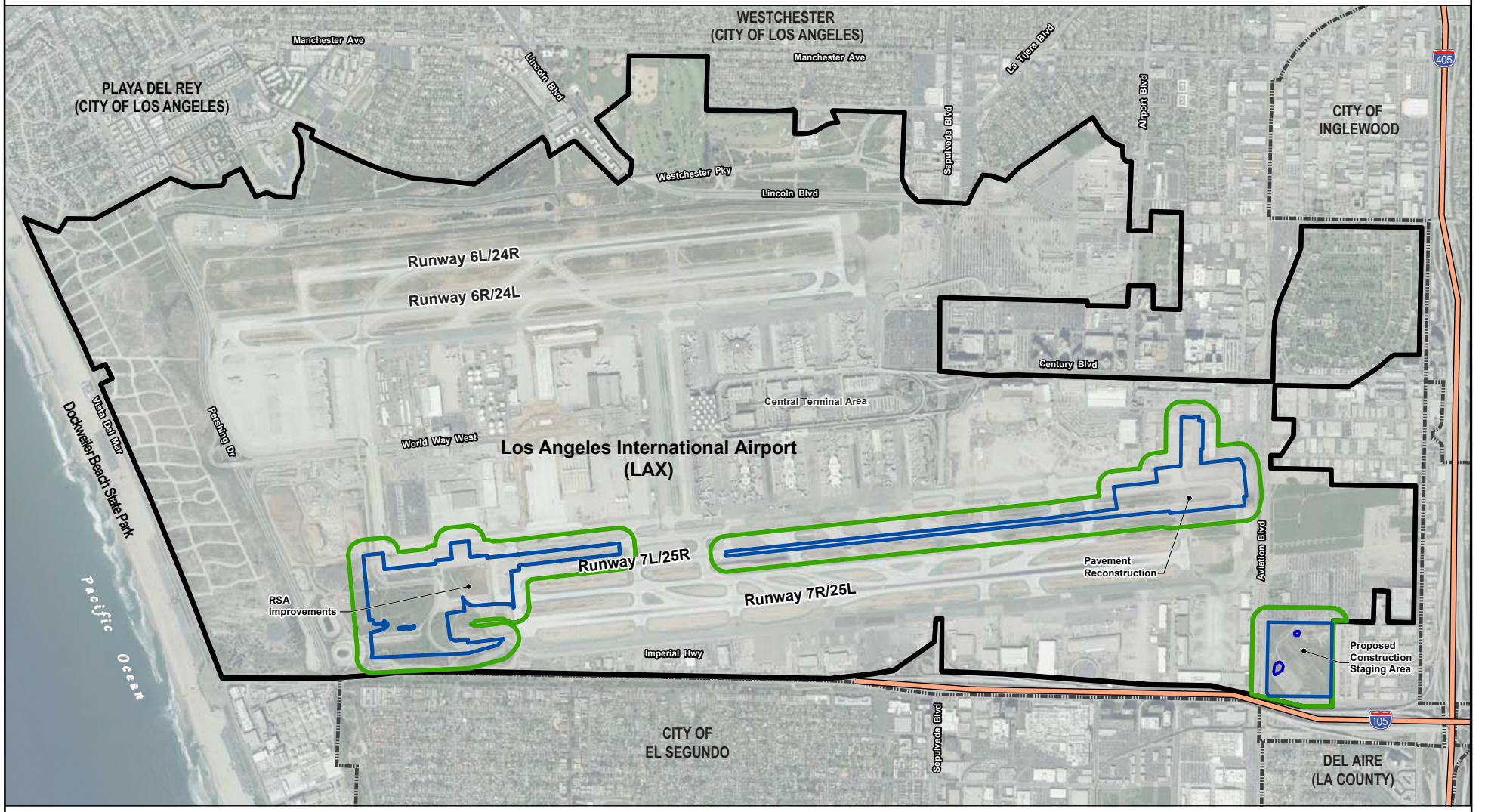
- Full-depth reconstruction of existing pavement from the Runway 25R threshold to Taxiway F (1,225 feet long by 150 feet wide by approximately 6 feet deep);
- Full-depth reconstruction of the keel section of Runway 7L/25R from Taxiway F westward to Taxiway J (1,600 feet long by 50 feet wide by approximately 3 feet deep);
- Replace existing pavement surface of the keel section of Runway 7L/25R keel from Taxiway J west to the Taxiway N (6,447 feet long by 50 feet wide) - the full width of runway pavement will be replaced over the Sepulveda Tunnel;
- Full-depth reconstruction of Taxiway B, from Taxiway C2 to its terminus near the Runway 25R threshold, including connecting taxiways (2,128 feet long by 176 feet wide by approximately 3 feet deep);
- Replace existing asphalt pavement surface for the aircraft parking apron located between Taxilane C1 and Air Freight Building No. 8;
- Replace existing jet blast fence east of Runway 25R; and
- Installation of in-pavement lights.

The BRSA is located within the San Bernardino meridian, Sections 1, 2, and 3, Township 35 North, Range 15 West and Sections 6 and 8, Township 35, Range 14 West of the Venice and Inglewood United States Geological Survey (USGS) 7.5 Minute Topographic Quadrangle Maps (USGS 1981). The BRSA is located within the City of Los Angeles, Los Angeles County, California. Surrounding land uses include densely developed residential, commercial, and industrial areas, public infrastructure and a large open space area (the El Segundo Blue Butterfly Habitat Restoration Area and Dockweiler Beach State Park) to the west.

