# *DRAFT*
# *ENVIRONMENTAL ASSESSMENT AND DRAFT GENERAL CONFORMITY DETERMINATION*

## *Volume 1: Main Report*
## *(Executive Summary – Chapter 9)*

LOS ANGELES INTERNATIONAL AIRPORT (LAX)
LANDSIDE ACCESS MODERNIZATION PROGRAM

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:*

Ricondo and Associates, Inc.

**August 2017**

**This environmental assessment becomes a Federal document when evaluated, signed and dated by the Responsible FAA Official.**

**Responsible FAA Official** **Date**

# GENERAL INFORMATION ABOUT THIS DOCUMENT

**WHAT'S IN THIS DOCUMENT?** This document contains a Draft Environmental Assessment (EA) and a Draft General Conformity Determination for the proposed Landside Access Modernization Program at Los Angeles International Airport (LAX). The proposed improvements analyzed in this environmental documentation include: construction of an Automated People Mover (APM) system with six APM stations; construction of a Consolidated Rental Car facility (CONRAC); construction of two Intermodal Transportation Facilities (ITFs); roadway improvements and project design features; and various enabling projects to allow construction and operation of the proposed LAX Landside Access Modernization Program. This document discloses the analysis and findings of the potential impacts associated with the Los Angeles World Airports (LAWA) proposal, the No Action Alternative, and other reasonable alternatives.

**WHAT SHOULD YOU DO?** Read this Draft EA and Draft General Conformity Determination and provide comments, if applicable. Copies of this document are available for review at libraries in Los Angeles and other communities around LAX; the Federal Aviation Administration (FAA) offices in Lawndale, California; and the LAWA administrative offices. Addresses of these and other locations where the Draft EA and Draft General Conformity Determination are available for review are provided in Chapter 6 of this document. If you have important information you believe has **not** been considered in this Draft EA and Draft General Conformity Determination, or if you have comments about the conclusions, you may submit your written comments by letter to the following address:

Los Angeles World Airports
Land Use and Entitlement Section
Attention: Evelyn Quintanilla, Chief of Airport Planning I
P.O. Box 92216
Los Angeles, California 90009-2216

A Public Workshop on the Draft EA and Draft General Conformity Determination will be held on Tuesday, September 19, 2017 from 5:00 p.m. to 8:00 p.m., Pacific Daylight Time at the Flight Path Museum, 6661 W. Imperial Highway, Los Angeles, California, 90045. Comments are due no later than 5:00 p.m. Pacific Daylight Time on Tuesday, September 26, 2017. Please allow sufficient time for mailing. LAWA must **receive** your comments by the deadline, not simply postmarked by that date.

**BACKGROUND**. The LAX Landside Access Modernization Program is being proposed to address automobile congestion in and around the Central Terminal Area (CTA) at LAX. The bulk of the proposed project would occur on existing airport property.

**WHAT HAPPENS AFTER THIS?** The FAA will make a Final General Conformity Determination prior to making a determination on the EA and the federal actions associated with the LAX Landside Access Modernization Program. LAWA will prepare written responses to comments received on the adequacy of the information presented in this Draft EA and prepare a Final EA for transmittal to the FAA for the agency's evaluation and acceptance. Following evaluation of the Final EA, the FAA will either issue a Finding of No Significant Impact (FONSI) or decide to prepare an Environmental Impact Statement (EIS).

Before including your name, address and telephone number, email or other personal identifying information in your comment, be advised that your entire comment – including your personal identifying information - may be made publicly available at any time. While you can ask us in your comment to withhold from public review your personal identifying information, we cannot guarantee that we will be able to do so.

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# Executive Summary

## ES.1 Introduction

The City of Los Angeles, through the Los Angeles World Airports (LAWA) as owner and operator of Los Angeles International Airport (LAX or "the Airport"), proposes the LAX Landside Access Modernization Program to modernize LAX to improve passenger quality-of-service and to provide world class facilities to its customers, as well as address existing levels of traffic congestion at and around the Airport.

LAX is located at the western edge of the City of Los Angeles within a developed, urbanized region consisting of airport, commercial, and residential areas. To the north of LAX are the communities of Westchester and Playa del Rey in the City of Los Angeles; to the east are the City of Inglewood, City of Hawthorne, and unincorporated areas under the jurisdiction of Los Angeles County; to the south is the City of El Segundo; and to the west is the Pacific Ocean. Regional access to LAX is provided by the San Diego Freeway (Interstate 405 or I-405), which is a north-south freeway located east of LAX, and the Century Freeway (Interstate 105 or I-105), which is an east-west freeway, located south of LAX. Major roadways serving LAX include Century Boulevard, Imperial Highway, Westchester Parkway/W. Arbor Vitae Street, and Lincoln Boulevard/Sepulveda Boulevard (State Route 1).

LAWA prepared this draft Environmental Assessment (EA) of the potential environmental impacts associated with the proposed development of the LAX Landside Access Modernization Program (Proposed Action). This EA has been prepared pursuant to the requirements of Section 102(2)(c) of the National Environmental Policy Act of 1969 (NEPA, 42 United States Code [U.S.C.] 4321-4370), the President's Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) §§ 1500-1508 and in accordance with FAA Order 1050.1F, *Environmental Impacts: Policies and Procedure* and FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*.

This EA also includes a Draft General Conformity Determination for the proposed improvements associated with the Proposed Action. The EA also provides a detailed air quality analysis for purposes of disclosing air quality effects pursuant to NEPA. The anticipated effects of the proposed federal actions to air quality are discussed in Section 5.1 of the EA, and further assessed in the Draft General Conformity Determination (see **Appendix O**) to satisfy the general conformity requirements of the Federal Clean Air Act (CAA). Comments are being sought on the Draft General Conformity Determination, for which the FAA will make a Final General Conformity Determination prior to completing the NEPA process and undertaking the federal actions associated with the Proposed Action.

# ES.2 Purpose and Need

## ES.2.1 SUMMARY OF THE PURPOSE AND NEED

The Airport currently has a single vehicle access point to all passenger terminals via the Central Terminal Area (CTA). All ground vehicles for passengers (including transit, private vehicles, taxis, transportation network companies or "TNCs" [e.g., Uber and Lyft], limousines, and shuttles) travel through this access point, which results in more time spent in traffic, uncertain travel times, more passenger hours traveled, congestion and delay in the CTA, as well as back-ups onto the surrounding local and regional roadway network.

The existing traffic problems will be exacerbated in the future as traffic conditions at LAX are expected to worsen over time partly because of expected increases in the amount of local traffic not associated with the CTA and partly because of the growth in passenger activity levels that are projected to occur with or without the LAX Landside Access Modernization Program. As no viable options for additional or improved roadways exist within the CTA, a reliable, predictable, non-road means of access into the CTA is needed to relieve congestion in the CTA and on the surrounding street system.

Additionally, a projected shortfall of approximately 2,260 employee parking spaces is forecasted through 2035. By providing public and employee parking options outside the CTA, and removing this segment of the vehicle traffic from within the CTA, traffic within the CTA would be reduced.

The LAX Landside Access Modernization Program ("Proposed Action") seeks to:

- Improve access options and the landside[1] travel experience for passengers;
- Enhance efficiency and alleviate delays on and congestion of on-Airport and surrounding roadways;
- Shift the location of a portion of traffic from the CTA to locations outside the CTA and off of the surrounding street network;
- Provide a direct connection to the Los Angeles County Metropolitan Transportation Authority (Metro) rail and transit system; and
- Improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system, including highways, local roadways, and regional transit options, and LAX.

[1] Airports are generally divided into landside and airside areas. Landside areas are accessible to the public and include roadway networks, parking lots, rental car operations, and public transportation facilities. Airside areas are restricted areas with access only to authorized personnel and ticketed passengers that have undergone security screening; airside areas include passenger handling facilities, runways, taxiways, apron areas and service roads.

The Proposed Action would improve passenger quality-of-service, enhance efficiency, and alleviate delays on and congestion of on-Airport and surrounding roadways by providing a direct connection to Metro rail and transit systems and a consolidated rental car facility (CONRAC) outside the CTA. Section 2 provides additional information on the Purpose and Need for the Proposed Action.

## ES.2.2 PROPOSED ACTION

LAWA's Proposed Action is comprised of three major ground transportation elements: an Automated People Mover (APM), two Intermodal Transportation Facilities (ITFs), and a CONRAC. The primary components of the Proposed Action include:

- An aerial APM, in a spine-configuration down Center Way inside the CTA.
- Three APM stations within the CTA. One to the west serving Terminals 3 and 4 and the Tom Bradley International Terminal. One APM station would be located in the middle of the CTA, serving Terminals 2, 5, and 6, and one APM station located to the east, serving Terminals 1, 7, and 8.
- An APM alignment outside the CTA that would generally follow W. 96th Street connecting the CONRAC facility, two ITFs, the future Metro LAX/Crenshaw Light Rail Station at/near W. 96th Street and Aviation Boulevard, and the CTA.
- ITF East and ITF West with APM stations, new adjacent and interconnected public parking structures, a commercial vehicle curb, and internal circulation roads.
- A pedestrian walkway to provide access from the ITF East to the proposed Metro AMC 96th Street Transit Station.
- A CONRAC consisting of a customer service building, rental car ready/return parking area, quick turnaround area (QTA), QTA support and additional site functions, and idle storage.

In addition, the following facilities are also proposed to provide support to the primary components:

- APM ancillary facilities:
  - Passenger walkway systems connecting the APM stations to passenger terminals, parking garages, and ground transportation facilities;
  - Modifications to existing passenger terminals and parking garages to support the APM walkway system connections, including vertical circulation (elevators, escalators, and stairs) cores to garage levels and to the arrival, departure, and concourse levels at the terminals;
  - An APM maintenance and storage facility (MSF); and
  - APM power substations.
- Roadway improvements designed to improve access to the proposed facilities and the CTA and reduce traffic congestion in neighboring communities;
- Utilities infrastructure, both new and modified, to support the Proposed Action;

- Land acquisition, subdivision of parcels, creation of new tract maps, and/or other reconfiguration of parcels, dedications and vacations of public rights-of-way, as well as zoning change approvals; and
- Enabling projects to allow construction of the Proposed Action, including utility relocation and demolition of certain existing facilities, some of which would be reconstructed.

**Figure ES-1** provides an overview of the Proposed Action.

The Proposed Action would not affect or change any airfield components, including the runways, taxiways, or aircraft arrival and departure procedures.

### ES.2.3 FEDERAL ACTIONS

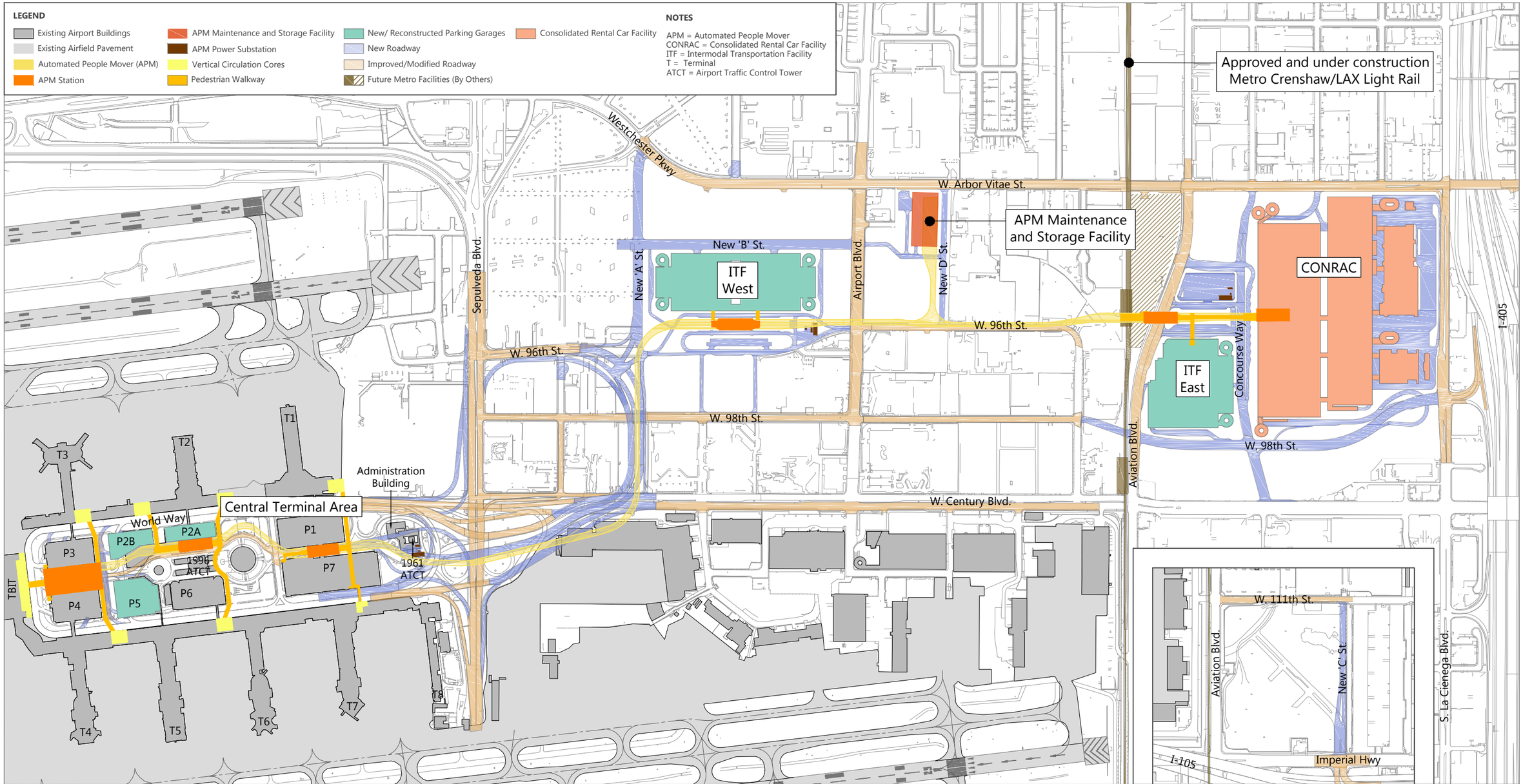
LAWA is requesting the following FAA actions:

- Unconditional approval of the Airport Layout Plan (ALP) depicting the proposed improvements pursuant to 49 U.S.C. §§ 40103(b), 44718 and 47107(a)(16); Title 14, CFR Part 77 (14 CFR 77), *Safe, Efficient Use and Preservation of the Navigable Airspace*; and 14 CFR 157, *Notice of Construction, Alteration, Activation, and Deactivation*;
- Determinations under 49 U.S.C. §§ 47106 and 47107 relating to the eligibility of the Proposed Action for federal funding under the Airport Improvement Program (AIP) and/or under 49 U.S.C. § 40117, as implemented by 14 CFR § 158.25, to impose and use passenger facility charges (PFCs) collected at the Airport for the Proposed Action to assist with construction of potentially eligible development items shown on the ALP;
- A determination under 49 U.S.C. 44502(b) that the Proposed Action is reasonably necessary for use in air commerce or in the interest of national defense; and
- Approval of a construction safety and phasing plan to maintain aviation and airfield safety during construction pursuant to FAA Advisory Circular 150-5370-2F, *Operational Safety on Airports During Construction*, under 14 CFR 139 (49 U.S.C. 44706).

LAWA is also requesting the following Federal Highway Administration (FHWA) actions:

- FHWA Interstate Highway access approval for changes to Interstate 405 ramp access.
- FHWA certification of conformity of the proposed federal actions with the State Implementation Plan (SIP) per the requirements of the Clean Air Act, as amended (40 CFR Part 93) for certain highway components of the Proposed Action.

**[Preliminary Draft for Discussion Purposes Only]**




NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE ES-1**

LAX Landside Access Modernization Program Components

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### ES.2.4 TIMEFRAME OF PROPOSED ACTION

Construction of the Proposed Action would occur in two separate phases. The first phase would include enabling projects, the APM operating system and fixed facilities, the CONRAC, the ITF West, the ITF East, and a portion of roadway improvements. Phase 1 would be constructed over approximately 6 years, beginning in 2018 and finishing in 2024. While most construction of Phase 1 projects would be completed by 2022, system and operational testing of the APM and other facilities would extend into 2023. The second phase would consist of additional roadway elements associated with the W. Century Boulevard and Sepulveda Boulevard entrance and exit ramps into the CTA. Phase 2 construction would begin in 2025 and be completed by 2030.

## ES.3 Alternatives

Section 3.1 provides information related to the planning and design guidelines and recommendations used in developing the alternatives. The potential alternatives to be considered are identified in Section 3.2. The screening process used to determine which alternatives would reasonably satisfy the Purpose and Need, and thus be carried forward for analysis of environmental consequences in this draft EA are described in Sections 3.3 and 3.4, respectively.

### ES.3.1 GENERAL DESCRIPTION OF ALTERNATIVES

Planning alternatives pertaining to the APM alignment were analyzed and are included in **Appendix E** for reference. Section 3 identifies and analyzes three "build" and four "no build" alternatives, summarized below.

#### ES.3.1.1 No Action Alternative

Under the No Action Alternative, none of the improvements and activities proposed for the LAX Landside Access Modernization Program would occur. Therefore, the physical roadway network would be consistent with existing conditions. Without improvements to the roadway network, local traffic conditions would deteriorate with increased passengers expected to occur with or without implementation of the LAX Landside Access Modernization Program. LAX would continue to have one vehicular entrance to the CTA, with no direct connection to the regional Metro system. Access to the proposed and existing Metro facilities would be through bus operations, similar to existing conditions.

#### ES.3.1.2 Use of Alternative Modes of Transportation Alternative

This alternative would involve encouraging more employees and passengers to shift from driving to using transit to access the Airport in order to relieve traffic congestion at LAX. Non-aviation interregional transportation services available to travelers to and from the Los Angeles International Airport include commercial buses and light rail trains with connections via bus routes. Metro is independently working on a connection to the Airport along the Metro Crenshaw/LAX light rail line, which is currently under construction, and Green light rail line. The Metro Crenshaw/LAX and Green light rail line will include two transit stations in close proximity to LAX. Passengers and employees utilizing either of these stations to access LAX would need to transfer to a shuttle bus or walk to the CTA.

### ES.3.1.3 Use of Other Public Airports Alternative

This alternative would use one or more of the nearby airports to accommodate the demand for commercial, cargo, and general aviation operations. Nearby airports include Palm Springs International Airport, Long Beach Airport, Hollywood Burbank (Bob Hope) Airport, Ontario International Airport, John Wayne Airport, and San Diego International Airport. This alternative would shift traffic from LAX to one or more of these other airports to relieve existing traffic congestion at LAX.

### ES.3.1.4 Transportation Demand Management Alternative

This alternative would aim to achieve a greater participation in LAWA's planned Transportation Demand Management (TDM) program with a goal to capture 20 percent of the employees working within the Gateway to LAX Business Improvement District.[2]

### ES.3.1.5 Modified Master Plan Alternative

LAWA proposed multiple transportation facilities including an APM, a ground transportation center, and an intermodal transportation center located outside of the CTA as part of the 2004 LAX Master Plan.[3] The Modified Master Plan Alternative is the same as Alternative D, the preferred Master Plan alternative examined in the Master Plan Environmental Impact Statement (EIS), with the exception of the APM alignment within the CTA and vehicle operations within the CTA, as described below.

#### *Automated People Mover*

The Modified Master Plan Alternative would include a single APM alignment with three stations within the CTA, one at the west end of the APM alignment, one in the center of the CTA, and one just west of the LAWA Administration Building, the same as the Proposed Action Alternative. Outside the CTA, the APM alignment would include two separate, but coordinated routes. One route would connect the proposed Intermodal Transportation Center (ITC) and the CONRAC to the CTA. A second route would connect the proposed Ground Transportation Center (GTC) with the CTA via a route that would be located along the south side of W. Century Boulevard.

#### *Intermodal Transportation Facilities*

The Modified Master Plan Alternative would include two intermodal transportation facilities, the GTC and the ITC. The GTC would be an airport access center for private and most commercial vehicles, and provide private vehicle parking. The GTC would be located in the area commonly referred to as Manchester Square which is bound by W. Arbor Vitae Street to the north, S. La Cienega Boulevard to the east, W. Century Boulevard to the south, and Aviation Boulevard to the west. The ITC would be located at the northeast corner of Imperial Highway and Aviation Boulevard and would serve as the connection point between the Airport, the Metro

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2 The Gateway to LAX Business Improvement District is a group of businesses adjacent to LAX that voluntarily commit to improving the campus along W. Century Boulevard for local residences, employees, visitors and businesses. The Gateway to LAX Business Improvement District includes more than 40 properties and 12.3 million square feet of hotel, office, parking, and restaurant space.

3 City of Los Angeles, Los Angeles World Airports, *LAX Master Plan*, April 2004.

Green Line, and regional bus service. The ITC would also provide parking facilities for the public and large buses. Although Alternative D from the LAX Master Plan included the closure of the CTA to private vehicles, LAWA does not intend to close the CTA to passenger traffic; therefore, the Modified Master Plan Alternative assumes that the CTA would remain open to private and commercial vehicles.

#### *CONRAC Facility*

Under the Modified Master Plan Alternative, the CONRAC would include a customer service building, rental car ready/return parking area, QTA, QTA support and additional site functions, and idle storage located largely where Parking Lot C is located. Vehicle access to the CONRAC would be provided via existing roads from the north, east, and south. Rental car returns would enter on the east side of the garage off Airport Boulevard into the ready/return garage. Customers would exit out the west side of the garage onto W. 96th Street or out of the garage onto Airport Boulevard southbound.