The intended use of this document is to disclose and evaluate habitat conditions, and determine the potential for occurrence of common and special-status species and their habitats within BRSA limits. For the purposes of this analysis, special-status species refers to any species that has been afforded special protection by federal, state, or local resource agencies (e.g., U.S. Fish and Wildlife Service [USFWS], California Department of Fish and Wildlife [CDFW]) or resource conservation organizations (e.g., California Native Plant Society [CNPS]). The term special-status species excludes those avian species solely identified under Section 10 of the *Migratory Bird Treaty Act* (MBTA) for federal protection. Nonetheless, MBTA species protected by Section 10 are afforded avoidance and minimization measures per state and federal requirements.

Source: LAWA 2012; ESRI Maps and Data - January 2012; Prepared by: URS Corporation

FIGURE 1	**Regional Map**	**Biological Technical Report Runway 7L/25R RSA and Associated Improvements Project**



Sources: LAWA, 2013; Ricondo, 2013; URS, 2013; ESRI Maps & Data, May 2013; Prepared by: URS Corporation.

FIGURE 2	**Biological Resources Study Areas**	**Biological Technical Report Runway 7L/25R RSA and Associated Improvements Project**

2.0 METHODOLOGY

URS biologists reviewed available information from resource management plans, and other technical documents containing information on locations and types of biological resources that have the potential to exist within the BRSA (USFWS Critical Habitat Mapper and File data [USFWS 2013] and the Carlsbad Field Office Species List for Los Angeles County [USFWS 2012]). The CDFW's Natural Diversity Database (CDFW 2013), and CNPS Inventory of Rare and Endangered Plants (CNPS 2013) file data were also queried for records of occurrence of special-status species and habitats within the Venice and Inglewood USGS 7.5 Minute Topographic Quadrangle Map (USGS 1981). The pertinent documents, scientific studies, and technical publications include, but are not limited to, the following:

- LAX Master Plan Final Environmental Impact Statement (EIS)/Environmental Impact Report (EIR) (FAA 2005)
- LAX Master Plan Final EIS/EIR, Appendix J1. Biological Assessment Technical Report 2001 Sapphos Environmental, Inc. (Sapphos 2001)
- LAX Master Plan Final EIR/EIS Appendix F-E. Biological Opinion From the United States Fish and Wildlife Service (FAA 2005)
- LAX Master Plan Mitigation Monitoring and Reporting Program (MMRP) 2010 Annual Progress Report (LAWA 2011)

URS biologists conducted site visits on January 11, 2012 and May 16, 2013 to assess general and dominant vegetation community types, community sizes, habitat types, and species present within communities. Community type descriptions were based on observed dominant vegetation composition and derived from the criteria and definitions of several widely accepted vegetation classification systems (Holland 1986; Sawyer and Keeler-Wolf 1995; Sawyer, Keeler-Wolf and Evens 2009). Plants were identified in the field to the lowest taxonomic level sufficient to determine positive identity, native/nonnative, or rarity status. Plants of uncertain identity were subsequently identified from taxonomic keys (Baldwin 2012). Scientific and common species names were recorded according to Baldwin (2012). The presence of a wildlife species was based on direct observation or wildlife sign (e.g., tracks, burrows, nests, scat, or vocalization). Field data compiled for wildlife species included scientific name, common name, and evidence of sign when no direct observations were made. Wildlife of uncertain distinctiveness was documented and subsequently identified from specialized field guides and related literature (Burt and Grossenheider 1980; Halfpenny 2000; Sibley 2000; Elbroch 2003; and Stebbins 2003).

The BRSA was also assessed for its potential to support special-status species based on habitat suitability comparisons with reported occupied habitats. The following definitions were utilized to determine the need for subsequent surveys and to assess Project-related effects to special-status species:

- Absent: No habitat occurs within the BRSA and no further surveys are necessary.
- Habitat Present: Habitat is present within the BRSA.
- Present: Species or species sign were observed within the BRSA.
- Critical Habitat: The BRSA is within a designated critical habitat unit.

3.0 RESULTS

3.1 Vegetation Communities/Land Cover Types

Four vegetation community types were observed within the BRSA: Mule Fat Scrub, Non-native Grassland, Ornamental, and Disturbed/Developed (**Table 1** and **Figure 3**). Each community type is discussed further below, and representative photos are included in Appendix A.