### ES.3.1.6 Modified SPAS Alternative

LAWA completed the Specific Plan Amendment Study (SPAS)[4] in 2013. The SPAS comprehensively addressed potential alternative designs, technologies, and configurations for certain LAX Master Plan projects identified as the "Yellow Light" projects, subject to additional planning and environmental review prior to implementation. The SPAS studied airfield improvements, terminal improvements, and ground access improvements, including alternatives to the GTC and construction of the APM from the GTC to the CTA as envisioned in the LAX Master Plan. Following completion of the SPAS, the Board of Airport Commissioners (BOAC) and the Los Angeles City Council selected the LAWA "Staff Recommended Alternative" as the best alternative to the problems the Yellow Light projects were designed to address, subject to future detailed planning, engineering, and project-level environmental review. The LAX ground access improvements selected for further study as part of the Staff Recommended Alternative included, among other things, development of an ITF, CONRAC, parking outside of the CTA, and an APM linking these new facilities to the CTA and connecting them to the planned Metro facilities. The Modified SPAS Alternative is the same as the Staff Recommended Alternative, with the exception of the APM alignment within the CTA, as described below.

#### *Automated People Mover*

Under the Modified SPAS Alternative, the APM alignment inside the CTA would be the same as the Modified Master Plan and Proposed Action Alternatives. Outside the CTA, the Modified SPAS Alterative includes a single APM alignment connecting the CONRAC and ITF to the CTA via W. 98th Street. The APM alignment would include a bridge over Sepulveda Boulevard and stops at the future Metro LAX/Crenshaw and Green Line Light Rail Station.[5]

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[4] City of Los Angeles, Los Angeles World Airports, *Final LAX Specific Plan Amendment Study Report*, January 2013.

[5] Subsequent to completion of SPAS, Metro conducted an alternatives analysis and determined that a connection to the APM at Century/Aviation was not feasible. See Los Angeles County Metropolitan Transportation Authority, "Metro Green Line to LAX, Alternatives Analysis Report," April 2012.

*Intermodal Transportation Facilities*

The Modified SPAS Alternative would include a new ITF on 14 acres between W. 96th and W. 98th Streets, between Vicksburg Avenue and Airport Boulevard for public parking and remote passenger pick-up/drop-off. In addition, arriving passengers could travel to the ITF to board door-to-door shuttles or scheduled buses. The ITF would include public parking, remote passenger and pick-up/drop-off areas, and indoor waiting areas for passengers and meeter/greeters within a multi-story parking structure.

*CONRAC Facility*

Under the Modified SPAS Alternative, the CONRAC would include a customer service, structured parking facility, QTA, parking spaces for ready/return in the Manchester Square area, similar to the Proposed Action Alternative. The CONRAC would be designed to accommodate the total demand for staging of vehicles in surface parking areas, some longer-term storage of rental car vehicles would be expected to take place at the existing individual rental car operator sites. The Modified SPAS Alternative also assumed that heavy vehicle maintenance would not be accommodated at the CONRAC facility. Therefore, it was assumed that rental car companies would choose to retain all or a portion of their existing sites for vehicle maintenance and storage. Consequently, continued vehicle trip activity would take place between the CONRAC and the existing, individual rental car properties. To accommodate CONRAC access, up to three signalized intersections would be modified.

### ES.3.1.7 Proposed Action Alternative

LAWA conducted additional planning studies after completion of SPAS to refine the landside access elements and address planning challenges, which resulted in the Proposed Action Alternative. This planning effort included coordination with Metro's plans for a more robust connection to the transit network, as well as coordination with the Los Angeles Department of Transportation (LADOT), California Department of Transportation (Caltrans) and Southern California Association of Governments (SCAG) for roadway improvements.

*Automated People Mover*

The Proposed Action Alternative APM alignment inside the CTA would be the same as the Modified Master Plan Alternative and Modified SPAS Alternative. Outside the CTA, the single APM alignment would connect to the CONRAC facility, two ITFs, the future Metro LAX/Crenshaw and Green Line Light Rail Station, and the CTA via W. 96th Street.

*Intermodal Transportation Facilities*

The Proposed Action Alternative includes an ITF West and an ITF East that would function as new gateways to LAX by providing convenient access to the APM system for those traveling to LAX in private or commercial vehicles. Each facility would be designed to include airport amenities, which may include valet parking, waiting areas, commercial amenities such as dining and concession services, baggage check facilities, and ticketing/information kiosks to make these facilities attractive and convenient alternatives to the CTA.

### *CONRAC Facility*

Under the Proposed Action Alternative, the main components of the CONRAC facility would be similar to the Modified SPAS Alternative, with a customer service building, rental car ready/return parking area, QTA, QTA support and additional site functions, and idle storage. New roadways would be constructed to provide access to the CONRAC. All rental car customers would enter the facility at the southwest corner of the Ready/Return garage via new circulation roads. Rental car customers would exit the facility at the northwest corner of the Ready/Return garage, onto an internal circulation road. A signalized intersection at this roadway and W. Arbor Vitae Street would allow rental car customers to make right or left turns onto W. Arbor Vitae Street.

## ES.3.2 SCREENING OF ALTERNATIVES

The screening process utilized to identify feasible alternatives for detailed environmental analysis used a two-step evaluation process. First, each alternative was evaluated to determine whether it would meet the purpose of and need for the Proposed Action. Each alternative found to meet the Step 1 criteria was then evaluated in Step 2 to determine whether or not it would be constructible, considering existing physical and operational constraints, including logistics of maintaining Airport operations during construction.

Each of the alternatives was evaluated against the Step 1 evaluation metrics. If an alternative did not pass all evaluation metrics in that step, it was eliminated from further consideration and not carried forward to Step 2. Similarly, in the Step 2 evaluation, retained alternatives that did not pass evaluation metrics in that step were eliminated. The exception is the No Action Alternative, which is retained pursuant to NEPA as implemented by the CEQ regulations. **Table ES-1** summarizes the results of the alternatives screening evaluation.

**Table ES-1: Summary of Alternatives Screening Evaluation**

| ALTERNATIVE | ALTERNATIVE PASS TO THE NEXT STEP | | RETAINED FOR FURTHER ANALYSIS IN THE DRAFT EA? |
|---|---|---|---|
| | STEP 1 | STEP 2 | |
| No Action Alternative | No | | **Yes** |
| Use of Alternative Modes of Transportation | No | | No |
| Use of Other Public Airports Alternative | No | | No |
| Transportation Demand Management Alternative | No | | No |
| Modified Master Plan Alternative | Yes | No | No |
| Modified SPAS Alternative | Yes | No | No |
| Proposed Action | Yes | Yes | **Yes** |

SOURCE: Ricondo & Associates, Inc., February 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

# ES.4 Affected Environment and Environmental Consequences

Additional information on the Affected Environment and Environmental Consequences is provided in Sections 4 and 5, respectively. The analysis and conclusions by impact category are summarized in **Table ES-2**.

**Table ES-2 (1 of 5): Summary of Environmental Impacts and Mitigation Measures**

| RESOURCE CATEGORY | IMPACT POTENTIAL | JUSTIFICATION | MITIGATION MEASURE |
|---|---|---|---|
| Air Quality | No Significant Impact | The Proposed Action Alternative construction emissions would exceed the $NO_x$ *de minimis* threshold; however, the SCAQMD determined these emissions could be accommodated within the State Implementation Plan budget. Therefore, construction of the Proposed Action Alternative would conform to the SIP and impacts would not be significant when compared to the No Action Alternative. Implementation of the Proposed Action Alternative would decrease emissions for most criteria pollutants when compared to the No Action Alternative. Emissions associated with the Proposed Action Alternative would not exceed the NAAQS threshold, and no significant operational air quality impacts would occur under the Proposed Action Alternative when compared to the No Action Alternative. Operational emissions would not exceed General Conformity *de minimis* thresholds, thus the Proposed Action would conform to the SIP. | |
| Climate | No Significant Impact | Operation of the Proposed Action Alternative would result in a reduction of GHG emissions when compared to the No Action Alternative. Additionally, LAWA standard control measures would be utilized during construction of the Proposed Action Alternative to reduce or avoid GHG emissions. GHG emissions associated with construction of the Proposed Action Alternative would be temporary and would comprise a very small fraction of the U.S. and global GHG emissions. | |
| Department of Transportation Act, Section 4(f) | No Significant Impact | There are no existing or proposed parks, recreational areas, or publicly owned wildlife or waterfowl refuges located within the vicinity of the Proposed Action Alternative. Construction of the Proposed Action Alternative in the vicinity of the Theme Building would avoid any physical disturbance to this structure or any significant historic resource, and therefore would not result in a physical use of a historic resource. New visual elements introduced in the proximity of the Theme Building would not result in a constructive use of the resource. The Proposed Action Alternative would not have a significant impact on Section 4(f) resources when compared to the No Action Alternative. | |

**Table ES-2 (2 of 5): Summary of Environmental Impacts and Mitigation Measures**

| RESOURCE CATEGORY | IMPACT POTENTIAL | JUSTIFICATION | MITIGATION MEASURE |
|---|---|---|---|
| Hazardous Materials, Solid Waste, and Pollution Prevention | No Significant Impact | Construction and operation of the Proposed Action Alternative would not generate an appreciably different quantity or type of solid waste that would exceed local capacity. Construction of the Proposed Action Alternative may interfere with ongoing remediation at three contaminated sites until the RWQCB determines remediation targets have been met and the sites can be closed. If remediation must be interrupted to allow for construction, approval would be obtained from the regulatory agency with jurisdiction. Remediation would be reinstated as soon as practicable following completion of construction in the area. The Proposed Action Alternative would utilize hazardous materials typical for routine operation of transportation and airport-related facilities. Compliance with applicable regulations would ensure potential spills or releases of hazardous materials would not create a hazard to the public or environment and would not result in significant pollution impacts when compared to the No Action Alternative. | |
| Historic, Architectural, Archaeological, and Cultural Resources | No Significant Impact | There are no recorded cultural or archaeological resources within the APE. Through compliance with federal, state, and local regulations, and LAWA's Archaeological Treatment Plan impacts from disturbance of any previously unknown buried archaeological or human remains would not be significant when compared to the No Action Alternative. The Theme Building, historically significant for its unique architectural design, is located in the vicinity of the proposed APM guideway and pedestrian walkway. At their closest points, the APM guideway would be 43 feet and a pedestrian walkway would be 20 feet from the Theme Building. These components of the Proposed Action Alternative would reduce the integrity of the setting of the Theme Building by partially obscuring unique features of the building. FAA determined the APM guideway and passenger walkway would result in an adverse effect to the Theme Building as defined by Section 106 of the NHPA. Implementation of design guidelines would reduce the impact to the Theme Building. The Theme Building would remain eligible for listing in the National Register after implementation of the Proposed Action Alternative. FAA requested concurrence with this determination in a letter to the SHPO dated March 20, 2017. The SHPO concurred on June 28, 2017. | |

**Table ES-2 (3 of 5): Summary of Environmental Impacts and Mitigation Measures**

| RESOURCE CATEGORY | IMPACT POTENTIAL | JUSTIFICATION | MITIGATION MEASURE |
|---|---|---|---|
| Land Use | No Significant Impact | The Proposed Action Alternative is consistent with applicable land use plans, policies, and regulations. Therefore, the Proposed Action Alternative would not result in significant impacts to land use when compared to the No Action Alternative. | |
| Natural Resources and Energy Supply | No Significant Impact | The natural resources and energy supply required for the Proposed Action Alternative are readily available. Measures related to the reduction of energy and water consumption would be incorporated into construction and operation of the Proposed Action Alternative. Installation of new utility infrastructure and relocation of existing utility lines would occur under the Proposed Action Alternative. Service disruptions would be avoided or limited to the shortest amount of time necessary. Rare construction materials are not needed to implement the Proposed Action Alternative. The Proposed Action Alternative would not result in significant impacts to natural resources and energy supply when compared to the No Action Alternative. | |
| Noise and Noise-Compatible Land Use | No Significant Impact | The Proposed Action Alternative would not result in a significant increase in aircraft noise when compared to the No Action Alternative. The Proposed Action Alternative would cause temporary increases in noise from construction equipment, but noise levels would not be significant. The Proposed Action Alternative would not result in significant noise impacts when compared to the No Action Alternative. | |

**Table ES-2 (4 of 5): Summary of Environmental Impacts and Mitigation Measures**

| RESOURCE CATEGORY | IMPACT POTENTIAL | JUSTIFICATION | MITIGATION MEASURE |
|---|---|---|---|
| Socioeconomics (including Surface Transportation/Traffic and Parking), Environmental Justice, and Children's Environmental Health and Safety Risks | No Significant Impact | Existing dwelling units, schools, and resident population in the Belford and Manchester Square areas would be relocated pursuant to LAWA's ANMP Relocation Plan and other existing programs under both the No Action Alternative and the Proposed Action Alternative. Existing rights-of-way within the Manchester Square area would no longer be accessible to the public, including homeless people under both the No Action and Proposed Action Alternatives. However, homeless people would have access to existing City, County, and local programs supporting homeless people. The Proposed Action Alternative would not result in significant impacts on residential or other noise-sensitive land uses; therefore, no disproportionate impacts to minority or low-income populations or children are anticipated. The intersection of La Cienega Boulevard and Arbor Vitae Street would experience a reduction in LOS during the p.m. peak hour (from LOS D to LOS F). However, the local jurisdiction expressed its intent not to widen the intersection due to nearby residential uses. Because the local jurisdiction prefers not to minimize this impact, and when considering operational traffic impacts as a whole, the Proposed Action Alternative would not disrupt local traffic patterns or substantially reduce the levels of service of roads serving LAX and its surrounding communities, no significant surface transportation impact would occur when comparing the Proposed Action Alternative to the No Action Alternative. The Proposed Action Alternative would not cause significant impacts to socioeconomics (including public services and surface transportation), environmental justice, and children's environmental health and safety risk when compared to the No Action Alternative. | |
| Visual Effects | No Significant Impact | The Proposed Action Alternative would conform to the existing highly-built environment and comply with aesthetic-related goals and policies of LAX and local land use plans, and incorporate mechanisms to minimize light spillover. Therefore, the Proposed Action Alternative would not significantly affect the viewshed in the vicinity of the Airport or result in light emissions that would affect nearby land uses when compared to the No Action Alternative. | |

**Table ES-2 (5 of 5): Summary of Environmental Impacts and Mitigation Measures**

| RESOURCE CATEGORY | IMPACT POTENTIAL | JUSTIFICATION | MITIGATION MEASURE |
|---|---|---|---|
| Water Resources | No Significant Impact | No fill or alteration of Waters of the U.S. would occur under the Proposed Action Alternative. The Proposed Action Alternative would not encroach upon a 100-year floodplain. Water contaminants resulting from the Proposed Action Alternative potentially affecting stormwater runoff would be controlled through compliance with the existing NPDES permit, LID requirements, project SWPPPs, and other control measures. The Proposed Action Alternative would be designed and constructed to decrease potential input of chemical nutrients and sediments to existing surface water and groundwater sources. The Proposed Action Alternative would not have significant water resources impacts when compared to the No Action Alternative. | |
| Cumulative Impacts | No Significant Impact | The environmental impacts of the Proposed Action Alternative would not be considered significant when added to the impacts of other past, present, and reasonably foreseeable future actions, when compared to the No Action Alternative. | |

NOTE: ANMP – Aircraft Noise Mitigation Program APE – Area of Potential Effect dBA – A-weighted decibels GHG – greenhouse gas LAWA – Los Angeles World Airports LID – Low Impact Development NAAQS – National Ambient Air Quality Standards NHPA – National Historic Preservation Act $NO_x$ – nitrogen oxides NPDES – National Pollutant Discharge Elimination System RWQCB – Regional Water Quality Control Board SCAQMD – South Coast Air Quality Management District SIP – State Implementation Plan SWPPP – Stormwater Pollution Prevention Plan

SOURCE: Ricondo & Associates, Inc., April 2017
PREPARED BY: Ricondo & Associates, Inc., April 2017.

## ES.5 Agency and Public Consultation

Section 6 provides a description of the consultation process employed throughout the preparation of this EA. Copies of the correspondence received from the agencies and the public are included in **Appendix N**.

# 1. Introduction and Background

This Environmental Assessment (EA) evaluates the effects of a proposed Federal action on the surrounding environment and has been prepared pursuant to the requirements of Section 102(2)(c) of the National Environmental Policy Act of 1969 (NEPA, 42 United States Code [U.S.C.] 4321-4370), the President's Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) §§ 1500-1508, as well as in accordance with Federal Aviation Administration (FAA) Order 1050.1F, *Environmental Impacts: Policies and Procedures*, and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*.[1,2] EAs assist agencies in determining whether potential environmental impacts are significant. As the FAA is the lead agency for this EA, the responsible FAA official uses the EA to meet the requirements of FAA Orders 1050.1F and 5050.4B, and NEPA. The findings of the EA are used as the basis for recommending the issuance of a Finding of No Significant Impact (FONSI) or the preparation of an Environmental Impact Statement (EIS).[3]

This EA identifies the potential environmental impacts related to the proposed development associated with the Landside Access Modernization Program at Los Angeles International Airport (LAX or "the Airport") as explained below. The EA assesses the impact categories required by FAA Orders 1050.1F and 5050.4B in relationship to the Proposed Action and demonstrates how identified impacts can be eliminated or mitigated, and provides the context for public involvement and comment.

This EA also includes a Draft General Conformity Determination for the proposed improvements associated with the Proposed Action. The EA also provides a detailed air quality analysis for purposes of disclosing air quality effects pursuant to NEPA. The anticipated effects of the proposed federal actions to air quality are discussed in Section 5.1 of the EA, and further assessed in the Draft General Conformity Determination (see **Appendix O**) to satisfy the general conformity requirements of the Federal Clean Air Act (CAA). Comments are being sought on the Draft General Conformity Determination, for which the FAA will make a Final General Conformity Determination prior to completing the NEPA process and undertaking the federal actions associated with the Proposed Action.

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1 U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

2 U.S. Department of Transportation, Federal Aviation Administration, Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, effective April 28, 2006.

3 FAA Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, April 2006, paragraph 700.

## 1.1 Background

The City of Los Angeles, through Los Angeles World Airports (LAWA) as owner and operator of LAX, proposes to modernize LAX to improve passenger quality-of-service and to provide world class facilities to its customers as well as to address increasing levels of traffic congestion at and around the Airport. This introductory section of this EA explains the background of the Proposed Action, the role of the FAA as lead Federal agency, regulatory guidance, and the organization of this document. It also briefly describes the functional role of the Airport—its location and size, history, facilities, existing roadways and traffic patterns, and past airport planning efforts.

LAX is the primary airport for the greater Los Angeles area, encompassing approximately 3,800 acres located at the western edge of the City of Los Angeles (see **Figure 1-1**) within a developed, urbanized region consisting of airport, commercial, and residential areas. In addition, the region contains other transportation facilities, including interstate highways and regional rail facilities. To the north of LAX are the communities of Westchester and Playa del Rey in the City of Los Angeles; to the east are the City of Inglewood, City of Hawthorne, and unincorporated areas under the jurisdiction of Los Angeles County; to the south is the City of El Segundo; and to the west is the Pacific Ocean. Regional access to LAX is provided by the San Diego Freeway (Interstate 405 or I-405), which is a north-south freeway located east of LAX, and the Century Freeway (Interstate 105 or I-105), which is an east-west freeway, located south of LAX. Major roadways serving LAX include Century Boulevard, Imperial Highway, Westchester Parkway/W. Arbor Vitae Street, and Lincoln Boulevard/Sepulveda Boulevard (State Route 1).

All of these regional roadways feed into a single point of passenger ground access to the LAX passenger terminals, a series of ramps and elevated structures at Sepulveda Boulevard and W. Century Boulevard, which feeds all traffic into the primary Central Terminal Area (CTA)[4] roadway, World Way.[5] During peak travel times, this access system becomes congested and unreliable, requiring more travel time, and providing a low level of passenger service. Often, vehicles are stopped on the airport roadway system due to congestion and/or because of congestion are forced to travel at speeds substantially slower than the posted speed limit, thus increasing travel time.

LAWA continues to modernize LAX to improve passenger quality-of-service and provide world class facilities for its customers. To further transform LAX into a modern airport and to address increasing levels of traffic congestion at and around LAX, LAWA is working to redevelop the ground access system to the Airport, and provide additional options to enter the CTA, including a seamless connection to the regional rail and transit system.

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[4] The CTA refers to the main passenger access features of the Airport that consists of terminals/concourses and parking encircled by a roadway system.

[5] This includes the Sky Way/W. 96th Street bridge that provides vehicle access over Sepulveda Boulevard to World Way, just east of Terminal 1 at the entrance to the CTA.

[Preliminary Draft for Discussion Purposes Only]


SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
National Geographic World Map, ESRI Database, 2011.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

**FIGURE 1-1**

## General Location and Vicinity Map

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The shortcomings of the current LAX landside access system, especially the reliance on a sole point of entry for transit, private vehicles, taxis, shuttles, and all other vehicles, have long been identified by LAWA.[6] To address congestion issues and to provide multiple access options, LAWA, through its 2004 Master Plan, proposed multiple transportation facilities including an Automated People Mover (APM), a ground transportation center, and an intermodal transportation center located outside of the CTA.[7]

In 2004, LAWA completed its master plan, which was the subject of a NEPA EIS. In its 2005 Record of Decision (ROD) on that EIS, the FAA approved the ground transportation improvements as described in the 2004 LAX Master Plan and as depicted on the LAX Airport Layout Plan (ALP) also approved for signature in connection with the ROD.[8] The ROD is now over 10 years old. During this period, LAWA's understanding of the needs for ground access to the CTA has evolved based on new information regarding transit access opportunities, shifting ground access modes and trends (including the introduction of Transportation Network Companies or "TNCs" [such as Uber and Lyft] as a new surface transportation category), street network traffic conditions, security and safety needs, practical construction and operational constraints, and other factors. As a result, LAWA updated the ground access elements included in the LAX Master Plan to reflect these new conditions in the proposed LAX Landside Access Modernization Program. Because the proposed LAX Landside Access Modernization Program differs from the project evaluated in the 2004 LAX Master Plan and the associated Final Environmental Impact Statement/Final Environmental Impact Report, a current evaluation of the Proposed Action is needed and is being analyzed in this EA.

In 2016, LAX handled 697,138 aircraft landings and takeoffs and 80.9 million passengers, making it the second busiest airport in the United States, and the fourth busiest in the world.[9] Today, the passenger experience for those arriving at or departing from LAX is often compromised by reliance on a single mode of access subject to congestion in LAX's CTA and on nearby connecting streets. Driving into the CTA via W. Century Boulevard, Sepulveda Boulevard, or the Sky Way/W. 96th Street bridge is the only non-pedestrian means for origin-destination passengers wishing to access the terminals and gates that support air travel to/from LAX. As further described below, this single option for all ground vehicles (including transit, private vehicles, taxis, TNCs, limousines, and shuttles) for passengers to enter the CTA currently results in more time spent in traffic, uncertain travel times, more passenger hours traveled, congestion and delay in the CTA, as well as back-ups onto the surrounding local and regional roadway network. Drivers often recirculate on the airport roadway system rather than park as they wait for an arriving passenger, thus incurring added vehicle miles traveled.

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6 Airports are generally divided into landside and airside areas. Landside areas are accessible to the public and include roadway networks, parking lots, rental car operations, and public transportation facilities. Airside areas are restricted areas with access only to authorized personnel and ticketed passengers that have undergone security screening; airside areas include passenger handling facilities, runways, taxiways, apron areas and service roads.

7 City of Los Angeles, Los Angeles World Airports, *LAX Master Plan*, April 2004.

8 U.S. Department of Transportation, Federal Aviation Administration, *Record of Decision, Proposed LAX Master Plan Improvements,* May 20, 2005, Available: http://www.faa.gov/airports/environmental/records_decision/lax/#lax05, accessed August 25, 2016.

9 Los Angeles World Airports, "Traffic Comparison (TCOM) Los Angeles International Airport, Calendar YTD January to December 2016," January 25, 2017, Available: http://www.lawa.org/uploadedfiles/LAX/statistics/tcom-1216.pdf.

Some of the challenges users of LAX currently experience include:

- Uncertain and long vehicle travel times;
- Excess Vehicle Hours Traveled to access terminals;
- Heavy traffic congestion during peak hours;
- Buses, shuttles, and cars competing for limited space;
- No alternative option for ground access into the CTA; and
- Passengers stuck in crowded and uncomfortable conditions along a narrow curb awaiting the various transportation options.

These challenges are discussed in detail in Section 2, *Purpose and Need*.

## 1.2 Description of the Proposed Action

### 1.2.1 MAJOR PROJECT COMPONENTS

As part of the overall modernization of LAX, LAWA proposes to implement the LAX Landside Access Modernization Program (the Proposed Action) to continue to advance and transform LAX's access system. The Proposed Action includes several individual components that collectively would improve overall access to and from LAX as well as the efficiency of the existing surface transportation infrastructure. Key components of this Program include:

- an Automated People Mover (APM) system,
- Intermodal Transportation Facilities (ITFs),
- a Consolidated Rental Car Facility (CONRAC),
- pedestrian walkway connections to the passenger terminals within the CTA, and
- roadway improvements.

In addition, LAWA plans to establish and enhance programs to encourage Airport and other employees to use alternative means of transportation.

Metro is independently working on a connection to the Airport along the Metro Crenshaw/LAX light rail line at their proposed Airport Metro Connector (AMC) 96th Street Transit Station to be located at Aviation Boulevard and W. 96th Street, about 1.5 miles east of the entry to the CTA. LAWA proposes to provide a direct connection from the APM to Metro's station at W. 96th Street, allowing passengers to seamlessly transition between the airport APM and the Metro transit system. Metro released a Final Environmental

Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) assessing the potential environmental effects of the proposed AMC 96th Street Transit Station in November 2016,[10] which was certified in December 2016. Separate documentation will be prepared for Federal Transit Administration compliance with NEPA for the proposed station. Because Metro plans to construct this transit station whether or not the proposed LAX Landside Access Modernization Program is approved and/or constructed, FTA considers it to be an independent project; as such it is not evaluated as part of the proposed action in this EA.

Upon implementation of the Proposed Action, the APM system would offer passengers an opportunity to bypass the existing roadway loop in the CTA. Departing passengers would be able to access the APM system from the ITFs, the CONRAC, or Metro's proposed AMC 96th Street Transit Station. These facilities would serve as new points of access to LAX, catering to all types of Airport passengers and users. The process would be seamless for arriving passengers as well. Arriving passengers would be able to pick-up their baggage, board the APM system, and be quickly and efficiently conveyed to locations outside the CTA, such as to the ITFs, CONRAC, or AMC 96th Street Transit Station.

Public access into the CTA under the Proposed Action would continue to function the way it does today with the addition of the APM option. The purpose of the APM system is to reduce the number of commercial and private vehicles within the CTA. The APM, in combination with the ITFs, CONRAC, and Metro's proposed AMC 96th Street Transit Station, would add new options to access the CTA without having to drive through it or ride on a shuttle, bus or other road vehicle. This would result in improved traffic flows on CTA and surrounding roadways, as well as fewer vehicle miles traveled and vehicle hours traveled. The APM system would provide passengers several different options to access LAX and would give LAWA the ability to implement pricing strategies, policies, and procedures that would result in a reduced number of vehicles in the CTA. The proposed APM would consist of a fixed guideway transportation system that would provide free access to the CTA for passengers, employees, and other users of LAX, 24 hours a day. Constructed completely above grade, the APM would connect to the passenger terminals in the CTA through a pedestrian walkway system located above the existing roads and curb areas in the CTA.

**Figure 1-2** provides an illustration of the elements associated with the Proposed Action. A description of the location of each project component is provided in **Table 1-1**. Additionally, after construction of the Proposed Action is complete, some land owned by LAWA located adjacent to the new proposed ground transportation facilities that are needed for construction staging and laydown would be available for future development. However, as LAWA has no definitive plans for these areas, development of these parcels is not part of the Proposed Action.

[10] Los Angeles County Metropolitan Transportation Authority (Metro), *Airport Metro Connector 96th Street Transit Station, Final Environmental Impact Report*, November 2016.

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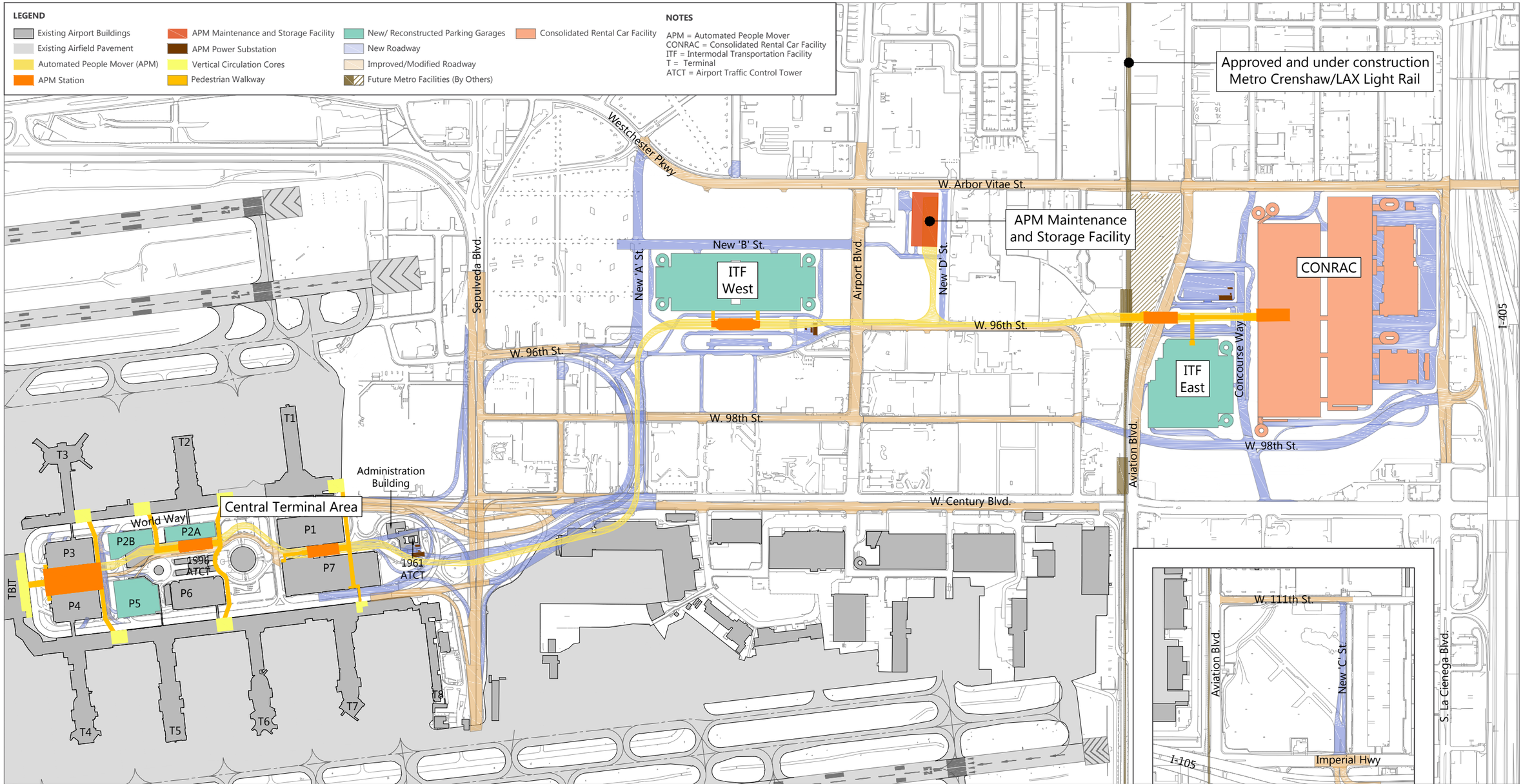
**[Preliminary Draft for Discussion Purposes Only]**




NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 1-2**

LAX Landside Access Modernization Program Components

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**Table 1-1 (1 of 2): Project Component Location**

| PROJECT COMPONENT | GENERAL LOCATION | APPROXIMATE SIZE |
|---|---|---|
| APM System | | 25 acres |
| APM Guideway | The APM guideway would begin on the western end of the CTA, directly east of the Tom Bradley International Terminal (TBIT). The guideway would extend east along the northern part of Center Way for approximately half a mile to a point just west of the Clifton A. Moore Administration Building (1 World Way), where the APM guideway would turn slightly to the south, cross S. Sepulveda Boulevard, and then turn slightly north to Century Boulevard. At Century Boulevard, the APM guideway would continue north perpendicular to Century Boulevard along New 'A' Street for a quarter of a mile. The alignment would then turn east along W. 96th Street for approximately 1 mile until reaching the eastern terminus at the CONRAC. The APM guideway would be grade-separated with an elevation varying between approximately 70 feet above grade within the CTA, to approximately 50 feet above grade near the ITF East and CONRAC. | 2.25 miles |
| APM Stations | Six stations would be located along the APM guideway: three within the CTA and three outside of the CTA.<br>• The West CTA APM Station would be located at the western terminus of the APM guideway, situated between Parking Garages P3 and P4, approximately 150 feet east of TBIT.<br>• The Center CTA APM Station would be located along the APM guideway approximately 670 feet to the northeast of the West CTA station. This station would be located directly south of and adjacent to Parking Garage P2A, and 120 feet north of the 1996 Airport Traffic Control Tower.<br>• The East CTA APM Station would be located on the eastern end of the CTA, between Parking Garages P1 and P7, perpendicular to and approximately 240 feet east of East Way.<br>• The ITF West APM Station would be located approximately 750 feet directly west of the W. 96th Street/Airport Boulevard intersection and approximately 680 feet north of W. 98th Street.<br>• The ITF East APM station would be elevated above Aviation Boulevard, located approximately 1,000 feet south of W. Arbor Vitae Street and approximately 1,500 feet north of W. Century Boulevard. Metro's proposed AMC 96th Street Transit station would be located west of Aviation Boulevard, but would connect via vertical circulation to the ITF East APM station.<br>• The CONRAC APM Station would be the eastern terminus of the APM guideway, located approximately 630 feet directly east of the ITF East APM station.<br>Pedestrian walkways would connect the CTA APM stations to the terminals and parking garages via vertical cores. | 3.8 acres |
| APM Maintenance and Storage Facility | The APM Maintenance and Storage Facility (MSF) would be located on the south side of W. Arbor Vitae Street, approximately 300 feet east of Airport Boulevard. | 7.3 acres |

**Table 1-1 (2 of 2): Project Component Location**

| PROJECT COMPONENT | GENERAL LOCATION | APPROXIMATE SIZE |
|---|---|---|
| APM Power Substations | Three or more traction power substations (TPSS) would provide power to the APM guideway. These facilities would be generally located on the eastern end of the CTA, adjacent to the ITF West, and adjacent to the ITF East:<br>• The CTA TPSS would be located adjacent to World Way, approximately 90 feet south of the 1961 Airport Traffic Control Tower.<br>• The ITF West TPSS would be located directly west of the W. 96th Street/Airport Boulevard intersection, approximately 270 feet west of Airport Boulevard and 640 feet north of W. 98th Street.<br>• The ITF East/CONRAC TPSS would be located north of the APM guideway, between the ITF East APM station and the CONRAC APM Station. The facility would be located approximately 380 feet east of Aviation Boulevard and approximately 860 feet south of W. Arbor Vitae Street.<br>• A fourth TPSS, if needed, could be located adjacent to the APM Maintenance and Storage Facility. | 1 acre |
| ITF West | The ITF West facility would be located generally in the area bound by W. 96th Street to the south, Airport Boulevard to the east, New B Street to the north, and New A Street to the west. Specifically, the ITF West would be located approximately 830 feet north of W. 98th Street, approximately 300 feet west of Airport Boulevard, and approximately 530 feet south of Westchester Parkway/W. Arbor Vitae Street. | 33 acres |
| ITF East | The ITF East facility would be located generally east of and adjacent to Aviation Boulevard between W. 96th and W. 98th Streets. The ITF East would be located approximately 630 feet north of W. Century Boulevard. | 22 acres |
| CONRAC Facility | The CONRAC would be located in the area west of La Cienega Boulevard, north of W. Century Boulevard, east of Aviation Boulevard and south of W. Arbor Vitae Street. | 69 acres |
| Roadway Improvements | A series of roadway improvements would occur generally in the areas of:<br>• West Way and Center Way within the CTA;<br>• S. Sepulveda Boulevard and W. Century Boulevard, just east of the CTA;<br>• East of the CTA, bound generally by W. Century Boulevard to the south, S. Sepulveda Boulevard to the west, the I-405 to the east and Westchester Parkway/W. Arbor Vitae Street to the north; and<br>• Aviation Boulevard and Imperial Highway, bound generally by W. 111th Street on the north, Hindry Avenue on the east, Imperial Highway on the south, and Aviation Boulevard on the west.<br>See Section 1.2.2 for a detailed description of each roadway improvement. | 6.5 miles |

SOURCE: MapLAX, *Los Angeles International Airport Landside Access Modernization Program, Program Brief,* January 2016; MapLAX, July 2016; Ricondo & Associates, Inc., July 2016.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

### 1.2.2 ROADWAY IMPROVEMENTS

Improvements to roadways serving the CTA and the new proposed ITFs and CONRAC are another component of the Proposed Action. The proposed roadway improvements are designed to reduce congestion and enable passengers to more efficiently access LAX, provide direct connections from the local highways to the CONRAC and ITF East, and reduce traffic impacts to local communities.

A summary of new roadways and roadway improvements included as part of the Proposed Action is included in **Table 1-2**. **Figure 1-3** illustrates roadway improvements for areas in and around the CTA. As part of the improvements to roadway segments providing access into the CTA, LAWA may install security checkpoints. Roadway improvements in the area east of the CTA are shown on **Figure 1-4**. Roadway improvements would also occur in the southeast corner of the Airport area, the Imperial Highway/Aviation Boulevard intersection area, as shown on **Figure 1-5**.

In addition, LAWA has incorporated several project design features to avoid and minimize traffic impacts on area roadways in the surrounding jurisdictions. These project design features are identified in **Appendix A**.

### 1.2.3 ENABLING PROJECTS

Before construction can begin on the key components of the Program, a number of facilities must be either relocated or new facilities completed. **Appendix A** provides an overview of the facilities affected by the Proposed Action, including the name, size, and disposition of each facility. These actions are the enabling projects, which are part of the Proposed Action and their environmental impacts are considered in this EA.

## 1.3 Timeframe of the Proposed Action

Construction of the Proposed Action is contingent on project approvals, including the outcome of this NEPA process. Construction of the Proposed Action would occur in two separate phases. The first phase would be constructed over approximately 6 years, beginning in 2018 and finishing in 2024. While most construction of the Phase 1 Project would be completed by 2022, system and operational testing of the APM and other facilities would extend into 2023. The second phase of construction would begin in 2025 and be completed by 2030. In order to meet schedule constraints, multiple Project components may be under construction concurrently. The general sequence of construction developed for analysis in this EA represents the best available information, but is subject to change during the design process.

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**Table 1-2 (1 of 3): Roadway Improvements**

| MAP KEY ID | ROADWAY SEGMENT | DESCRIPTION |
|---|---|---|
| 1 | West Way Relocation | Relocation of West Way 200 feet to the west |
| 2 | Improvements to Center Way | Shifting of some portions to allow construction of the APM |
| 3 | Sky Way/W. 96th Street Bridge Demolition | Closure and demolition of the Sky Way/W. 96th Street Bridge |
| 4 | Recirculation Ramps Demolition | Demolition of arrivals and departures levels recirculation ramps on the east end of the CTA |
| 5 | Demolition of W. Century Boulevard Eastbound Ramp | Demolition of the ramp from southbound Sepulveda Boulevard to eastbound W. Century Boulevard |
| 6 | New Ramps Arrivals and Departures from Southbound Sepulveda Boulevard | New ramps from southbound Sepulveda Boulevard to both the arrivals and departures level to replace the existing Sky Way Bridge |
| 7 | Demolition of W. Century Boulevard eastbound ramp | Removal of W. Century Boulevard between Sepulveda Boulevard and Sky Way to allow for southbound Sepulveda Boulevard ramps |
| 8 | Shift of Southbound Sepulveda Boulevard Lanes to the West | Shifting the southbound lanes of Sepulveda Boulevard between W. Century Boulevard and W. 96th Street by approximately 42 feet to the west |
| 9 | Demolition of Sepulveda Northbound Ramp | Demolition of the ramp from northbound Sepulveda Boulevard to westbound W. Century Boulevard/World Way |
| 10 | Vicksburg Avenue Cul-de-Sac | Vicksburg Avenue south of W. 96th Street would be closed and converted to a cul-de-sac |
| 11 | W. 96th Street Improvements | Reconfiguration of W. 96th Street between Sepulveda Boulevard and New 'A' Street to provide access to the ITF West |
| 12 | New Ramps to Connect to/from Century Boulevard | New ramps connecting W. 96th Street to the departures and arrivals levels of World Way |
| 13 | New Ramps to Arrivals and Departures from Century Boulevard to World Way | New ramps would be constructed from the W. Century Boulevard bridges to both the arrivals and departures levels |
| 14 | New Ramps from Arrivals and Departures to Southbound Sepulveda Boulevard | New ramps connecting the arrivals and departures levels to southbound Sepulveda Boulevard |
| 15 | New Ramps from Arrivals and Departures from World Way to Century Boulevard | New ramps from both the arrivals and departures levels to W. Century Boulevard |
| 16 | New Ramp from Northbound Sepulveda Boulevard to Eastbound W. Century Boulevard | A new ramp from northbound Sepulveda Boulevard to eastbound W. Century Boulevard |
| 17 | New Southbound Loop to Century Boulevard/World Way | A new roadway loop connecting northbound Sepulveda Boulevard to the elevated arrivals and departures ramps above New 'A' Street |