Table 1

Vegetation Communities/Land Cover Types Observed within BRSA

Vegetation Communities	Acreage
Mule Fat Scrub	0.4
Non-native Grassland	86.7
Ornamental	8.0
Disturbed/Developed	322.3
Total	**417.5**

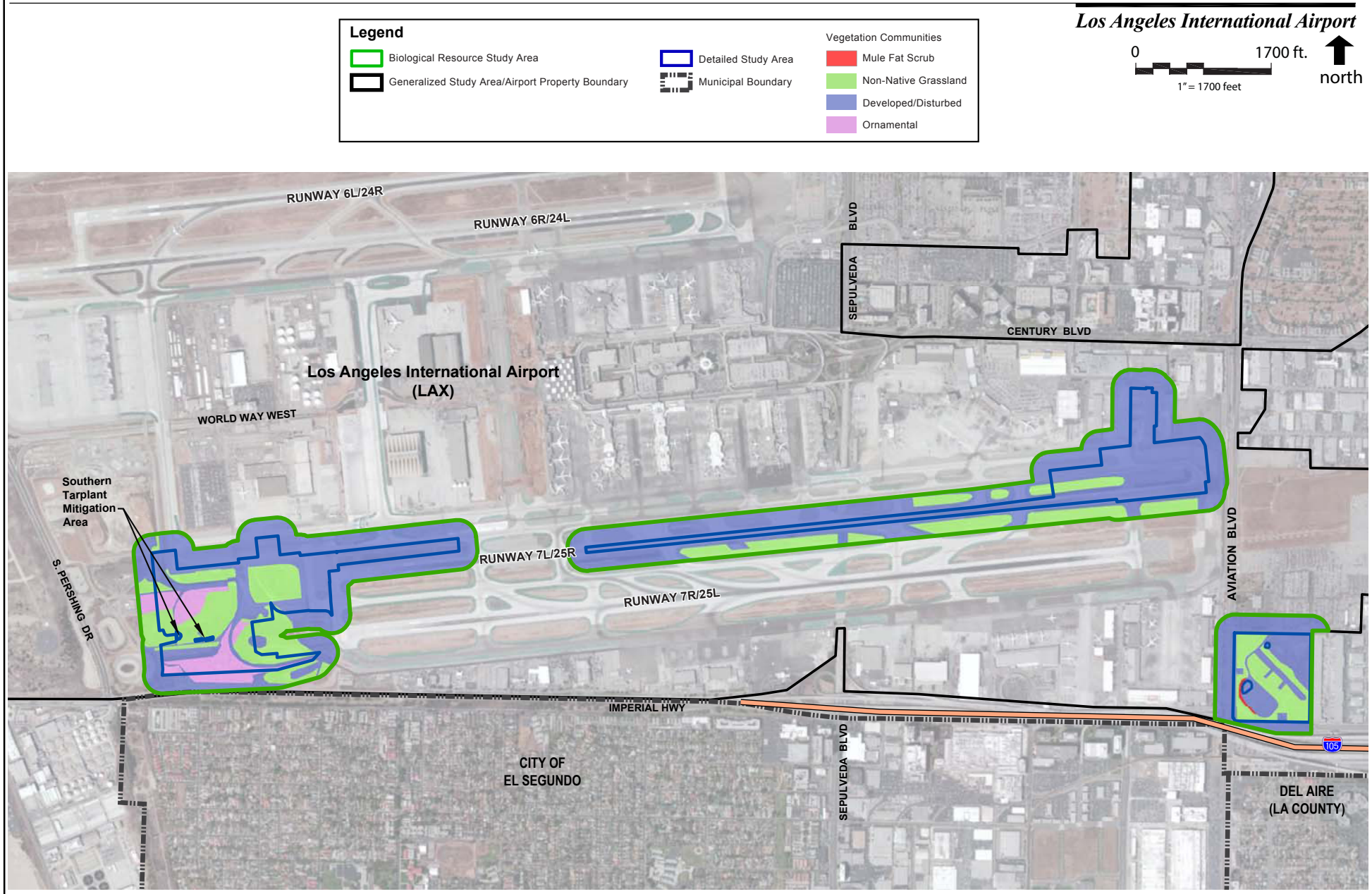
Note: The BRSA includes the Project sites and staging areas and, to the maximum extent practical, a 250-foot buffer.
Source: URS Corporation, 2012 and 2013.

3.1.1 Mule Fat Scrub

Mule Fat Scrub is generally considered to be a riparian community that typically occurs in intermittent streambeds and seeps (Holland 1986). This community is an early seral stage that forms in damp soils and is maintained by frequent flooding. Within the BRSA, Mule Fat Scrub was found along the margins of the large basin within the eastern staging area. The habitat was heavily disturbed and dominated by mule fat (*Baccharis salicifolia* spp. *salicifolia*) and scattered narrow-leaved willow saplings (*Salix exigua*). The understory was dominated by non-native grasses.

3.1.2 Non-native Grassland

Non-native grassland areas are characterized by a dense to sparse cover of annual grasses, often with interspersed native and non-native annual forbs (Holland 1986). This habitat is a disturbance-related community most often found in old fields or openings in native scrub habitats. This community favors fine-textured, usually moist clay soils that can become waterlogged during the winter rainy season and are very dry during summer and fall. Typical grasses within the BRSA include ripgut grass (*Bromus diandrus*), wild oat (*Avena fatua*), and Bermuda grass (*Cynodon dactylon*). Characteristic forbs include Australian saltbush (*Atriplex semibaccata*), Namaqualand daisy (*Dimorphotheca sinuata*), and broad-lobed filaree (*Erodium botrys*).



Sources: LAWA, 2013; URS, 2013; ESRI Maps & Data, May 2013; Prepared by: URS Corporation.

FIGURE 3	**Vegetation Communities**	**Biological Technical Report Runway 7L/25R RSA and Associated Improvements Project**

3.1.3 Ornamental

Ornamental areas within the BRSA are characterized by the presence of large stands of Cootamundra wattle (*Acacia baileyana*) with non-native grass understory. This shrub species was most likely introduced for dune stabilization and has naturalized and spread within these areas of the BRSA.