**Table 1-2 (2 of 3): Roadway Improvements**

| MAP KEY ID | ROADWAY SEGMENT | DESCRIPTION |
|---|---|---|
| 18 | New 'A' Street | A new roadway located between Century Boulevard and Westchester Parkway, parallel to Sepulveda Boulevard. This north-south roadway would consist of six lanes aerial on two viaducts and two southbound lanes at-grade. |
| 19 | New Intersection at 'A' Street and W. 96th Street | Addition of New 'A' Street and reconfiguration of W. 96th Street would result in a new intersection and new traffic pattern |
| 20 | W. 96th Street Closure | Closure and demolition of W. 96th Street between just east of Vicksburg Avenue and Airport Boulevard |
| 21 | Jenny Avenue Cul-de-Sac | Jenny Avenue north of Westchester Parkway would be closed and converted to a cul-de-sac |
| 22 | Demolition of Jenny Avenue | Closure and demolition of Jenny Avenue between Westchester Parkway and W. 96th Street |
| 23 | New 'B' Street | A new 4-lane roadway providing a connection between New 'A' Street and Airport Boulevard |
| 24 | New Access Roadways to ITF West | Three one-way, one-lane roadways would provide access to ITF West |
| 25 | W. 98th Street Improvements | Widen the existing roadway between New 'A' Street and Airport Boulevard to provide two lanes in each direction |
| 26 | Airport Boulevard Improvements | Widen the existing roadway between W. Arbor Vitae Street and W. 98th Street to provide an additional lane in each direction |
| 27 | New 'D' Street | A new 2-lane roadway located between W. 96th Street and W. Arbor Vitae Street |
| 28 | Demolition of Belford Avenue | Closure and demolition of Belford Avenue |
| 29 | W. 96th Street Improvements | Widening and restriping of the roadway between Airport Boulevard and Bellanca Avenue to maintain one lane in each direction and parking |
| 30 | W. Century Boulevard Improvements | Widen the roadway by 25 feet to the south to provide an additional eastbound lane between New 'A' Street and Aviation Boulevard |
| 31 | W. 98th Street Extension | Would provide through access of 98th Street between Aviation Boulevard and Bellanca Avenue |
| 32 | Aviation Boulevard Improvements | Widen the roadway between W. Century Boulevard and W. Arbor Vitae Street in order to provide an additional lane in each direction |
| 33 | New 98th Street Segment | A new roadway located between Aviation Boulevard and S. La Cienega Boulevard, parallel to W. Century Boulevard. This east-west roadway would consist of two lanes in each direction. |

**Table 1-2 (3 of 3): Roadway Improvements**

| MAP KEY ID | ROADWAY SEGMENT | DESCRIPTION |
|---|---|---|
| 34 | Extended Concourse Way | A new roadway located between W. Century Boulevard and W. Arbor Vitae Street, parallel to S. La Cienega Boulevard. This north-south roadway would consist of two lanes in each direction. |
| 35 | Demolition of Secondary Roadways in Manchester Square | Closure and demolition of secondary roadways within Manchester Square |
| 36 | W. 98th Street Underpass | An underpass beneath W. 98th Street to provide an entrance into the CONRAC for eastbound traffic |
| 37 | S. La Cienega Boulevard Improvements | Widen the roadway to provide an additional lane in each direction between W. 98th Street and W. Arbor Vitae Street |
| 38 | I-405 Off-Ramp Improvements | Widen the existing off-ramp to provide two additional lanes to allow traffic to flow across S. La Cienega Boulevard and onto the new W. 98th Street segment and to the CONRAC entrance |
| 39 | W. Arbor Vitae Street Improvements | Widen the roadway between Aviation Boulevard and S. La Cienega Boulevard in order to provide an additional lane in each direction |
| 40 | New Access Roadways to the ITF East | Three access drives would provide a connection from Aviation Boulevard to the ITF East |
| 41 | W. 111th Street Improvements | Widening of W. 111th Street on the south side between Aviation Boulevard and New 'C' Street to provide an additional lane in each direction and turn lanes |
| 42 | New 'C' Street | A new roadway located between Imperial Highway and W. 111th Street, parallel to Aviation Boulevard. This north-south roadway would consist of two lanes in each direction. |
| 43 | I-105 Ramp Improvements | Improvements to allow dual left turn lanes, a through lane to the New 'C' Street, and a shared through-right turn lane |

SOURCE: MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., July 2016.

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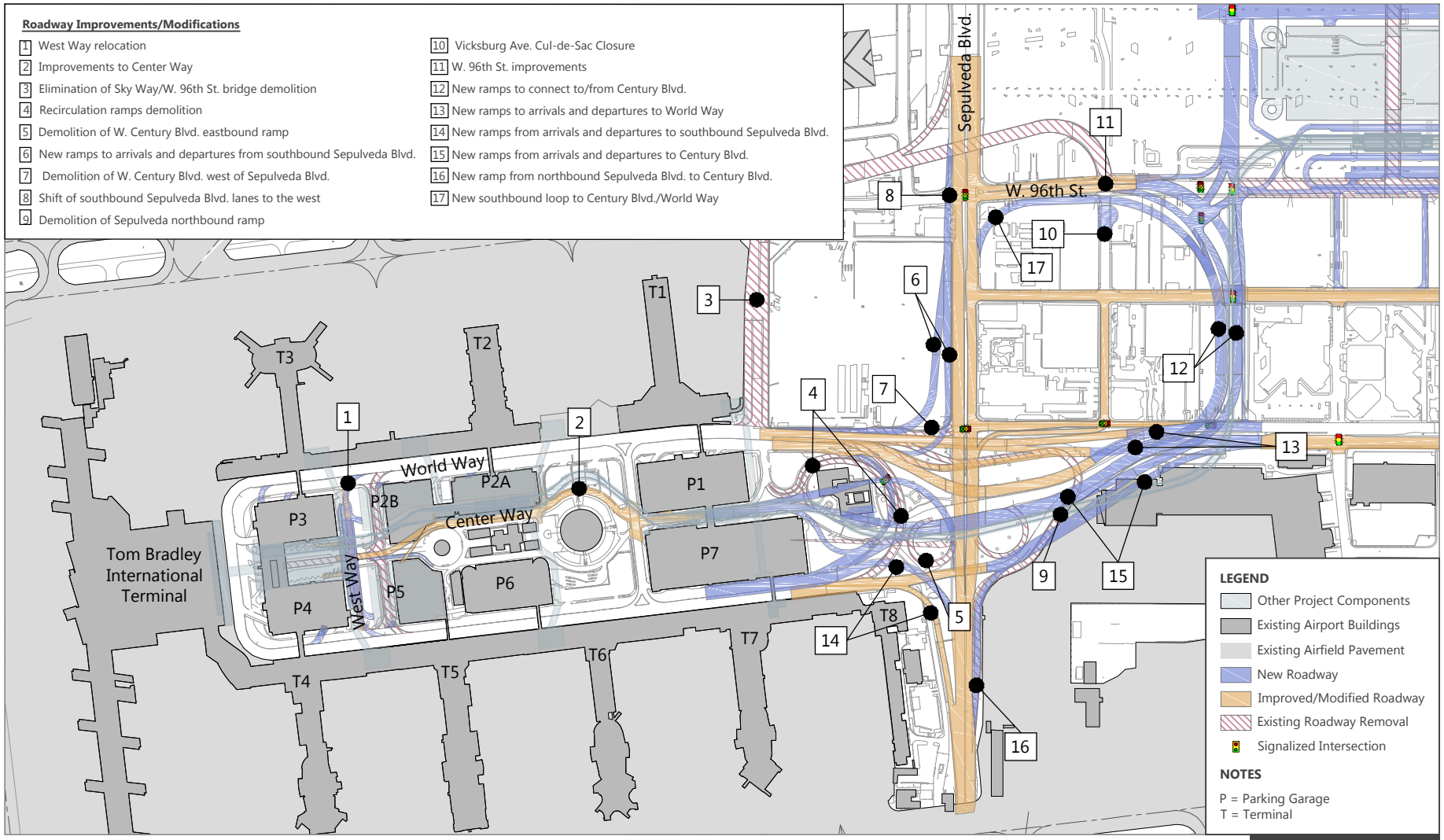


NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 1-3**

## Roadway Improvements
## Central Terminal Area

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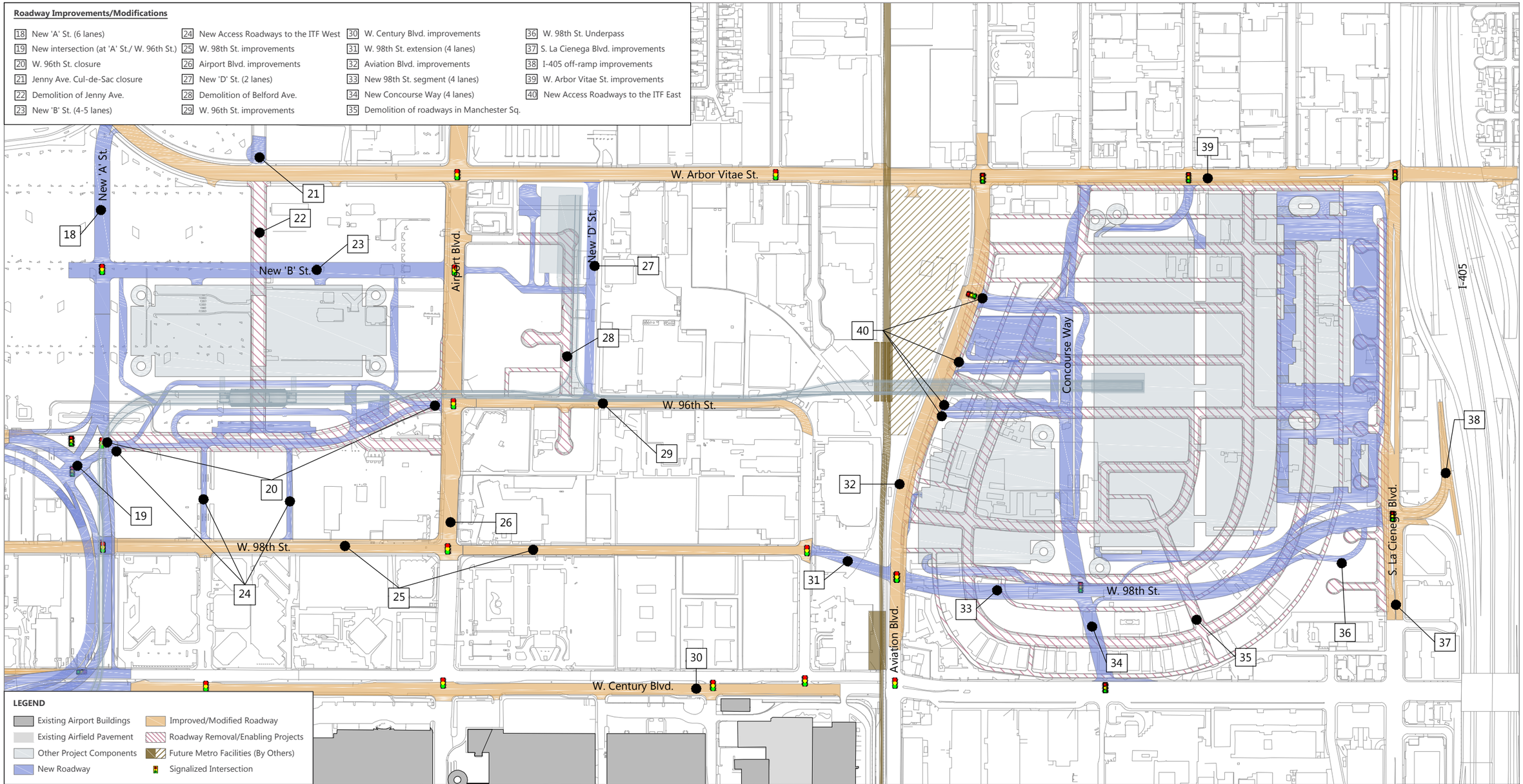


NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 1-4**

Roadway Improvements
East of Central Terminal Area

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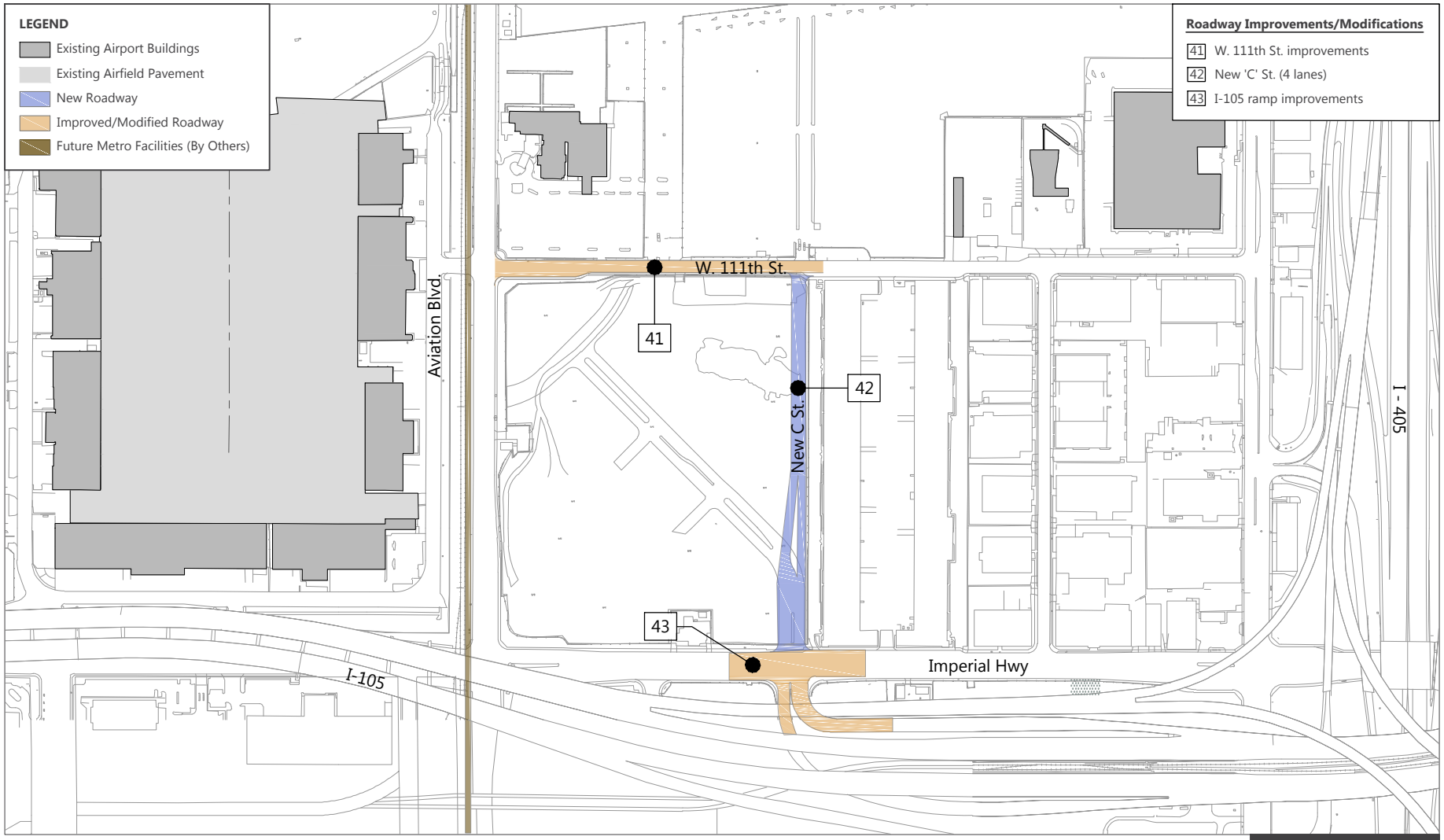
**[Preliminary Draft for Discussion Purposes Only]**




NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

NORTH 0 300 ft.

**FIGURE 1-5**

## Roadway Improvements
## Imperial Highway/Aviation Boulevard Intersection Area

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### 1.3.1 PHASE 1

The first phase would include enabling projects and the construction of the APM operating system and fixed facilities, the CONRAC, the ITF West, the ITF East, and a portion of roadway improvements (see **Figure 1-6**). As previously discussed, these elements would be constructed over approximately 6 years, beginning in 2018 and finishing in 2024. The projected construction schedule for Phase 1 components of the Proposed Action is shown on **Table 1-3**. Further information for each facility is discussed below.

- The initial stages of construction would focus on enabling projects, including CTA parking garage reconstruction, property acquisition, and utility relocation.
- Facilities to be constructed as part of the ITF West in 2018 and 2019 include the western portion of the public parking garage, the ITF West APM Station, adjacent APM power substation, and internal circulation roadways.
- Construction of the APM would begin in approximately 2018 and conclude in approximately 2022. Construction during this timeframe would include the APM operating system and fixed facilities, consisting of the APM guideway, the three CTA APM stations, passenger walkways, traction power substations, and the APM Maintenance and Storage Facility. The APM stations associated with the ITFs and CONRAC would be constructed in conjunction with those facilities. Construction of the APM would also include the necessary enabling projects and roadway modifications necessary for the construction of the APM guideway.
- Construction of the CONRAC would occur simultaneously with the APM, beginning in approximately 2019 and concluding in approximately 2022. Facilities to be constructed in this timeframe include the CONRAC facility, CONRAC APM Station, and internal circulation roadways. Concurrent construction of the CONRAC and APM would provide for both facilities to come online at the same time, thus eliminating the need for short-term operations of shuttle buses between facility opening dates.
- The ITF East would be constructed during the first phase of the Project, estimated to begin in approximately 2019 and conclude by end of 2023. Facilities to be constructed in this timeframe include the ITF East public parking garage, the ITF East APM Station, adjacent APM power substation, and internal circulation roadways.
- The 6-level eastern section of the public parking garage at the ITF West would begin construction in approximately 2022 and be completed by the end of approximately 2023/beginning of 2024.

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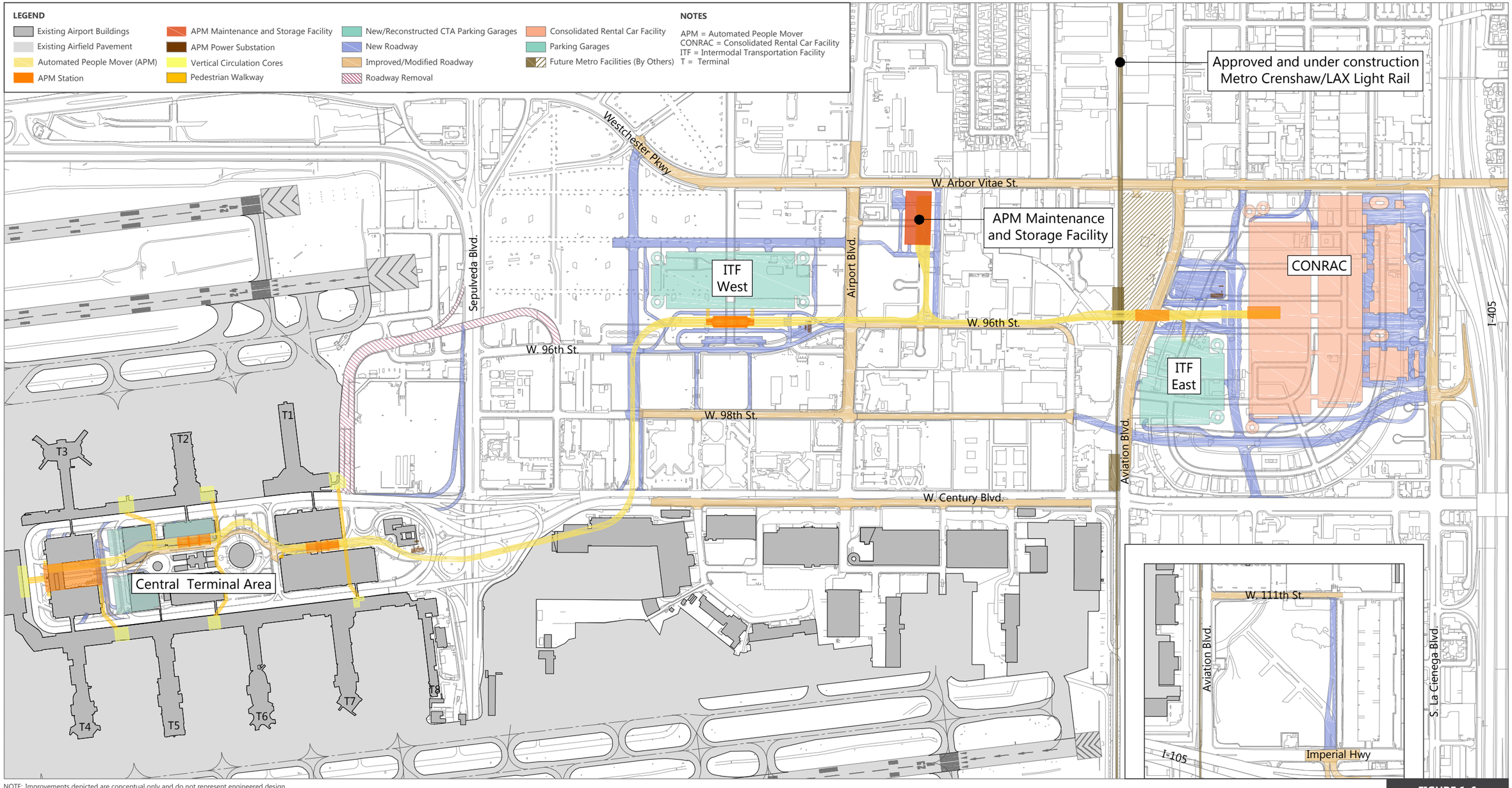


NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 1-6**

LAX Landside Access Modernization Program Components
Phase 1 (2024)

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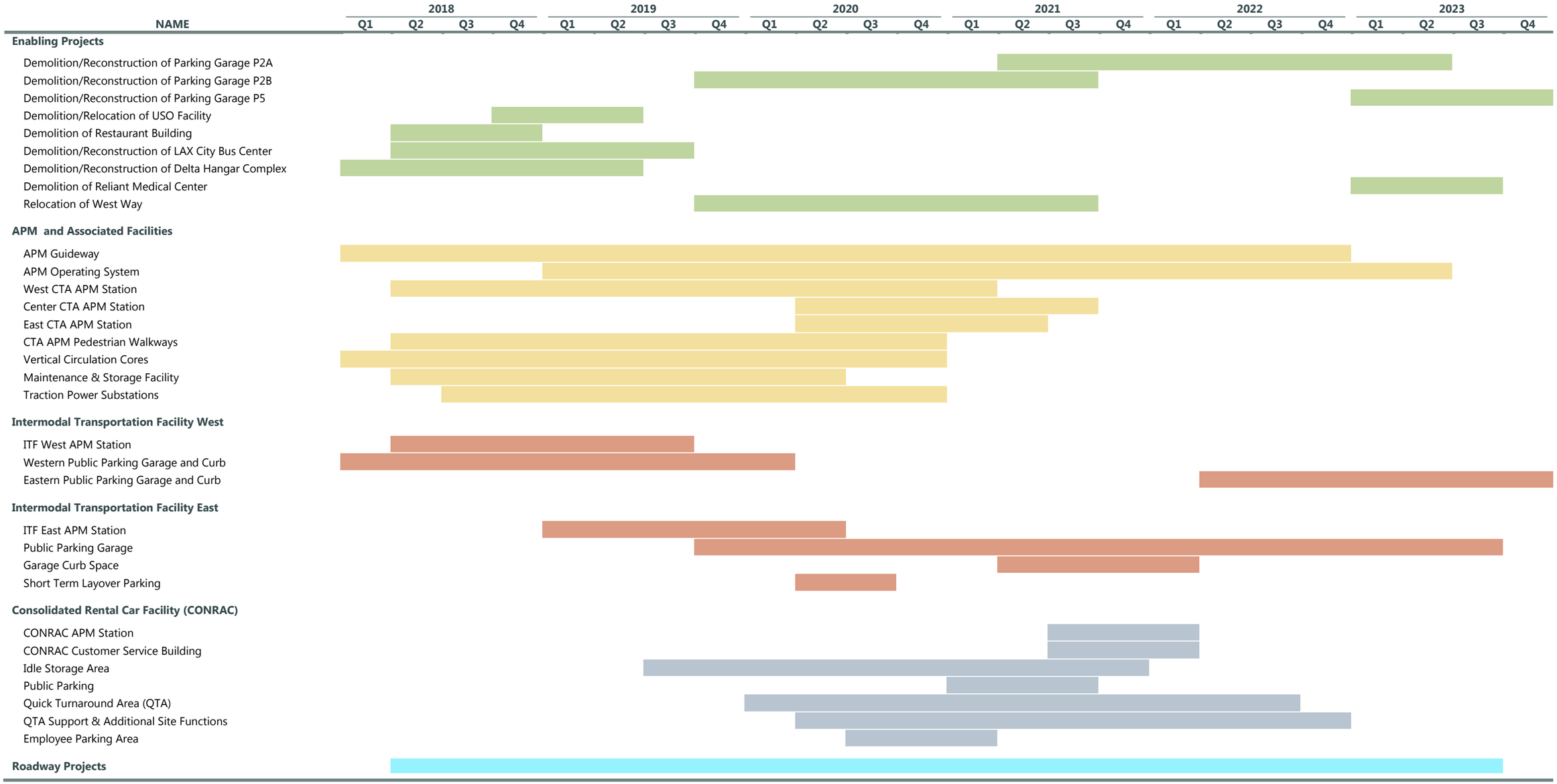
## Table 1-3: Construction Phasing




SOURCE: Connico, June 2016.
PREPARED BY: Ricondo & Associates, Inc., February 2016.

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- Roadway improvements constructed during the first phase of the Project would include:
  - New 'A' Street (W. Century Boulevard to Westchester Parkway/W. Arbor Vitae Street)
  - New 'B' Street (New 'A' Street to Airport Boulevard)
  - W. 96th Street (Airport Boulevard to Bellanca Avenue)
  - New 'D' Street (W. 96th Street to W. Arbor Vitae Street)
  - W. Arbor Vitae Street (Aviation Boulevard to S. La Cienega Boulevard)
  - Aviation Boulevard (W. Century Boulevard to W. Arbor Vitae Street)
  - S. La Cienega Boulevard (W. 98th Street to W. Arbor Vitae Street)
  - New W. 98th Street Segment (Aviation Boulevard to S. La Cienega Boulevard)
  - Extended Concourse Way (W. Century Boulevard to Arbor Vitae Street)
  - Southbound S. Sepulveda Boulevard to World Way (departures and arrivals) Ramps
  - Airport Boulevard (W. 98th Street to W. Arbor Vitae Street)
  - W. 98th Street (Airport Boulevard to Aviation Boulevard)
  - W. Century Boulevard (New 'A' Street to Aviation Boulevard)
  - S. La Cienega Boulevard/I-405 On- and Off-Ramps
  - New 'C' Street (Imperial Highway to W. 111th Street)

The Proposed Action would require changes to the configuration and use of existing parcels owned by LAWA where the Project components are proposed to be constructed. These changes would create new parcels owned by LAWA that would be needed for construction laydown and staging areas during construction of the Proposed Action in Phase 1.

### 1.3.2 PHASE 2

Phase 2 of the Proposed Action is not planned for implementation until 2025 and would be completed by approximately 2030. Phase 2 consists of additional roadway elements associated with the W. Century Boulevard and Sepulveda Boulevard entrance and exit ramps into the CTA; LAWA would not implement these improvements until after the APM is operational (see **Figure 1-7**).

Roadway improvements constructed during the second phase of the Proposed Action would include:

- S. Sepulveda Boulevard (north of LAX Airport Tunnel to W. 96th Street)
- Northbound S. Sepulveda Boulevard to eastbound W. Century Boulevard Ramp
- Westbound W. Century Boulevard (New 'A' Street to World Way)
- Westbound W. Century Boulevard Viaduct to World Way
- Eastbound World Way (Arrivals) to southbound S. Sepulveda Boulevard Ramp
- Eastbound World Way (Departures) to southbound S. Sepulveda Boulevard Ramp (join existing ramp)
- Eastbound World Way (Arrivals & Departures) to eastbound W. Century Boulevard and to northbound New 'A' Street
- Eastbound World Way (Departures) to northbound S. Sepulveda Boulevard Ramp

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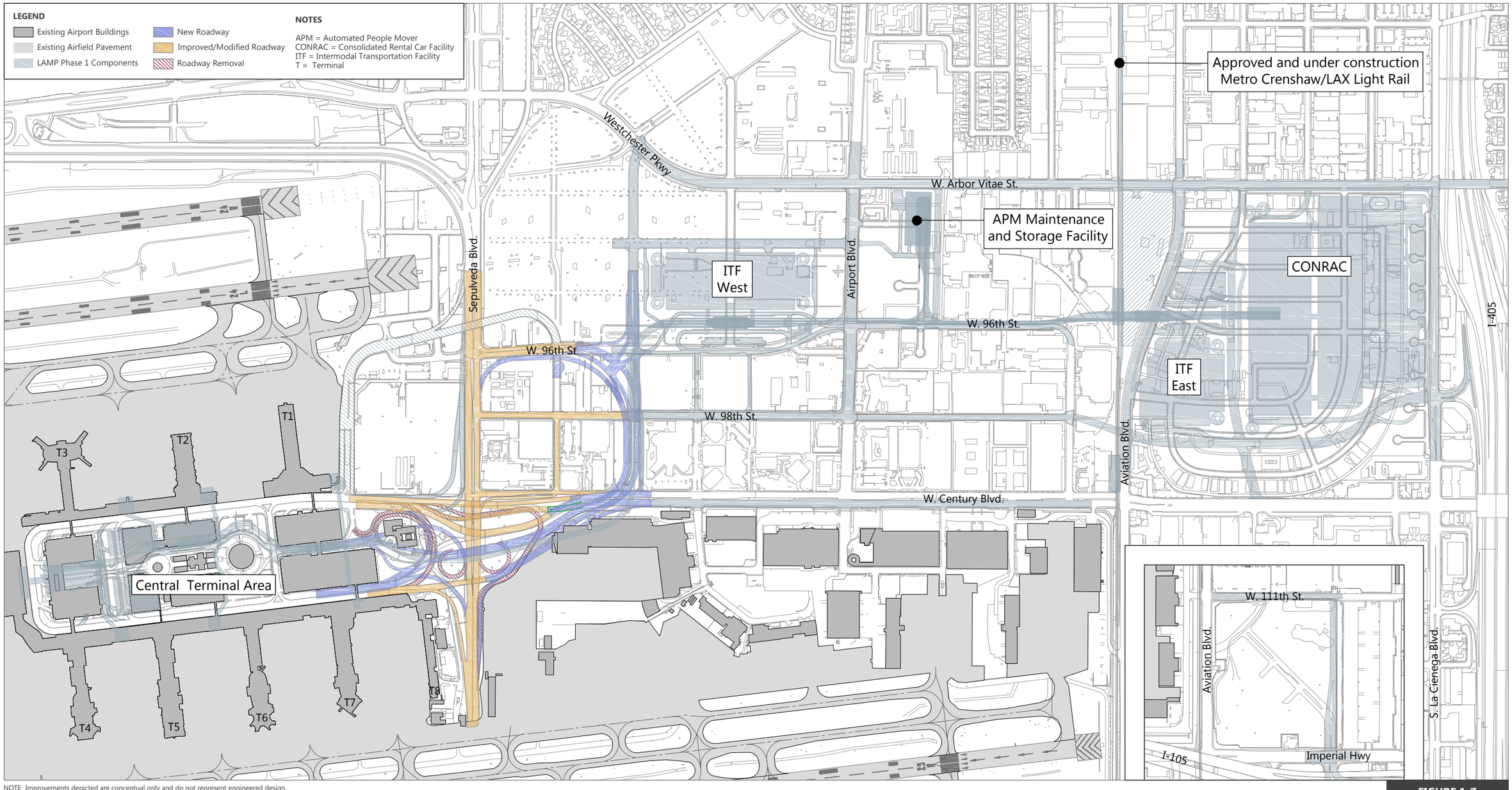


NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 1-7**

LAX Landside Access Modernization Program Components
Phase 2 (2030)

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In addition, the cumulative impact analysis in this EA includes potential future development on parcels of land that are needed for construction of the Phase 1 LAX Landside Access Modernization Program facilities, but would be available for airport support or other uses after completion of Phase 1. At this time, LAWA does not have specific plans for the redevelopment of these sites, and as a result, they are not ripe for detailed evaluation. The potential future related development is discussed more thoroughly in Section 5.12, Cumulative Impacts, of this EA.

## 1.4 Requested Federal Actions

LAWA is requesting the following FAA actions:

- Unconditional approval of the Airport Layout Plan (ALP) depicting the proposed improvements pursuant to 49 U.S.C. §§ 40103(b), 44718 and 47107(a)(16); Title 14, CFR Part 77 (14 CFR 77), *Safe, Efficient Use and Preservation of the Navigable Airspace*; and 14 CFR 157, *Notice of Construction, Alteration, Activation, and Deactivation*;
- Determinations under 49 U.S.C. §§ 47106 and 47107 relating to the eligibility of the Proposed Action for federal funding under the Airport Improvement Program (AIP) and/or under 49 U.S.C. § 40117, as implemented by 14 CFR § 158.25, to impose and use passenger facility charges (PFCs) collected at the Airport for the Proposed Action to assist with construction of potentially eligible development items shown on the ALP;
- An FAA determination under 49 U.S.C. 44502(b) that the proposed action is reasonably necessary for use in air commerce or in the interest of national defense; and
- FAA approval of a construction safety and phasing plan to maintain aviation and airfield safety during construction pursuant to FAA Advisory Circular 150-5370-2F, *Operational Safety on Airports During Construction*, under 14 CFR 139 (49 U.S.C. 44706).

LAWA is also requesting the following California Department of Transportation (Caltrans) actions:

- Caltrans access approval for modifications to Interstate 405 and Interstate 105 ramps.

LAWA acknowledges that an environmental finding by the FAA does not constitute funding approval. LAWA will apply for a funding grant for eligible portions of the project subsequent to a favorable environmental finding.

## 1.5 Organization of Document

The format and content of this EA conforms to the requirements of Section (§) 102(2)(c) of the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. 4321-4370h). The content of each section of this EA is summarized below.

- Executive Summary
- Section 1—Introduction and Background, provides a brief description of LAX and the existing traffic conditions within the CTA, a description of the Proposed Action, timeframes associated with the Proposed Action, and requested federal actions.
- Section 2—Purpose and Need, provides a description of the purpose and need of the Proposed Action.
- Section 3—Alternatives, provides an overview of the identification and screening of alternatives considered as part of the environmental evaluation process.
- Section 4—Affected Environment, describes existing environmental conditions within the project site.
- Section 5—Environmental Consequences, discusses and compares the environmental impacts associated with the Proposed Action, feasible alternatives to the Proposed Action, and the No Action Alternative, and it also identifies mitigation options considered.
- Section 6—Coordination and Public Involvement, discusses the coordination and public involvement associated with the EA process. This section also presents a list of federal, state, and local agencies, as well as other interested parties, that have been involved in EA coordination efforts.
- Section 7—List of Preparers
- Section 8—References
- Section 9—List of Abbreviations and Acronyms

The Appendices contain various reference materials, including technical information and records of coordination activities.

# 2. Purpose and Need

## 2.1 Introduction

Pursuant to NEPA and FAA Orders 1050.1F and 5050.4B, an EA must include a description of the purpose of a proposed action and why it is needed. Identification of the purpose and need for a proposed action provides the rationale for the proposed action and forms the foundation for identification of reasonable alternatives that can meet the purpose for the action and, therefore, address the need or problem. The purpose of and the need for the proposed action are discussed in this section.

## 2.2 Purpose of the Proposed Action

LAWA is modernizing LAX to improve passenger quality-of-service and provide world class facilities for its customers. Today, the passenger experience for those arriving at or departing from LAX is often compromised by roadway congestion in LAX's Central Terminal Area (CTA) and on nearby streets. Compounding the local traffic congestion, 12 rental car agencies operate independent shuttles to transport passengers between the CTA and their individual rental car facilities that are spread over 20 locations throughout the surrounding area. Unlike many major U.S. airports, LAX does not have a consolidated rental car facility that provides a convenient and centralized location for airport passengers to pick-up and return cars. In 2015, there were a total of over 1.1 million rental car shuttle trips on the upper and lower level roadways of the CTA. Moreover, LAX also lacks a direct connection to the Los Angeles County Metropolitan Transportation Authority (Metro) transit system. Currently, passengers and employees who want to take public transportation to LAX must either take a bus (often requiring a transfer from the City Bus Center on W. 96th Street to the LAWA-operated Lot C shuttle to reach the CTA), or take the Metro Green Line light rail to the station at Imperial Highway and Aviation Boulevard. They must then transfer to the LAWA-operated G shuttle to the Airport, which is a trip of approximately 2 miles.

Today, regardless of transportation mode, passengers, employees and visitors face uncertain travel times, congestion and overcrowding to and from LAX. Approximately 63 percent of all departing passengers used private vehicles, taxis, limousines, or Transportation Network Companies (TNCs) such as Uber or Lyft to get to

LAX in 2015,[1] this percentage is even greater for those departing passengers who are residents. During peak periods, over 6,000 vehicles enter the Airport on an hourly basis.

The LAX Landside Access Modernization Program ("Proposed Action") seeks to:

- Improve access options and the landside travel experience for passengers;
- Enhance efficiency and alleviate delays on and congestion of on-Airport and surrounding roadways;
- Shift the location of a portion of traffic from the CTA to locations outside the CTA and off of the surrounding street network;
- Provide a direct connection to the Metro rail and transit system; and
- Improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system, including highways, local roadways, and regional transit options, and LAX.

The Proposed Action includes several individual components whose purpose is to collectively improve access to and from LAX. These components include an Automated People Mover (APM) system, Intermodal Transportation Facilities (ITFs), a Consolidated Rental Car Facility (CONRAC), pedestrian walkway connections to the passenger terminals within the CTA, and roadway improvements. Metro is independently working on a connection to the Airport along the Metro Crenshaw/LAX light rail line at their proposed Airport Metro Connector (AMC) 96th Street Transit Station to be located at Aviation Boulevard and W. 96th Street, about 1.5 miles east of the entry to the CTA. LAWA proposes to provide a direct connection from the APM to Metro's station at W. 96th Street, allowing passengers to seamlessly transition between the airport APM and the Metro transit system. Metro released a Final EIR assessing the potential environmental effects of the proposed AMC 96th Street Transit Station in November 2016[2] which was certified in December 2016. Separate documentation will be prepared for the Federal Transit Administration in compliance with NEPA for the proposed station.

The proposed APM system would offer passengers an opportunity to bypass the existing roadway loop in the CTA. Departing passengers would be able to access the APM system from the ITFs or the CONRAC. Passengers utilizing Metro's proposed AMC 96th Street Transit Station would be able to utilize escalators or elevators from the transit station to access the ITF East APM Station. The process would be seamless for arriving passengers as well. Arriving passengers would be able to pick-up their baggage, board the APM system, and be quickly and efficiently conveyed directly to the ITFs, CONRAC, or Metro AMC 96th Street Transit Station via the ITF East APM Station.

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1 Unison Consulting, Inc., *Final Report, Los Angeles International Airport 2015 Air Passenger Survey Results and Findings*, February 2016.

2 Los Angeles County Metropolitan Transportation Authority (Metro), *Airport Metro Connector 96th Street Transit Station, Final Environmental Impact Report*, November 2016.

Public roadway access into the CTA in the future would be maintained into the CTA via World Way. However, the purpose of the APM system is to reduce the number of commercial and private vehicles within the CTA, which would result in improved traffic flows on CTA and surrounding roadways, as well as fewer vehicle miles traveled and vehicle hours traveled. The APM system would provide passengers several different options on how to access LAX and would give LAWA the ability to implement pricing strategies, policies, and procedures that would result in a reduced number of vehicles in the CTA. The proposed APM would consist of a fixed guideway transportation system that would provide free access to the CTA for passengers, employees, and other users of LAX, 24 hours a day. Constructed completely above grade, the APM would connect to the passenger terminals in the CTA through a pedestrian walkway system located above the existing roads and curb areas in the CTA.

The APM would transport passengers between the passenger terminals and the other main components of the Proposed Action located east of the CTA, including a CONRAC facility, new public parking facilities, and locations for passenger pick-up and drop-off at the ITF East and the ITF West, as well as Metro's proposed AMC 96th Street Transit Station. The ITFs would provide access to the APM for those that choose to drive their vehicle to LAX and park, including both long- and short-term parking. In addition, the ITFs would have designated space for commercial transportation providers, which could include but are not limited to, off-airport parking operators, long-distance shuttle operators, and hotel shuttles. The ITFs would enable passengers to access commercial transportation providers while eliminating the need for the providers to enter and circle through the CTA. The ITFs may include amenities and concessions for passengers, would offer long- and short-term parking options with close proximity to the APM system, provide new meet and greet locations for arriving passengers, and kiss and ride areas for departing passengers. In addition, various roadway improvements would accommodate the APM system, the CONRAC, and ITFs, and improve overall traffic circulation and vehicle access to and from LAX from all directions.

## 2.3 Need for the Proposed Action

This section describes the need for the Proposed Action based on the historic and existing traffic congestion at LAX, the limitations of the existing LAX access roadway system, the lack of connectivity to the regional Metro rail and bus system, and the anticipated growth in enplanements over the forecast period (through 2035) that would occur with or without the Proposed Action.

The Proposed Action is needed to:

- Reduce vehicle travel times and distance and provide traffic congestion relief;
- Reduce traffic congestion and provide additional parking during peak periods;
- Reduce vehicle congestion and conflicts within the CTA and surrounding streets;
- Provide improved transit connectivity; and
- Provide a consolidated rental car facility to reduce crowded and uncomfortable passenger conditions on the terminal curbside by removing the rental car shuttles from the CTA.

The discussions below provide information on the identified needs for the Proposed Action.