3.1.4 Disturbed/Developed

Disturbed/Developed lands within the BRSA include the runway areas, roadways, parking facilities, maintenance and airport operation buildings, residences and other private/public infrastructure with ornamental plantings. Species composition in developed communities within the BRSA varied. This cover type also includes ornamental areas which are characterized by moderate to dense cover of non-native tree species. Within the BRSA, this community was confined to the southwestern corner of the Continental City staging area. The area was dominated by turf grasses and non-native trees including eucalyptus (*Eucalyptus* sp.) and Mexican fan palm (*Washingtonia robusta*).

3.2 Plant and Wildlife Species

Plant and animal species observed within the BRSA were typical of developed and disturbed habitats. All plant and wildlife species observed within the BRSA are listed in **Tables 2** and **3**, respectively.

Table 2

Plant Species Observed within BRSA

Scientific Name	Common Name
DICOTYLEDONS	
Aizoaceae	**Fig-Marigold Family**
*Carpobrotus edulis**	Hottentot Fig
Asteraceae	**Sunflower Family**
Baccharis pilularis	Coyote Brush
Baccharis salicifolia ssp. salcifolia	Mule Fat
*Centaurea melitensis**	Tocalote
Corethrogyne filaginifolia	California-Aster
*Dimorphotheca sinuata**	Namaqualand Daisy
*Erigeron bonariensis**	Flax-Leaved Horseweed
*Glebionis coronaria**	Garland Daisy
Heterotheca grandiflora	Telegraph Weed
Pseudognaphalium californicum	California Everlasting
*Senecio vulgaris**	Common Groundsel
*Sonchus oleraceus**	Common Sow-Thistle

Table 2

Plant Species Observed within BRSA

Scientific Name	Common Name
Brassicaceae	**Mustard Family**
*Brassica nigra**	Black Mustard
*Hirschfeldia incana**	Shortpod Mustard
*Raphanus sativus**	Wild Radish
Chenopodiaceae	**Goosefoot Family**
*Atriplex semibaccata**	Australian Saltbush
*Chenopodium album**	Lamb's Quarters
*Salsola tragus**	Russian Thistle
Convolvulaceae	**Morning-Glory Family**
*Convolvulus arvensis**	Bindweed
Crassulaceae	**Stonecrop Family**
Crassula connata	Pygmy-Weed
Euphorbiaceae	**Spurge Family**
*Ricinus communis**	Castor Bean
Fabaceae	**Legume Family**
*Acacia baileyana**	Cootamundra Wattle
Acmispon glaber	Deerweed
Acmispon strigosus	Strigose Lotus
Lupinus bicolor	Miniature Lupine
Lupinus succulentus	Arroyo Lupine
*Medicago polymorpha**	Bur-Clover
*Melilotus alba**	White Sweetclover
*Melilotus indica**	Sourclover
Trifolium albopurpureum	Rancheria Clover
Geraniaceae	**Geranium Family**
*Erodium botrys**	Long-Beaked Filaree
Malvaceae	**Mallow Family**
*Malva parviflora**	Cheeseweed
Moraceae	**Fig Family**
*Ficus carica**	Edible Fig
Myrsinaceae	**Myrsine Family**
*Anagallis arvensis**	Scarlet Pimpernel
Onagraceae	**Evening Primrose Family**
Camissonia cherianthifolia	Beach Evening Primrose
Oxalidaceae	**Wood-Sorrel Family**
*Oxalis pers-caprae**	Bermuda Buttercup / Sourgrass
Plantaginaceae	**Plantain Family**
*Plantago lanceolata**	English Plantain
Polygonaceae	**Buckwheat Family**
*Rumex crispus**	Curly Dock

Table 2

Plant Species Observed within BRSA

Scientific Name	Common Name
Salicaceae	**Willow Family**
Salix exigua	Narrow-Leaved Willow
Solanaceae	**Nightshade Family**
*Nicotiana glauca**	Tree Tobacco
MONOCOTYLEDONS	
Arecaceae	**Palm Family**
*Washingtonia robusta**	Mexican Fan Palm
Poaceae	**Grass Family**
*Avena fatua**	Wild Oat
*Bromus diandrus**	Ripgut
*Cortaderia selloana**	Pampas Grass
*Cynodon dactylon**	Bermuda Grass
*Festuca pratensis**	Meadow Fescue
*Hordeum murinum var. leporinum**	Hare Barley
*Pennisetum setaceum**	Crimson Fountain Grass

Note:
** Indicates non-native species*
Source: URS Corporation, 2012 and 2013.