### 2.3.1 NEED FOR IMPROVED ACCESS OPTIONS

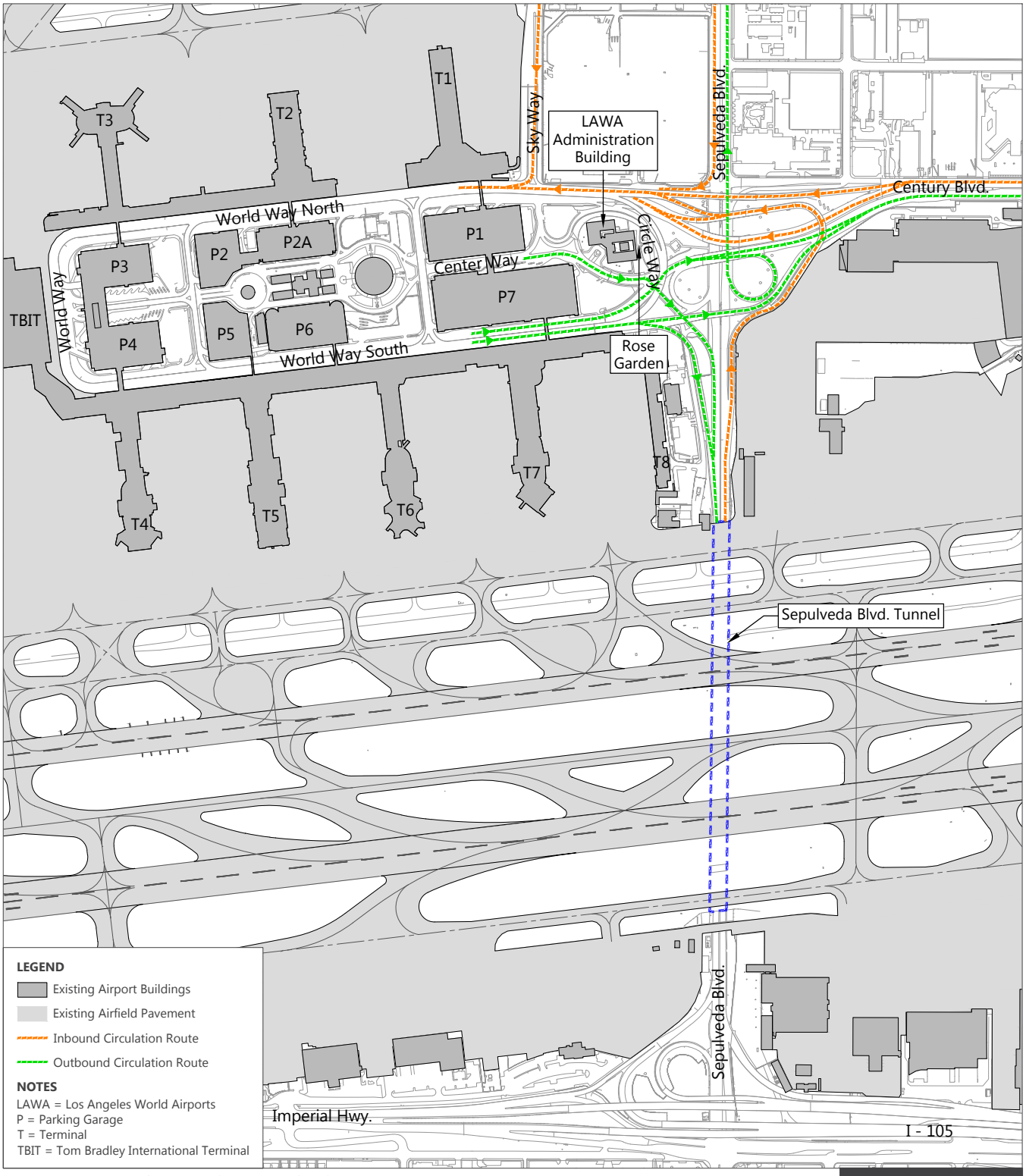
The reliance on a single access point into the CTA for all ground vehicles for passengers (including transit, private vehicles, taxis, TNCs, limousines, and shuttles) currently results in more time spent in traffic, uncertain travel times, more passenger hours traveled, congestion and delay in the CTA, as well as back-ups onto the surrounding local and regional roadway network.

The CTA curbside and roadway system consists of a two-level roadway; the upper level is dedicated to departing passenger activities (and TNC passenger pick-ups as well as drop-offs), and the lower level is primarily dedicated to arriving passenger activities. The roadway loop (World Way) is the only means of vehicular access for passengers and visitors, and also provides the only access to parking structures located within the interior of the roadway loop, which are intended to accommodate short-term and daily parking customers. Regardless of the type of ground access a passenger uses, shuttles to/from the Metro light rail, FlyAway[3] buses, TNCs, taxis, regional shuttles, rental car shuttles, limousines, hotel shuttles, or personal pick-ups and drop-offs, they all must utilize this one-way roadway loop. Key roadways within and adjacent to the CTA are shown on **Figure 2-1**.

The two-level on-Airport curbside and roadway network is primarily accessed from the following three off-Airport roadways: (1) W. Century Boulevard, (2) Sepulveda Boulevard, and (3) Sky Way/W. 96th Street bridge (see Figure 2-1). Each of these roadways provides vehicular access to both the departures level and the arrivals level curbsides and roadways. Regardless of the off-Airport roadway used to access the CTA, all traffic entering the CTA must travel through the intersection of World Way North and Sky Way, near Terminal 1. On-Airport access from the departures level to the arrivals level is provided via a recirculation ramp located at the eastern end of the CTA and a ramp at the western end of Center Way connecting to West Way on the departures level. Access from the arrivals level to the departures level is provided via this same ramp at the western end of Center Way connecting to West Way on the departures level.

[3] A FlyAway is a facility/service which allows airline passengers and employees to park nearer to their point of origin and board a LAWA-operated bus to the airport.

**[Preliminary Draft for Discussion Purposes Only]**




SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 2-1**

NORTH 0 800 ft.

## Central Terminal Area Roadways

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### 2.3.2 NEED FOR REDUCTION OF TRAFFIC CONGESTION

All traffic entering and exiting the LAX CTA is recorded by LAWA's Traffic and Automated Vehicle Identification System (TRAVIS). A "trip" is defined as the entrance or exit of a vehicle to or from the Airport or airport-related property. **Table 2-1** shows the peak and lowest average daily traffic volume entering the LAX CTA over the past 10 years. Table 2-1 shows a general increase in traffic volumes from 2007 to 2016, with the exception of a drop in traffic during the recession as evidenced in 2008 to mid-2012. Beginning in 2013, daily traffic began to rise again and is now above pre-recession levels.

**Table 2-1: Historic Average Daily Traffic Entering LAX CTA**

| YEAR | HIGHEST MONTHLY AVERAGE DAILY TRAFFIC | LOWEST MONTHLY AVERAGE DAILY TRAFFIC | AVERAGE DAILY TRAFFIC |
|---|---|---|---|
| 2007 | 82,193 | 65,339 | 71,438 |
| 2008 | 76,434 | 64,128 | 69,601 |
| 2009 | 77,062 | 61,899 | 68,371 |
| 2010 | 75,881 | 60,857 | 62,501 |
| 2011 | 78,455 | 60,640 | 68,198 |
| 2012 | 73,990 | 57,922 | 66,774 |
| 2013 | 77,791 | 57,985 | 70,870 |
| 2014 | 82,282 | 66,793 | 75,690 |
| 2015 | 88,019 | 71,701 | 79,845 |
| 2016 | 99,185 | 75,513 | 90,579 |

SOURCES: Los Angeles World Airports, *Los Angeles International Airport Ground Transportation Report*, February 2015 (2007 – 2014); Los Angeles World Airports, Traffic Data, February 2017.
PREPARED BY: Ricondo & Associates, Inc., April 2017.

#### 2.3.2.1 CTA Intersection Existing Conditions

Existing level of service (LOS) conditions and volume-to-capacity (V/C) ratios for key intersections in the CTA for the Airport peak departures and arrivals hours were calculated using the CTA roadway traffic volumes for the 2014 conditions.[4] LOS is a qualitative measure used to describe the condition of traffic flow; LOS criteria are a standard measurement of traffic impacts recognized by the Federal Highway Administration (FHWA), as well as state and city agencies. LOS definitions vary for intersections (where two or more roads intersect) and roadway links (sections of roads between intersections), and are provided in **Table 2-2**.

[4] The analysis of CTA roadway conditions was based on comprehensive traffic counts taken during August 2014 in the CTA; this represents the most complete dataset available at the time the analysis was conducted.

**Table 2-2: Level of Service Definitions**

| LEVEL OF SERVICE (LOS) | VOLUME/CAPACITY RATIO RANGE | DEFINITION (INTERSECTIONS) | DEFINITION (ROADWAY LINKS) |
|---|---|---|---|
| A | less than 0.60 | EXCELLENT: No vehicle waits longer than one red light and no approach phase is fully used. | EXCELLENT: Traffic is free flow, with low volumes and high speeds |
| B | 0.61 - 0.70 | VERY GOOD: An occasional approach phase is fully used; many drivers begin to feel somewhat restricted within groups of vehicles. | VERY GOOD: Drivers have reasonable freedom to select their speed and lane of operation |
| C | 0.71 - 0.80 | GOOD: Occasionally, drivers may have to wait through more than one red light; backups may develop behind turning vehicles. | GOOD: Drivers are becoming restricted in their ability to select their speed or to change lanes |
| D | 0.81 - 0.90 | FAIR: Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups. | FAIR: Drivers have little freedom to maneuver and driving comfort levels are low |
| E | 0.91 – less than 1.00 | POOR: Represents the most vehicles that intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles. | POOR: Roadway is operating at or near capacity |
| F | greater than or equal to 1.00 | FAILURE: Backups from nearby intersections or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths. | FAILURE: Forced flow operation where excessive roadway queuing develops |

SOURCE: Transportation Research Board, *Transportation Research Circular No. 212, Interim Materials on Highway Capacity*, January 1980.
PREPARED BY: Ricondo & Associates, Inc. May 2016.

Intersection LOS ranges from "A" (i.e., excellent conditions with little or no vehicle delay) to "F" (i.e., excessive vehicle delays and queue lengths). With the exception of World Way South and Center Way (Exit) on the lower level, which operates at an LOS of B, all other intersections operated at LOS A; details are provided in **Appendix B**.

### 2.3.2.2 CTA Roadway Existing Conditions

Intersection LOS analysis assesses intersections (where two or more roads intersect) in isolation from other traffic conditions in the vicinity. However, the on-Airport roadways have a different set of operational issues, such as traffic weaving to and from different terminal curbsides, a higher proportion of traffic that is unfamiliar with the roadways leading to slower speeds, constant need of decision-making as a result of signage, and a complex mix of vehicle modes. The roadway link analysis methodology, summarized below and discussed in **Appendix B**, takes into account these complexities to provide a more realistic picture of the traffic conditions within the CTA than the intersection LOS analysis indicates.

In 2014, over half of the CTA roadway links (13 out of 24) operated at poor/congested levels of service (LOS E or F) at certain key times of the day (see Table 4-18). As delay and congestion mount during key hours, there

are currently days where the roadway system is not able to recover for the majority of the day and functions at gridlock for extended periods of time.

Drivers waiting to access the terminal curb to load or unload their passengers block moving lanes of traffic. On the lower level, rather than parking their vehicle in a structure, drivers may circle the Airport roadways while they wait for their passenger(s), thus contributing to the low LOSs (LOS E or F) on the lower level, outer curbsides. Hourly traffic counts were taken on the return road (Circle Way) from Thursday, August 7, 2014 to Monday, August 11, 2014. The counts were recorded on the portion of Circle Way adjacent to the rose garden, east of the LAWA Administration Building (see Figure 2-1). An average of 18.7 percent of lower level traffic recirculated on the return road during this four-day period. Recirculation includes revisiting the terminal curbside after missing a party or driving to a parking garage after dropping off a party curbside.

Congestion also occurs at specific locations in the curbside drop-off and pick-up areas for private vehicles. This is particularly true on the lower level, since drivers tend to take longer to pick-up their passengers than to drop them off. Terminal 1, which has one of the highest numbers of arriving passengers, also has one of the shortest curb zones for private vehicles. The lack of pick-up space creates queuing of private vehicles from the Terminal 1 curbside onto one or more lanes of the main roadway of the CTA and frequently through the intersection of Sky Way and World Way North, backing up traffic and impeding flow. Because traffic entering the CTA on the lower level must traverse through this intersection, the queuing that occurs at Terminal 1 can adversely impact all inbound traffic (see **Figure 2-2**).

Upper and lower level curbside congestion is not limited to Terminal 1. Each terminal curbside in the CTA experiences congestion as private vehicles struggle to reach the curb in front of their terminal or parking structure because of the many commercial shuttle buses and other vehicles also on World Way. This results in conditions where passengers are forced to wait in crowded and uncomfortable conditions along the narrow curb (see Figure 2-2).

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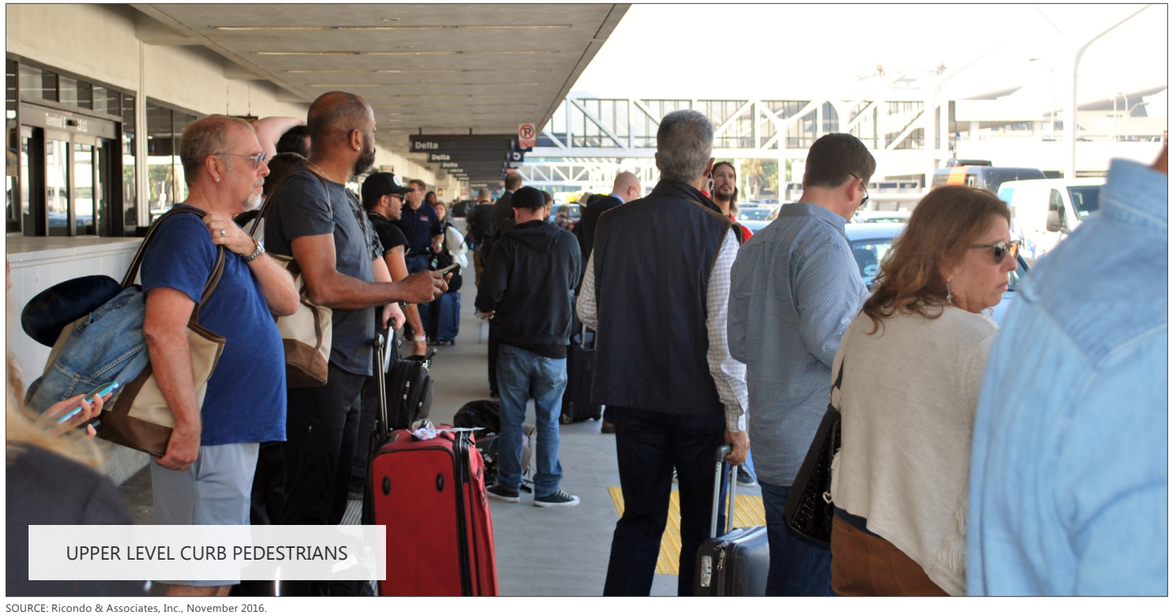


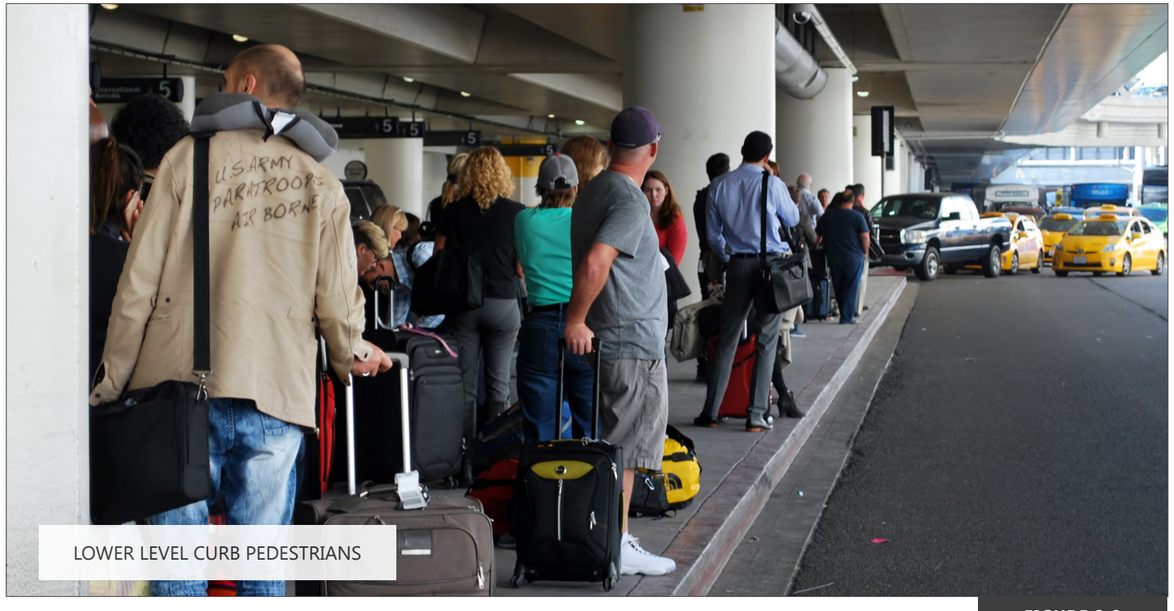


SOURCE: Ricondo & Associates, Inc., November 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 2-2**

Central Terminal Area
Traffic and Pedestrian Congestion

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During peak times, the volume of existing traffic exceeds the roadway's ability to accommodate this traffic, creating queues on Sky Way, World Way North and, most notably, northbound Sepulveda Boulevard.

#### 2.3.2.3 CTA Roadway Future Conditions

The same analysis for current intersection and roadway segment traffic LOS was also prepared for 2024 and 2035 without the Proposed Action to demonstrate the need to reduce future traffic congestion. The results of that analysis demonstrate that traffic conditions at intersections within the CTA will worsen over time as total passenger volume increases (see **Appendix D**).

Similar to the existing conditions analysis, key CTA roadway links were analyzed by comparing the roadway capacities to the predicted future roadway link demand based on the curbside demand at that link. The analysis evaluated the projected operating conditions using the CTA roadway traffic volumes for Future 2024 and Future 2035 Airport peak departures and arrivals hours, based on forecasted activity levels for LAX for those future years (see **Appendix D**). The roadway LOS conditions in both the 2024 and 2035 future years would be severely congested, with 16 of the 24 CTA roadway links operating at LOS F as compared to existing conditions (2014) where 7 out of 24 operated at LOS E and 6 operated at LOS F during peak periods of the day (see Table 5.9-4).

The predicted future intersection and roadway segment traffic conditions in the CTA shows that congestion within the CTA will continue to worsen over time. As no viable options for additional or improved roadways exist within the CTA, to relieve congestion in the CTA and on the surrounding street system, a reliable, predictable, non-road means of access into the CTA is needed. For more information on the traffic analyses described herein please refer to Sections 4.11.2.3 and 5.9.4.2.4 of this EA.

### 2.3.3 NEED FOR SHIFTING OF TRAFFIC OUTSIDE THE CENTRAL TERMINAL AREA

#### 2.3.3.1 Commercial Vehicles

Congestion through the CTA is a function of the sheer volume of traffic competing for a limited amount of space. **Figure 2-3** shows that in 2014, approximately 77 percent of the upper level inbound traffic and 61 percent of the lower level inbound traffic in the LAX CTA were private vehicles.[5] Rental car, hotel, private parking, and door-to-door shuttles comprised approximately 9 percent of the upper level traffic and 14 percent of the lower level traffic.[6] The remainder of the traffic consisted of taxis, limousines, and scheduled buses.[7] There are currently twelve rental car companies operating courtesy shuttles between the CTA and their individual facilities. In 2014, the annual number of outbound rental car shuttle trips on the lower level exceeded 717,000.

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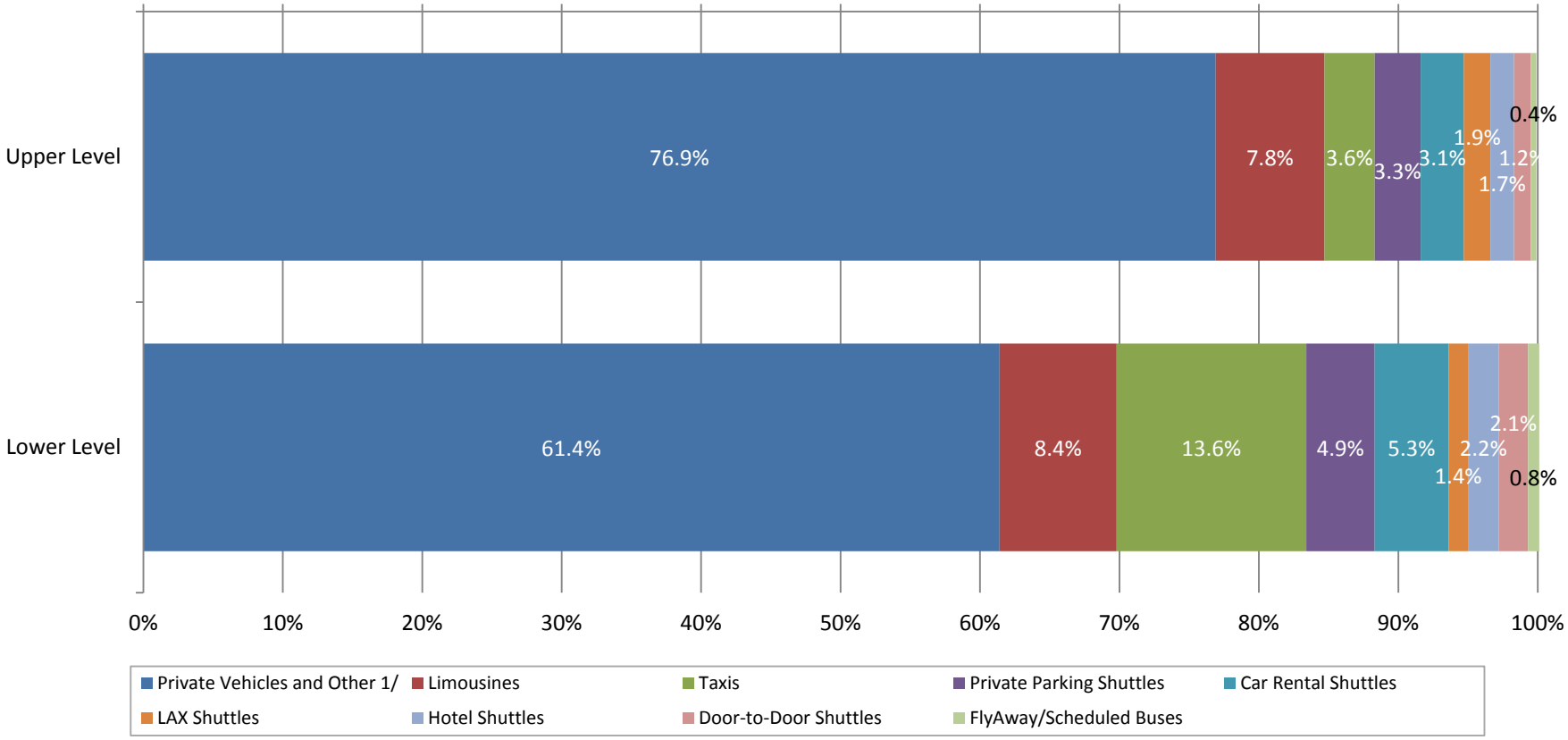
5 The "Private Vehicles and Other" category includes all vehicles which do not have vehicle transponders issued by LAWA. This includes but is not limited to private vehicles, TNCs, police vehicles, construction and maintenance vehicles, and vendor delivery trucks.

6 City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport Ground Transportation Report,* February 2015.

7 City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport Ground Transportation Report*, February 2015.

**Figure 2-3: Existing (2014) Percentage of Traffic by Vehicle Type**




NOTE:

1/ The "Private Vehicles and Other" category includes all vehicles which do not have vehicle transponders issued by LAWA. This includes but is not limited to private vehicles, TNCs, police vehicles, construction and maintenance vehicles, and vendor delivery trucks.

SOURCE: Los Angeles World Airports, *Los Angeles International Airport Ground Transportation Report,* February 2015.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

In addition to the rental car shuttles, the large number of shuttles serving hotels and parking facilities located in the LAX vicinity contributes to congestion in the CTA and surrounding area, as passengers who choose to park remotely, stay in local hotels, or take public transit to LAX, must take a bus, shuttle, taxi, or similar service from the CTA. These outbound trips totaled approximately 950,000 in 2014. It is important to note that the dwell times (staging, loading and unloading, etc.), frequent lane changes, and maneuverability challenges of these shuttles disproportionately contributes to the congestion experienced on the CTA roadways.[8] LAX is also served by other passenger transportation modes, such as FlyAway buses, shared ride vans, limousines and other commercial vehicles, all competing for limited space along the drop-off and pick-up curbs. Although their percentage of the total vehicles accessing the CTA is less than the various shuttles, all of these commercial vehicles contribute to congestion in the CTA. In other words, these are larger vehicles that stop frequently, make frequent lane changes, and impede sight lines and travel routes for automobiles that are trying to get to one location within the CTA.

All of this traffic leads to congestion and back-up on the roadway links in the CTA. As shown in detail in Table 4-18, over half of the CTA roadway links (13 out of 24) operated at LOS E or F at certain times of the day, with future conditions resulting in worse conditions within the CTA particularly during peak times. As a result of the poor LOS on the various roadway segments, Airport traffic backs up into the surrounding streets. During peak times, the volume of traffic exceeds the roadway's ability to accommodate this traffic, creating queues on Sky Way, World Way North and, most notably, northbound Sepulveda Boulevard. On peak travel days, the queue on northbound Sepulveda Boulevard can extend through the Sepulveda Boulevard Tunnel to the I-105 Freeway.

Additionally, traffic levels during peak travel times on southbound Sepulveda Boulevard prevent traffic exiting the Airport from merging onto southbound Sepulveda Boulevard, due to the constriction of lanes entering the Sepulveda Tunnel. This causes traffic to back-up through the intersection of Center Way and World Way and can cause traffic to back-up all along World Way throughout the CTA. World Way at the Tom Bradley International Terminal (TBIT) on both the upper and lower level roadways is another area of congestion, with high volumes of traffic transitioning to and from the limited curb space along the terminal frontage during peak travel times.

Traffic will be exacerbated in the future as conditions at LAX are expected to worsen over time partly because of expected increases in the amount of local traffic not associated with the Airport and partly because of the growth in passenger activity levels that are projected to occur irrespective of the Proposed Action (see **Appendix D**).

[8] City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport Ground Transportation Report*, February 2015.

#### 2.3.3.2 Parking

In 2015, a parking needs assessment was prepared assessing the existing and long-term demand for public and employee parking.[9] The parking analysis showed that during peak periods there is an inadequate amount of parking both on- and off-Airport, resulting in the need for additional available parking for employees, visitors, and travelers. The lack of parking causes increased congestion within the CTA, because drivers are forced to recirculate on World Way and/or travel to other garages if the garage they were intending to park in is full. Parking garages P3 and P4 located at the western end of World Way frequently become full, forcing drivers wishing to access TBIT, Terminal 3, or Terminal 4 to find other garages. Further details regarding existing parking conditions and detailed study methodology and results of the parking analysis are provided in **Appendix C**.

The public parking analysis resulted in a projected need ranging from approximately 4,000 additional spaces to nearly 16,000 additional spaces at passenger activity levels of 95 million annual passengers (MAP). The variation between the low and high number of parking spaces needed is based on whether some of the parking demand would be reduced by TNCs or public transit. Employee parking demand was also analyzed and estimated (described in detail in Section 4.11.2.3, Section 5.9.4.2.5, and in **Appendix C** as part of the 2015 parking needs assessment). Overall, based on existing employee parking availability and forecasting future employee growth and demand, a projected shortfall of approximately 2,260 employee parking spaces is forecasted through 2035. By providing public and employee parking options outside the CTA via the ITFs, which would be connected to the CTA by an APM, and removing this segment of the vehicle traffic from within the CTA, traffic within the CTA would be reduced.

### 2.3.4 NEED FOR TRANSIT CONNECTIVITY

LAX also lacks a direct connection to the Metro transit system. Passengers and employees who want to take public transportation to LAX must either take a bus (often requiring a transfer from the City Bus Center on W. 96th Street to the LAWA-operated Lot C shuttle to reach the CTA), or take the Metro Green Line light rail to the station at Imperial Highway and Aviation Boulevard. They must then transfer to the LAWA-operated G shuttle to the Airport, which is a trip of approximately 2 miles to the CTA.

As passenger levels increase and congestion within the CTA and surrounding streets worsen over the study period, passengers and employees will need another option to access the Airport, particularly in light of insufficient existing infrastructure and the lack of additional viable roadway options. Metro, working independently but in coordination with LAWA, is planning to provide another option for passengers, employees, and visitors to access the Airport and the greater Los Angeles area. In conjunction, the SCAG

[9] Walker Parking Consultants, *Public and Employee Parking Demand Analysis Draft Memorandum*, August 4, 2015.

2016-2040 RTP/SCS[10] notes as a regional goal the need to make communities more sustainable by improving access and reducing trips to LAX.

The Metro Crenshaw/LAX Line is currently under construction and will extend 8.5 miles from the existing Metro Exposition Line at Crenshaw and Exposition Boulevards to the Metro Green Line. Once completed, the Metro Crenshaw/LAX Line will offer an alternative transportation option to congested roadways. Riders will be able to make easy connections within the entire Metro Rail system, municipal bus lines, and other regional transportation services.

In June 2014, the Metro Board of Directors approved adding a station to the Metro Crenshaw/LAX Line at Aviation Boulevard and W. 96th Street.[11] As envisioned, the station will be the new "Gateway" to LAX for transit riders and will be served by the Metro Crenshaw/LAX Line and an extension of the Metro Green Line. Metro's planning for this station includes a bus plaza for Metro and municipal buses, passenger pick-up/drop-off, and amenities for pedestrians and bicyclists. The start of operations at this station is anticipated in the 2021-2023 timeframe. The Metro Green and Crenshaw/LAX Lines will also serve a transit station at Aviation/Century that will connect Airport and other transit patrons with destinations along the busy Century Boulevard corridor. An exhibit showing Metro's plans for the Metro Crenshaw/LAX and Metro Green Lines and the AMC 96th Street Transit Station is included for reference in **Figure 2-4**. This type of "Rail to APM" connection can be found at other airports around the country, including: San Francisco International, Oakland International, New York (John F. Kennedy), Newark Liberty International, Miami International, Chicago O'Hare International, Dallas/Fort Worth International, and Phoenix Sky Harbor.

Providing other access opportunities for Airport users is another aspect of LAWA's goal to improve passenger quality-of-service and provide world-class facilities for its customers, commensurate with or better than the other airports serving major U.S. cities. However, other existing mass transit operations including the FlyAway, Metro buses, and other buses face the same access and congestion issues as all other surface vehicles due to the single point-of-entry into the CTA.

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[10] Southern California Association of Governments, *Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*, Adopted April 7, 2016, Available: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

[11] Metro plans to construct the station at Aviation Boulevard and W. 96th Street whether or not the proposed LAX Landside Access Modernization Program is approved and/or constructed.

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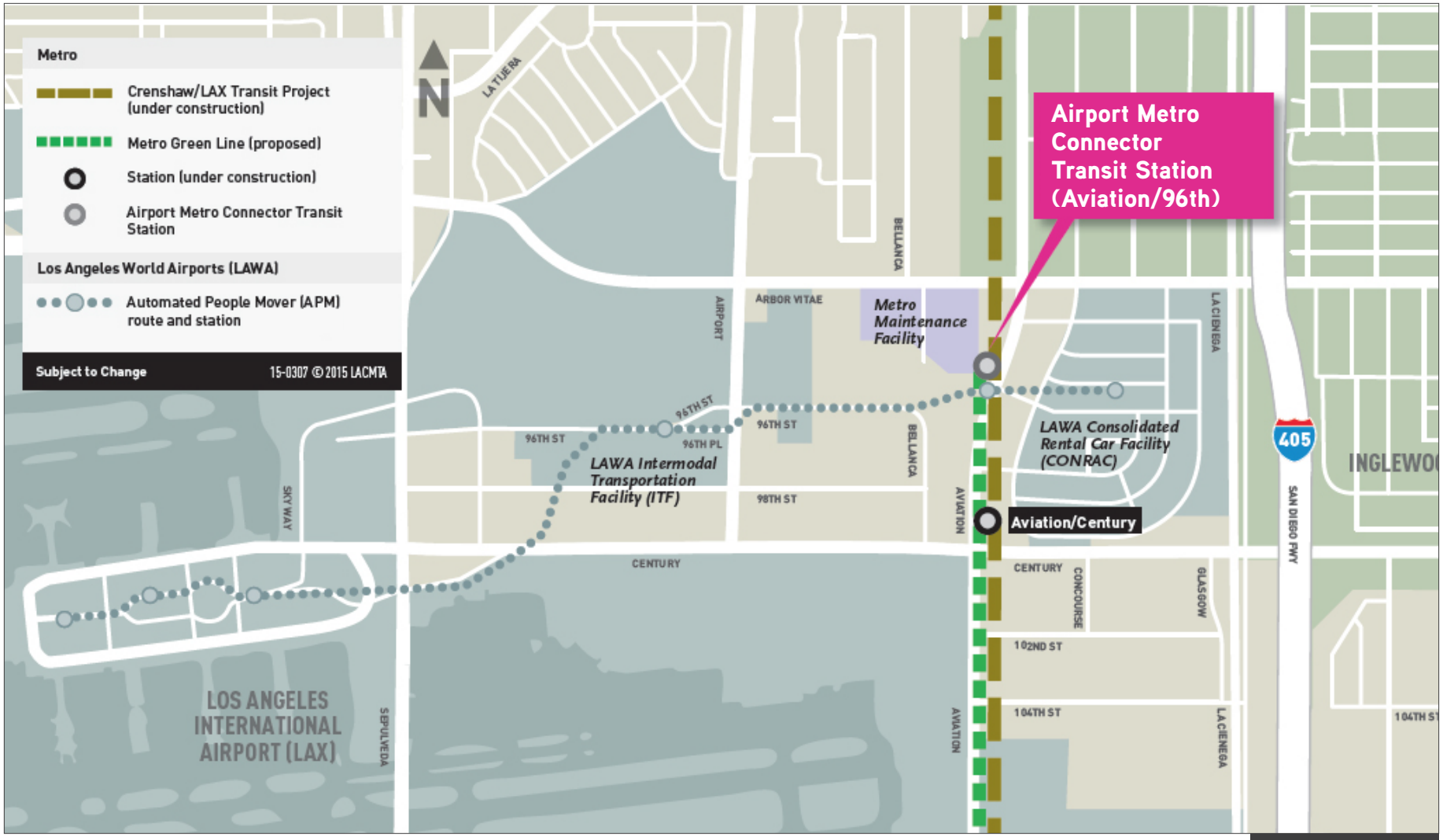


SOURCE: Metropolitan Transit Authority, Airport Metro Connector 96th Street Transit Station, Final Environmental Impact Report, November 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 2-4**

Airport Metro Connector

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### 2.3.5 NEED TO IMPROVE CONNECTIVITY AND MOBILITY

As noted above and as discussed in greater detail in Section 5.9.4.2.5, the roadway link and curbside LOS decreases over time with the increase in forecast passengers. In 2024 and 2035, each of the upper (ticketing) level roadway links adjacent every terminal will be at LOS F.

While the majority of the inner roadway links on the lower level (baggage claim) maintain an excellent LOS, the inner roadway adjacent Terminal 1 will be at LOS F. Terminal 1, which has one of the highest numbers of arriving passengers, also has one of the shortest curb zones. Congestion at Terminal 1 will continue to back up traffic through the intersection of Sky Way and World Way North which will then cascade through the CTA and surrounding roadways. In 2024 and 2035, all of the outer curbsides with the exception of Terminal 4 will be at LOS F. Removing the rental car shuttles from the curbside traffic mix would improve the curbside traffic condition.

Unlike many major U.S. airports, LAX does not have a consolidated rental car facility to provide a convenient and centralized location for airport passengers to pick-up and return cars. Twelve rental car agencies operate independent shuttles to transport passengers between the CTA and their individual rental car facilities that are spread over 20 locations throughout the surrounding area. In 2015, there were a total of over 1.1 million rental car shuttle trips on the upper and lower level roadways of the CTA, compounding the local traffic congestion.

The car rental properties used by the various rental car agencies for their individual operations are shown on **Figure 2-5**. In addition to the contribution to roadway congestion that the shuttles make within the CTA, the rental car companies are scattered throughout the area. As a result, there are over 50 directional signs currently installed on surface streets to direct customers to the various rental car facilities, which leads to driver confusion and challenging wayfinding (signs, maps, and other graphic methods used to convey location and directions to travelers), causing traffic and congestion on the surrounding streets. Rental car customers, unfamiliar with the area and trying to find their way to their ultimate destination, or upon returning the car trying to find their vendor's rental car return location, are frequently confused by the many directional signs and challenging way finding. As LAWA's goal is to improve passenger quality-of-service and provide world-class facilities for its customers, this congested and confusing passenger experience is not what LAWA wants to provide its customers.

The ITFs would provide public and employee parking options outside the CTA, which would be connected to the CTA by an APM. This would improve connectivity and mobility for passengers and employees that drive their vehicles to LAX, and would also allow passengers to be picked-up or dropped-off outside the CTA. Similarly, the connection between the ITF East APM Station and Metro's AMC 96th Street Transit Station would improve connectivity and mobility for transit passengers. Finally, the ITFs would include walkways and pedestrian paths to improve connectivity and mobility for hotel guests that fly in and out of LAX, as well as bike stations where LAX employees could ride and store their bicycles to commute to work.

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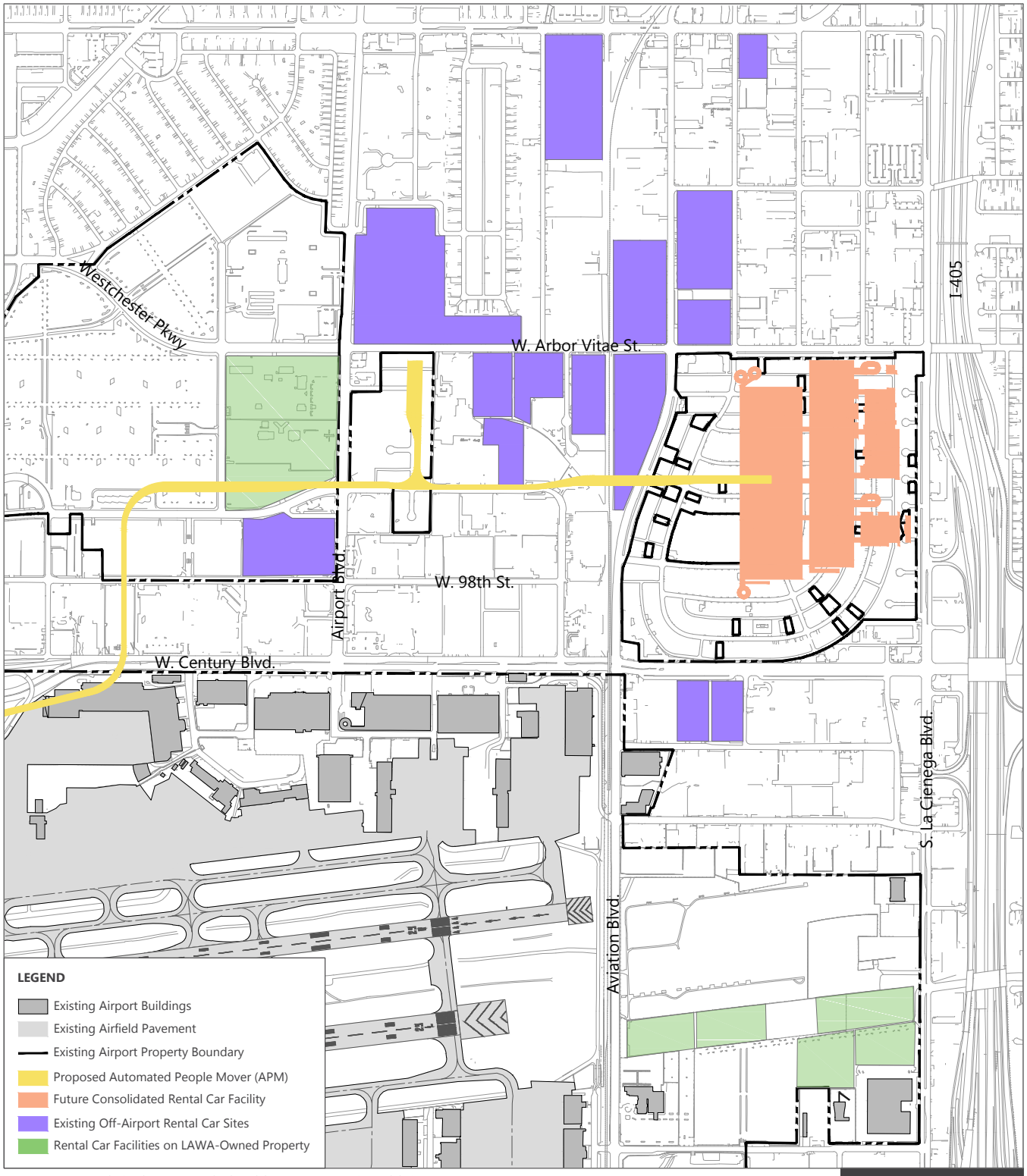


NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 2-5**

NORTH 0 1,200 ft.

## Existing Rental Car Sites

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# 3. Alternatives

## 3.1 Introduction

### 3.1.1 SCOPE OF THE ALTERNATIVES ANALYSIS

This section summarizes the screening process that was used to identify, compare, and evaluate alternatives to the Proposed Action. The process followed to identify alternatives to be considered and the screening process used to determine which alternatives would reasonably satisfy the purpose of and need for the Proposed Action are described in this section. Those alternatives that satisfy the purpose and need for the Proposed Action were next evaluated for construction and operational feasibility. Alternatives that satisfied those criteria were then carried forward for analysis of environmental consequences.

The alternatives presented in this EA were determined through the evolution of LAX planning efforts conducted over the last 15 years.[1,2] A ground transportation center and an intermodal transportation facility (ITF) located outside the Central Terminal Area (CTA) and served by an automated people mover (APM) system is consistent with previous plans. Previous planning has also identified a need for a consolidated rental car (CONRAC) facility located outside the CTA and connected to the APM system. During this period, LAWA's understanding of the needs for ground access to the CTA has evolved based on new information regarding transit access opportunities, shifting ground access modes and trends (including the introduction of Transportation Network Companies [such as Uber and Lyft] as a new surface transportation category), street network traffic conditions, security and safety needs, practical construction and operational constraints, and other factors. As a result, LAWA updated the ground access elements included in the Master Plan to reflect these new conditions in the proposed LAX Landside Access Modernization Program. The Proposed Action includes three major ground transportation elements: an APM, CONRAC, and two ITFs. This alternatives analysis evaluates alternative locations for each of the major ground transportation elements as identified in earlier studies, as well as the plans prepared by LAWA for the LAX Landside Access Modernization Program. In evaluating major ground transportation elements, a separate APM analysis was conducted to determine the

1 City of Los Angeles, Los Angeles World Airports, *LAX Master Plan*, April 2004.

2 City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study*, (SCH No. 1997061047), January 2013; City of Los Angeles, Los Angeles World Airports, Preliminary LAX Specific Plan Amendment Study Report, July 2012; City of Los Angeles, Los Angeles World Airports, *Final LAX Specific Plan Amendment Study Report*, January 2013.

vertical and horizontal alignments, as well as the number of APM stations and the alignment outside of the CTA. This analysis is contained in **Appendix E**.