Table 3

Wildlife Species Observed within BRSA

Scientific Name	Common Name
BIRDS	
Accipitridae	**Accipiter Hawks**
Buteo jamaicensis	Red-Tailed Hawk
Charadridae	**Plovers**
Charadrius vociferus	Killdeer
Columbidae	**Pigeons And Doves**
Columba livia	Rock Pigeon
Corvidae	**Jays And Crows**
Corvus brachyrhynchos	American Crow
Corvus corax	Common Raven
Emberizidae	**Sparrows, Buntings And Relatives**
Zonotrichia leucophrys	White-Crowned Sparrow
Falconidae	**Falcons**
Falco sparverius	American Kestrel

Table 3

Wildlife Species Observed within BRSA

Scientific Name	Common Name
Fringillidae	**Finches**
Carduelis psaltria	Lesser Goldfinch
Icteridae	**Blackbirds And Orioles**
Sturnella neglecta	Western Meadowlark
Parulidae	**New World Warblers**
Setophaga coronata	Yellow-Rumped Warbler
Passeridae	**Old World Sparrows**
Passer domesticus	House Sparrow
Tyrannidae	**Tyrant Flycatchers**
Sayornis saya	Say's Phoebe
MAMMALS	
Canidae	**Dogs And Relatives**
Canis familiaris	Domestic dog (sign)
Canis latrans	Coyote (sign)
Urocyon cinereoargenteus	Grey fox
Geomyidae	**Pocket Gophers**
Thomomys bottae	Botta's Pocket Gopher (Sign)

Source: URS Corporation, 2012 and 2013.

3.2.1 Special-Status Plants

Eleven special-status plant species are reported to occur within the USGS Inglewood and Venice 7.5 Minute Quadrangle Maps that includes the BRSA (**Table 4**). Five of these eleven species are listed as federally or state endangered or threatened. Two of the special-status plant species, southern tarplant (*Centromadia parryi* ssp. *australis*; present in vicinity of BRSA, but the Southern Tarplant Mitigation Rehabilitation Area has been excluded from the BRSA) and California Orcutt grass (*Orcuttia californica*; Absent), were determined to have a potential for occurrence within the BRSA. There is limited habitat potential for California Orcutt grass within the non-native grasslands that occur throughout the BRSA, where water does tend to pond after significant rain events. No record of observation for this species has been found within the BRSA.

Southern tarplant is a CNPS listed 1B.1 species, which signifies that it is rare, threatened, or endangered in California. This species is commonly known to occur in disturbed areas at the margins of marshes and swamps, valley and foothill grasslands, vernal pools, and non-native grasslands below 1,500 feet above mean sea level (CNPS 2013), and their blooming period typically runs from May to November. Southern tarplant occurs in Los Angeles, Orange, Santa Barbara, San Diego, and Ventura Counties (CNPS 2013). The number of individuals in a population can be highly variable from year to year, based on timing and amount of annual rainfall.

Southern tarplant was observed in several areas adjacent to the southwestern portion of the BRSA. These areas are part of mitigation plans associated with a concurrently running LAX project, Bradley West Expansion Project (Southern Tarplant Mitigation Plan 2011). The mitigation areas have been excluded as part of the BRSA and they will be avoided during Project design and construction (Figure 3). No other suitable habitat for this species was observed within the BRSA.

In addition to the listed species, the LAX Master Plan EIS/EIR mitigation measure MM-BC-2, requires the determination of potential habitat for Lewis' evening primrose (*Camissonia lewisii*). Based on the field visit, there is no potential habitat within the BRSA for this species.

3.2.2 Special-Status Wildlife

Twelve special-status wildlife species are reported to occur within the USGS Inglewood and Venice 7.5 Minute Quadrangle Map that includes the BRSA (**Table 5**). Nine of these twelve species are listed as federally or state endangered or threatened. Three of the twelve species, El Segundo blue butterfly (*Euphilotes battoides allyni*; Habitat Present), Riverside fairy shrimp (*Streptocephalus woottoni*; Absent), and burrowing owl (*Athene cunicularia hypugaea*; Habitat Present), were determined to have potential habitat within the BRSA. There is limited habitat for El Segundo blue butterfly within the BRSA and there are no records of the species occurring there. There is no suitable habitat within the BRSA for Riverside fairy shrimp. Suitable habitat for burrowing owl was present within the survey area, specifically within the eastern staging area. Previous protocol burrowing owl surveys have been conducted for this site and no owls were observed (BonTerra 2009).

Table 4

Special-Status Plant Species Potential for Occurrence within BRSA

Common Name *Scientific Name*	Habitat and Distribution	Flowering Season	Designation	Potential For Occurrence/ Local Status
Coastal dunes milk-vetch *Astragalus tener* var. *titi*	Moist sandy depressions near the coast, typically coastal bluffs and dunes below 15 meters above mean sea level. Historically, range was known to include Monterey, Los Angeles, and San Diego Counties. It is presumed extant at three locations, one in Monterey County and two in San Diego County.	Mar-May	FE SE	**Absent** Determined as a result of qualitative surveys conducted at the Los Angeles/El Segundo Dunes in 1995, 1996, 1997, 1998, 1999, and directed surveys in 1998 and 2000. There is no suitable habitat for this species within the BRSA.
Ventura marsh milk-vetch *Astragalus pycnostachyus* var. *lanosissimus*	Coastal marshes or seeps below 30 meters above mean sea level. Within reach of high tide or protected barrier beaches in coastal salt marsh or sandy bluffs. Believed extinct until its rediscovery in 1997. Only known extant population on McGrath State Beach in Ventura County. Historically known from the Ballona marshes and a meadow near the seashore in Santa Monica; presumed extirpated at both sites.	Jun-Oct	FE SE	**Absent** Determined absent as a result of qualitative surveys conducted at the Los Angeles/El Segundo Dunes in 1995, 1996, 1997, 1998, 1999, and directed surveys in 1998 and 2000. Potentially suitable habitat to the species is limited to the fore dune, west of the Los Angeles/El Segundo Dunes immediately adjacent to Vista del Mar Boulevard. There is no suitable habitat for this species within the BRSA.
Southern tarplant *Centromadia parryi* ssp. *australis*	Valley and foothill grasslands, alkaline locales, and peripheral Salt Marsh are all utilized by the Southern Tarplant. At the Del Mar locale the soils are mapped as Chino silt loam and the salt marsh vegetation is found only yards away. At Newport Back Bay this tarplant grows in mesic grasslands with an ocean influence; most of the surrounding vegetation in the BRSA consists of invasive non-native weeds.	May-Nov	CRPR 1B.1	**Absent** Mitigation areas for this species are immediately adjacent to the BRSA; however, these areas will be excluded and avoided as part of the Project Design. This species was not found to be present elsewhere in the BRSA, nor was there suitable habitat for the species within the BRSA.
Orcutt's pincushion *Chaenactis glabriuscula* var. *orcuttiana*	Coastal bluff scrub, coastal dunes habitats with sandy soils. Found within 0 - 100 meters elevation.	Jan-Aug	CRPR 1B.1	**Absent** No suitable habitat within the BRSA.

Table 4

Special-Status Plant Species Potential for Occurrence within BRSA

Common Name ***Scientific Name***	**Habitat and Distribution**	**Flowering Season**	**Designation**	**Potential For Occurrence/ Local Status**
Coastal Goosefoot *Chenopodium littoreum*	Occurs within coastal dunes from 10-30 meters elevation.	Apr-Aug	CRPR 1B.2	**Absent** No suitable habitat within the BRSA.
San Fernando Valley Spineflower *Chorizanthe parryi* var. *fernandina*	Sandy soil on flats and foothills in mixed grassland and chaparral communities from 90-425 meters elevation.	Apr-Jun	FE SE	**Absent** BRSA is below normal elevation range for this species. No suitable habitat within the BRSA
Beach Spectacle-Pod *Dithyrea maritima*	Coastal strand, coastal dunes and scrub, and sandy soils below 50 meters above mean sea level. Historically, this species ranged from the central coast of California south into Baja California. Known in California from less than twenty occurrences; extirpated from half of its historical range. Historically known from the Los Angeles/El Segundo Dunes. Historic topographic maps and aerial photographs indicate that potentially suitable habitat for this species within the Los Angeles/El Segundo Dunes was largely converted due to residential development between 1940 and 1974. This species has not been successfully reintroduced as a result of revegetation efforts undertaken between 1990 and 1994. Nearest known location is in the vicinity of the Ballona Marshes near Marina del Rey.	Mar-May	SE	**Absent** Determined absent as a result of qualitative surveys conducted at the Los Angeles/El Segundo Dunes for 1995, 1996, 1997, 1998, 1999 and directed surveys in 1998 and 2000 There is no suitable habitat for this species within the BRSA.
Coulter's Goldfields *Lasthenia glabrata* ssp. *coulteri*	Occurs in marshes, swamps, playas and vernal pools. Found within 1 – 1,220 meters elevation.	Feb-Jun	CRPR 1B.1	**Absent** No suitable habitat within the BRSA.
Prostrate Vernal Pool Navarretia *Navarretia prostrata*	Occurs in coastal scrub, meadows and seeps, valley and foothill grassland, vernal pools/mesic from 15 – 1,210 meters in elevation.	Apr-Jul	CRPR 1B.1	**Absent** No suitable habitat within the BRSA.

Table 4

Special-Status Plant Species Potential for Occurrence within BRSA

Common Name ***Scientific Name***	**Habitat and Distribution**	**Flowering Season**	**Designation**	**Potential For Occurrence/ Local Status**
California Orcutt Grass *Orcuttia californica*	Vernal pools below 625 meters above mean sea level. Drying mud flats and valley grassland. Once occurred in vernal pools from San Quintin, Baja California, Mexico northward to Riverside, Los Angeles, and San Diego Counties in Southern California. Currently known from the Santa Rosa Plateau and a site near Hemet, Skunk Hollow pool in Riverside County; two pools at Marine Corps Air Station Miramar (Carlsbad) and four pool complexes at the Cruzan Mesa near Santa Clarita; Carlsberg vernal pool in the City of Moorpark, Ventura County; Otay Mesa in San Diego County; and Woodland Hills in Los Angeles County. In Baja California, Mexico, the species is found on Mesa de Colonet and in pools in San Quintin. The nearest record for this species is 6 miles east southeast of LAX in the City of Gardena near the junction of Rosecrans and Western Avenues. Last seen in 1946. Known from less than twenty occurrences. Populations face high degree of threat and have low potential for recovery.	April-Aug	FE SE	**Absent** No suitable habitat within the BRSA.
San Bernardino Aster *Symphyotrichum defoliatum*	Cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, valley and foothill grasslands near ditches, streams and springs. Found within 2 – 2,040 meters elevation.	Jul-Nov	CRPR 1B.2	**Absent** No suitable habitat within the BRSA.

Notes: Designations

Federal Designations (Federal Endangered Species Act, USFWS):
FE: Federal-listed, endangered
FT: Federal-listed, threatened

State Designations (California Endangered Species Act, CDFW):
SE: State-listed, endangered
ST: State-listed, threatened

California Rare Plant Rank (CRPR) Status:
1B: Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction is low at this time
2: Distributed in a limited number of occurrences, occasionally more if each occurrence is small
3: Distributed in one to several highly restricted occurrences, or present in such small numbers that it is seldom reported

CRPR Threat Code:
1: Seriously endangered in California
2: Fairly endangered in California
3: Not very endangered in California

Source: URS Corporation, 2012 and 2013.

Table 5

Special-Status Wildlife Species Potential for Occurrence within BRSA

Common Name *Scientific Name*	Habitat Description	Designation		Potential For Occurrence/ Local Status
		USFWS	CDFW	
INVERTEBRATES				
El Segundo Blue Butterfly *Euphilotes battoides allyni*	Coastal sand dunes that support populations of its food plant: coastal buckwheat. Historically ranged over the entire Los Angeles/El Segundo Dunes and the northwestern Palos Verdes Peninsula in southwestern Los Angeles County. Currently distributed on three remnant habitats within its former range; Los Angeles/El Segundo Dunes, the 1.5 acre site at the oil refinery located south of the airport, and a half-acre site at Malaga Cove, all in Los Angeles County. There are currently 150.2 acres of occupied habitat for the El Segundo Blue Butterfly within the Los Angeles/El Segundo Dunes. Directed surveys of the El Segundo Blue Butterfly at the Los Angeles/El Segundo Dunes indicated continued decline in numbers between 1977 and 1979 with an estimated total of less than 2,000 adults. The City of Los Angeles initiated active habitat management measures for the El Segundo Blue Butterfly in 1987, and continues those work efforts as part of its annual operations and maintenance activities. Population estimates for 1999 range from 10,000 – 40,000 butterflies.	FE	None	**Absent** Only marginal habitat exits for this species within the BRSA. Species has not been historically documented within the BRSA. This species was determined present within the Los Angeles/El Segundo Dunes as a result of directed surveys performed in 1995, 1996, 1997, 1998, 1999, and 2000.
Riverside fairy shrimp *Steptocephalus woottoni*	Temporary ponds that persist for a minimum of 9-10 weeks, usually deep (greater than 30 cenitmeters). Historical range includes Ventura, Los Angeles, Orange, western San Diego and Riverside Counties and immediately south of the International Border, in Baja California, Mexico.	FE	None	**Absent** No suitable habitat within the BRSA.

Table 5

Special-Status Wildlife Species Potential for Occurrence within BRSA

Common Name *Scientific Name*	Habitat Description	Designation		Potential For Occurrence/ Local Status
		USFWS	CDFW	
BIRDS				
Coastal California gnatcatcher *Polioptila californica californica*	Occurs in coastal sage scrub vegetation on mesas, arid hillsides, and in washes and nests almost exclusively in California sagebrush.	FT	SSC	**Absent** Although, marginal winter foraging habitat is present in the BRSA, suitable habitat for nesting and foraging is absent from the BRSA.
Burrowing owl *Athene cunicularia hypugaea*	Burrow sites and some wintering sites. Open annual grasslands or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon burrowing mammals (especially California ground squirrel) for burrows.	None	SSC	**Absent** The species has not been observed in previous studies (Bonterra 2009) within the BRSA.
Golden eagle *Aguila chrysaetos*	Nesting and Wintering. Generally open country of the Temperate Zone worldwide. Nesting primarily in rugged mountainous country. Uncommon resident in southern California.	None	SSC	**Absent** There is no suitable breeding habitat for this species within the BRSA and this species was not detected during surveys.
American peregrine falcon *Falco peregrinus anatum*	Breeds primarily in woodland, forest, and coastal habitats. Nonbreeding habitat occurs in riparian, coastal, and inland wetlands. De-listed as federally-endangered on August 25, 1999. The peregrine falcon has reoccupied most of its historic breeding range in California, including the Channel Islands, the coast and Cascade ranges, and Sierra Nevada. It can inhabit all counties in California throughout the year, except during the breeding season. This species is an occasional visitor to the Master Plan boundaries, however no breeding habitat occurs within the Master Plan boundaries or Los Angeles/El Segundo Dunes.	None	SSC	**Absent** This species was determined absent within the Master Plan Boundaries and the Los Angeles/El Segundo Dunes as a result of directed surveys performed in summer 1998 and 2000. There is no suitable breeding habitat for this species within the BRSA.

Table 5

Special-Status Wildlife Species Potential for Occurrence within BRSA

Common Name *Scientific Name*	Habitat Description	Designation		Potential For Occurrence/ Local Status
		USFWS	CDFW	
California least tern *Sterna antillarum browni*	Open ocean and a colonial breeder on bare or sparsely vegetated flat substrate located along marine shores, estuarine shores, alkali flats, landfills, or paved areas throughout the year. This federally-listed endangered species comes to shore only to breed. Historically nested along the central and southern California coast to the coast of Mexico. Currently nests sporadically along the coast from San Francisco to Baja California. Nearest known breeding colony is located 3 miles north of the Master Plan boundaries. Observed as a seasonal visitor to waters offshore of Dockweiler State Beach. This species is not known to breed within the Master Plan boundaries or Los Angeles/El Segundo Dunes.	FE	SE	**Absent** This species was determined absent within the Master Plan Boundaries and the Los Angeles/El Segundo Dunes as a result of directed surveys performed in summer 1998 and 2000. There is no suitable habitat for this species within the BRSA.
California black rail *Laterallus jamaicensis conturniculus*	Tidal salt marshes associated with heavy growth of pickleweed; also occurs in brackish marshes or freshwater marshes at low elevations.	None	ST	**Absent** No suitable habitat within the BRSA.
Southwestern willow flycatcher *Empidonax extimus traillii*	Riparian areas with thick willow forests. Historically nested throughout California, wherever willow thickets or other riparian habitat was found. Regular nesting is currently known only from a few mountain meadows in the Sierra Nevada and several rivers in Trinity, Inyo, Kern, Santa Barbara, Los Angeles, and San Diego Counties. Species becomes more widely distributed in the spring and fall migration period. This species is not known to occur within the Master Plan boundaries or Los Angeles/El Segundo Dunes.	FE	SE	**Absent** This species was determined absent within the Master Plan Boundaries and the Los Angeles/El Segundo Dunes as a result of directed surveys performed in summer 1998 and 2000. There is no suitable habitat for this species within the BRSA.

Table 5

Special-Status Wildlife Species Potential for Occurrence within BRSA

Common Name *Scientific Name*	Habitat Description	Designation		Potential For Occurrence/ Local Status
		USFWS	CDFW	
Western snowy plover *Charadrius alexandrinus nivosus*	Sand spits, dune-backed beaches, beaches at creek and river mouths, and salt pans at lagoons and estuaries are the main coastal habitats for nesting. Can occur in man-made salt ponds and on estuarine sand and mud flats.	FT	None	**Absent** No suitable habitat within the BRSA.
Beldings savannah sparrow *Passerculus sandwichensis beldingi*	Resides year-round in the salt marsh and it depends entirely on this ecosystem for nesting and foraging. It shows a particular affinity for the upper littoral region of the marsh and nests preferentially in pickleweed (*Salicornia virginica)*. Nesting season extends from January to August. Nests must be above the highest tide line in spring as the eggs are not resistant to inundation. Forages on mudflats, sandflats, and rock jetties.	None	SE	**Absent** No suitable habitat within the BRSA.
MAMMALS				
Pacific pocket mouse *Perognathus longimenbris pacificus*	Occurs on fine-grained, sand substrates in open coastal sage scrub, coastal dunes, coastal strand, and river alluvium habitats. Species occurred historically along southern California coast from Los Angeles County south to Baja, California. Now restricted to less than five populations, one in Orange County and others in San Diego County. This species was last seen in 1938 at Marina del Rey in the El Segundo Area.	FE	None	**Absent** No suitable habitat exists within the study area. This species was determined absent within the Los Angeles/El Segundo Dunes as a result of directed surveys performed in 1995, 1996, 1997, 1998, 1999, and 2000.

Notes: Designations

U.S. Fish and Wildlife Service:
FE: Federal Endangered
FT: Federal Threatened

California Department of Fish and Wildlife:
SE: State Endangered
ST: State Threatened
SSC: State Species of Special Concern

Source: URS Corporation, 2012 and 2013.

4.0 CONCLUSIONS

The Literature Review for the Project region suggests that the BRSA includes some of the requisite habitat needed to support Lewis' evening primrose, El Segundo blue butterfly, Riverside fairy shrimp and burrowing owl, as well as lower potential for other species. Habitat was limited for the El Segundo blue butterfly and there are no records of this species occurring within the BRSA. There is no suitable habitat within the BRSA for Riverside fairy shrimp. Potential habitat for burrowing owl is discussed below. Southern tarplant was observed adjacent to the BRSA as part of an on-going mitigation plan, but no suitable habitat was present within the BRSA.

4.1 Special-Status Avian Species

The Project area contains suitable habitat that has the potential to support burrowing owl and other nesting avian species, however no burrowing owls, active burrows or nests were observed during the URS field survey or previous surveys within the BRSA (Bonterra 2009). URS recommends that work be conducted outside of the breeding season to the maximum extent practicable. Prior to ground-disturbing activities within the Project area, we recommend that a qualified biologist conduct and submit a pre-construction burrowing owl, migratory nesting bird, and raptors survey report. The survey should occur prior to initiation of Project activities and any occupied nests occurring within or adjacent to the Project area be delineated. To the maximum extent practicable, a minimum buffer zone from occupied nests should be maintained during physical ground-disturbing activities. Once nesting has been determined to cease, the buffer may be removed.

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APPENDIX A
Photograph Log

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	Photograph 1: RSA Improvements Area **Date:** 1/11/12 **Direction:** East
	Photograph 2: RSA Improvements Area **Date:** 1/11/12 **Direction:** Northeast
	Photograph 3: RSA Improvements Area **Date:** 5/16/13 **Direction:** Southwest

	Photograph 4: East Staging Area **Date:** 1/11/12 **Direction:** Northwest
	Photograph 5: East Staging Area **Date:** 1/11/12 **Direction:** South
	Photograph 6: Runway and Taxiways **Date:** 5/16/13 **Direction:** North