This section describes alternatives to the Proposed Action, each containing all three of the major ground transportation elements. The alternatives presented herein are modified forms of the preferred alternatives identified in the LAX Master Plan[3] and the LAX Specific Plan Amendment Study (SPAS)[4].

### 3.1.2 REQUIREMENTS OF THE FAA AND NATIONAL ENVIRONMENTAL POLICY ACT

Pursuant to 40 CFR 1502.14(d) and paragraph 6-2.1(d) of FAA Order 1050.1F and paragraph 706(d) of FAA Order 5050.4B, analysis of the No Action alternative is required.[5,6] Due to the complexity of the Proposed Action, the range of alternatives considered has been expanded beyond the No Action and Proposed Action alternatives, consistent with the requirements of FAA Orders 1050.1F and 5050.4B.

The purpose of the Proposed Action, as identified in Section 2.2, is to:

- Improve access options and the landside travel experience for passengers;
- Enhance efficiency and alleviate delays on and congestion of on-Airport and surrounding roadways;
- Shift the location of a portion of traffic from the CTA to locations outside the CTA and off of the surrounding street network;
- Provide a direct connection to the Metro rail and transit system; and
- Improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system, including highways, local roadways, and regional transit options, and LAX.

The Proposed Action is needed to:

- Reduce vehicle travel times and distance and provide traffic congestion relief;
- Reduce traffic congestion and provide additional parking during peak periods;
- Reduce vehicle congestion and conflicts within the CTA and surrounding streets;

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3 City of Los Angeles, Los Angeles World Airports, *LAX Master Plan*, April 2004.

4 City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study*, (SCH No. 1997061047), January 2013.

5 U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

6 U.S. Department of Transportation, Federal Aviation Administration, Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, effective April 28, 2006.

- Provide improved transit connectivity; and
- Provide a consolidated rental car facility to reduce crowded and uncomfortable passenger conditions on the terminal curbside by removing the rental car shuttles from the CTA.

## 3.2 Identification of Potential Alternatives

The No Action Alternative is included pursuant to NEPA and for purposes of evaluating and comparing potential environmental consequences of alternatives. Planning alternatives pertaining to individual components of the Proposed Action were analyzed and are included in **Appendix E** for reference. Alternative locations for each of the major ground transportation components are also analyzed in **Appendix E**. From this and previous analyses,[7,8] three build alternatives emerged:

- Modified Master Plan Alternative
- Modified SPAS Alternative
- Proposed Action Alternative

These three "build" alternatives are shown on **Figure 3-1**. A summary of the major components for these three "build" alternatives are shown in **Table 3-1**. Additionally, four "no build" alternatives have been identified, as outlined below:

- No Action Alternative
- Use of Alternative Modes of Transportation Alternative
- Use of Other Public Airports Alternative
- Transportation Demand Management Alternative

[7] City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport Master Plan,* April 2004.

[8] Los Angeles World Airports, *Preliminary Los Angeles International Airport (LAX) Specific Plan Amendment Study Report,* July 2012.

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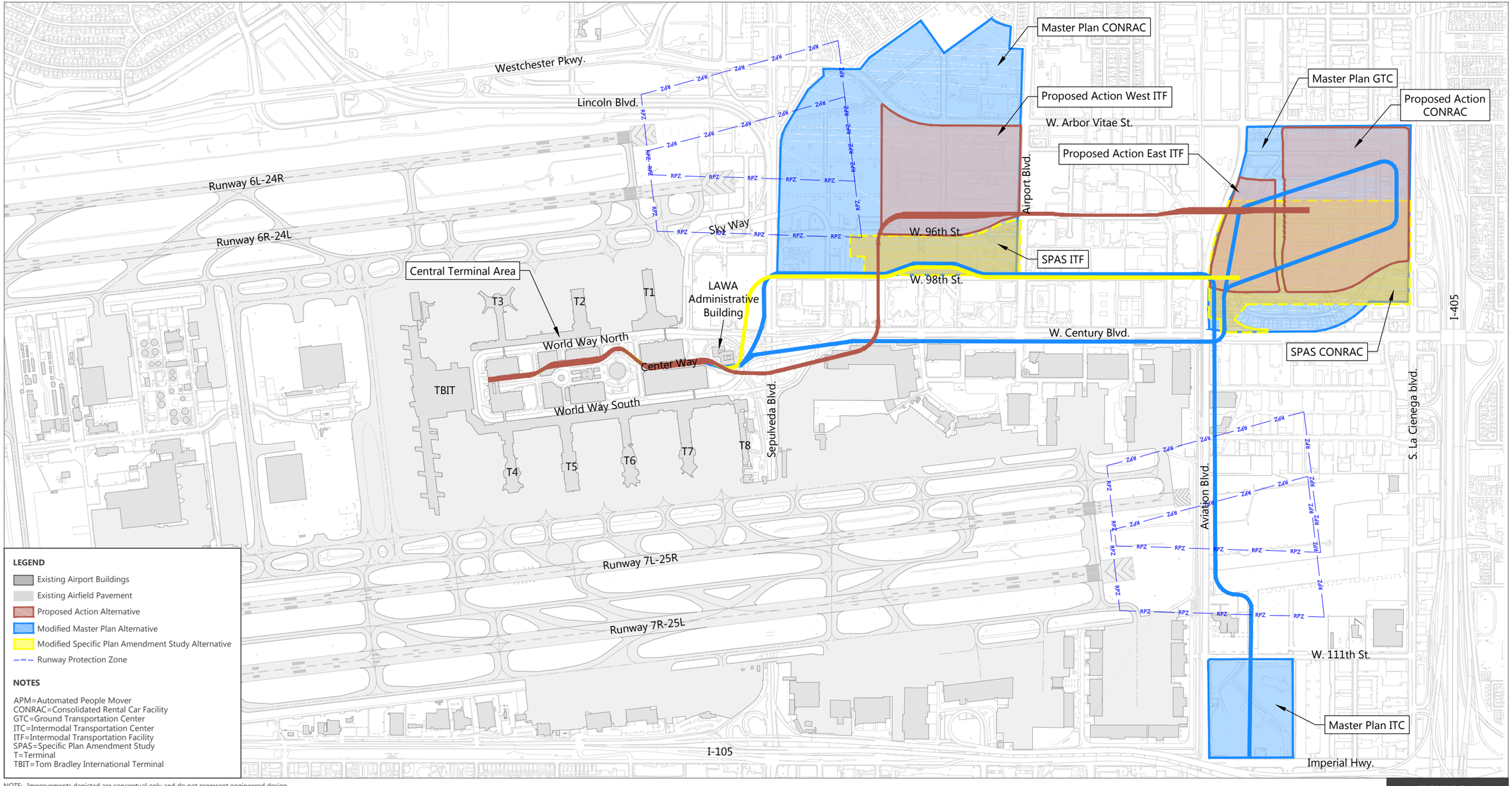


**LEGEND**

- Existing Airport Buildings
- Existing Airfield Pavement
- Proposed Action Alternative
- Modified Master Plan Alternative
- Modified Specific Plan Amendment Study Alternative
- RPZ — Runway Protection Zone

**NOTES**

APM=Automated People Mover
CONRAC=Consolidated Rental Car Facility
GTC=Ground Transportation Center
ITC=Intermodal Transportation Center
ITF=Intermodal Transportation Facility
SPAS=Specific Plan Amendment Study
T=Terminal
TBIT=Tom Bradley International Terminal

NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

NORTH 0 1,200 ft.

**FIGURE 3-1**

## Build Alternatives

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**Table 3-1: "Build" Alternatives Summary**

| | MODIFIED MASTER PLAN ALTERNATIVE | MODIFIED SPAS ALTERNATIVE | PROPOSED ACTION ALTERNATIVE |
|---|---|---|---|
| **Automated People Mover** | | | |
| Alignment within the CTA | ALL BUILD ALTERNATIVES:<br>• Elevated alignment down Center Way<br>• Three stations through CTA | | |
| Alignment outside the CTA | Two separate APM alignments:<br>• One route connecting ITC & CONRAC to CTA via W. 98th Street and Aviation Boulevard<br>• One route connecting the GTC to the CTA via an alignment along the south side of W. Century Boulevard. | Single APM alignment connecting CTA to CONRAC & ITF via W. 98th Street | Single APM alignment connecting CONRAC, ITFs to CTA via W. 96th Street |
| **Intermodal Transportation Facilities** | | | |
| Location(s) | • Manchester Square<br>• Imperial Highway and Aviation Boulevard | Between W. 96th and W. 98th Streets, between Vicksburg Avenue and Airport Boulevard | • Manchester Square<br>• The area bound by W. 98th Street to the south, Airport Boulevard to the east, Westchester Parkway to the north, and Parking Lot C parking lot to the west |
| Size | 164 Acres | 14 Acres | 55 Acres |
| Parking Spaces | N/A | 4,900 | 16,300 |
| **Consolidated Rental Car Facility** | | | |
| Location | Existing Parking Lot C | Manchester Square | Manchester Square |
| Size | 181 Acres | 63 Acres | 69 Acres |
| Parking Spaces [1/] | 26,100 [1/] | 17,800 | 19,522 |

NOTE:

1/ Reflects a minimum number of spaces.

SOURCE: City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport Master Plan,* April 2004; City of Los Angeles, Los Angeles World Airports, *Preliminary Los Angeles International Airport (LAX) Specific Plan Amendment Study Report*, July 2012; Ricondo & Associates, Inc., April 2017.
PREPARED BY: Ricondo & Associates, Inc., April 2017.

### 3.2.1 NO ACTION ALTERNATIVE

Under the No Action Alternative, none of the improvements and activities proposed for the LAX Landside Access Modernization Program would occur. Therefore, the physical roadway network would be consistent with existing conditions. Without improvements to the roadway network, local traffic conditions would deteriorate due to increased passengers expected to occur with or without implementation of the LAX Landside Access Modernization Program, as well as background growth in traffic volumes. LAX would continue to have one vehicular entrance to the CTA, with no direct fixed guideway connection to the regional Metro system. Access to the proposed and existing Metro facilities would be through bus operations, similar to existing conditions. Additionally, based on the amount of private parking today, it is likely that private parking operators would expand operations in order to capitalize on the demand for parking at LAX. Discussions with rental car operators have indicated that rental car facilities would also expand based on their needs and anticipated demand for rental cars.[9] These actions would be independent and beyond the control of LAWA.

### 3.2.2 USE OF ALTERNATIVE MODES OF TRANSPORTATION

This alternative would involve encouraging more employees and passengers to shift from driving to using transit to access the Airport in order to relieve traffic congestion at LAX. Non-aviation interregional transportation services available to travelers to and from the Los Angeles International Airport include commercial buses and light rail trains with connections via bus routes. Currently, passengers and employees who want to take public transportation to LAX must either take a bus (often requiring a transfer from the City Bus Center on W. 96th Street to the LAWA-operated Parking Lot C shuttle to reach the CTA), or take the Metro Green Line light rail to the station at Imperial Highway and Aviation Boulevard. They must then transfer to the LAWA-operated G shuttle to the Airport, which is a trip of approximately 2 miles. Metro is independently working on a connection to the Airport along the Metro Crenshaw/LAX light rail line, which is currently under construction, and Green light rail line. The Metro Crenshaw/LAX and Green light rail line will include two transit stations in close proximity to LAX; a station under construction at Aviation and Century Boulevard located approximately 1 mile east of the Airport, and a recently approved Airport Metro Connector (AMC) 96th Street Transit Station to be located at Aviation Boulevard and 96th Street, about 1.5 miles east of the entry to the CTA. The AMC 96th Street Transit Station will also include a bus transit center. Passengers and employees utilizing either of these stations to access LAX would need to transfer to a shuttle bus or walk to the CTA.

### 3.2.3 USE OF OTHER PUBLIC AIRPORTS ALTERNATIVE

An alternative to the Proposed Action includes the use of another airport or airports to accommodate the demand for commercial, cargo, and general aviation operations. Nearby airports include Palm Springs International Airport, Long Beach Airport, Hollywood Burbank (Bob Hope) Airport, Ontario International Airport, John Wayne Airport, and San Diego International Airport. This alternative would shift traffic from LAX to one or more of these other airports to relieve existing traffic congestion at LAX.

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[9] TranSystems, "Los Angeles International Airport Consolidated Rental Car Facility Project Definition Document," July 1, 2016.

### 3.2.4 TRANSPORTATION DEMAND MANAGEMENT ALTERNATIVE

The Transportation Demand Management (TDM) Alternative would aim to achieve a greater participation in LAWA's planned TDM program, which is a Project Design Feature described in **Appendix A**.[10] The TDM Alternative focuses on expanding from 5 percent participation by LAX-site employees in the TDM Program to include the greater LAX-Gateway Area employee base. The projected LAX-site employees – based upon assumed LAX employee growth over the horizon years of 2024 and 2035 – are projected to increase to 56,300 employees by the 2024 horizon year and to over 62,500 employees by the 2035 horizon year.

The current number of employees working within the Gateway to LAX Business Improvement District (Gateway BID) boundaries is just over 14,000 people. A total of 15,500 employees are anticipated in the Gateway BID area by the 2024 horizon year, and a total of 17,500 employees are anticipated in the Gateway BID area by the 2035 horizon year. The TDM Alternative's goal would be to capture 20 percent of the Gateway BID employees in the TDM program.

This alternative would consist of a LAX TDM Program that includes, but is not limited to the following:

- The formation of a Los Angeles International Airport – Gateway BID Area Transportation Management Organization (TMO) from which to organize and offer alternative transportation programs and benefits to area employees.
- Origin/Destination-based data to organize the following transportation amenities/opportunities for LAX-area employees:
  - Enhanced vanpool program opportunities
  - Enhanced carpool opportunities
  - Transit passes and "first/last mile" transportation for employees residing within two miles of Metro light rail transit stations
  - Employee shuttle program for TMO-based employees that reside within 10 miles of the TMO boundaries, prioritized for employees living within SB 535 designated disadvantaged communities
  - New car-share program opportunities, including "Anytime Mobility" programs to provide either on-site car-share for emergency personal transport or needed employment-related car transport, and/or to provide Transportation Network Company (TNC) car service to employees for personal emergency transport or work-related transport needs

### 3.2.5 MODIFIED MASTER PLAN ALTERNATIVE

As noted in Section 1.1, LAWA proposed multiple transportation facilities including an APM, a ground transportation center, and an intermodal transportation center located outside of the CTA as part of the 2004

[10] City of Los Angeles, Los Angeles World Airports, *Draft Environmental Impact Report for Los Angeles International Airport (LAX) Landside Access Modernization Program*, September 2016., Chapter 5, Alternatives.

LAX Master Plan.[11] The Modified Master Plan Alternative is the same as Alternative D, the preferred Master Plan alternative examined in the Master Plan EIS, with the exception of the APM alignment within the CTA and vehicle operations within the CTA, as described below.

#### 3.2.5.1 Automated People Mover Alignment

The Modified Master Plan Alternative[12] is shown in **Figure 3-2**. The APM analysis included assessment of vertical alignments, horizontal alignments, numbers of CTA stations, and multiple alignments east of the CTA. The various APM options are discussed in detail in **Appendix E**. Inside the CTA, the APM for all three build alternatives identified in this EA are the same. The APM analysis determined an elevated alignment, down Center Way, with three stations would be the most feasible route through the CTA.

The elevated APM alignment allows flexibility along the alignment to avoid existing facilities and work within the CTA's existing space constraints. The single APM alignment, referred to as a "spine" alignment, located along Center Way would travel along the northern portion of Center Way, to the north of the Central Utility Plant and the Theme Building, generally extending from the LAWA Administration Building to between Parking Garages P3 and P4. The APM would consist of three stations within the CTA, one at the west end of the APM alignment, one in the center of the CTA, and one just west of the LAWA Administration Building. The West CTA APM station would service Terminal 4 and the Tom Bradley International Terminal. The Center CTA APM Station would service Terminals 2, 3, 5, and 6; the East CTA APM Station would service Terminals 1, 7, and 8.

Outside the CTA, the Modified Master Plan Alternative APM alignment includes two separate, but coordinated routes, as shown on Figure 3-2. The Modified Master Plan Alternative includes two intermodal transportation facilities: the Ground Transportation Center (GTC) and the Intermodal Transportation Center (ITC). One route would connect the ITC and the CONRAC to the CTA along a route that generally would follow W. 98th Street and Aviation Boulevard. A second route would connect the GTC with the CTA via a route that would be located along the south side of W. Century Boulevard.

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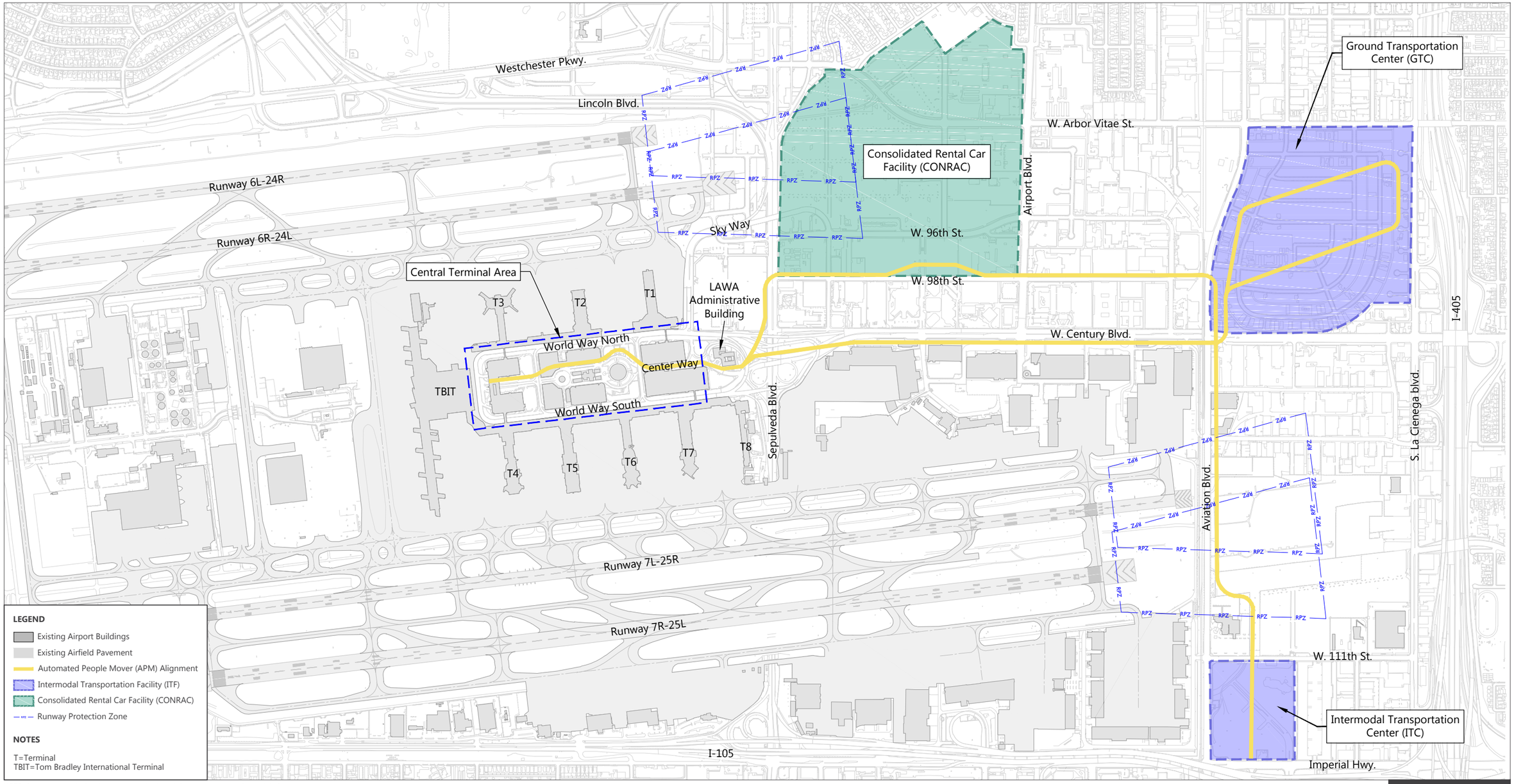
[11] City of Los Angeles, Los Angeles World Airports, *LAX Master Plan*, April 2004.

[12] The Modified Master Plan Alternative is identical to Alternative D from the LAX Master Plan EIS/EIR with the exception of the APM alignment within the CTA. Based on the analysis presented in **Appendix E**, only one APM alignment was considered viable within the CTA.

**[Preliminary Draft for Discussion Purposes Only]**




NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

NORTH 0 1,200 ft.

**FIGURE 3-2**

## Modified Master Plan Alternative

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#### 3.2.5.2 Intermodal Transportation Facilities

The GTC would be an airport access center for private and most commercial vehicles, and provide private vehicle parking; the ITC would serve as the connection point between the Airport, the Metro Green Line station at Imperial Highway and Aviation Boulevard, and regional bus service. In addition, the ITC would provide parking facilities for the public and large buses. Although Alternative D from the LAX Master Plan included the closure of the CTA to private vehicles, LAWA does not intend to close the CTA to passenger traffic; therefore, the Modified Master Plan Alternative assumes that the CTA would remain open to private and commercial vehicles.[13]

##### 3.2.5.2.1 Ground Transportation Center (GTC)

The GTC would be located on 135 acres in the area commonly referred to as Manchester Square. This area is bound by W. Arbor Vitae Street to the north, S. La Cienega Boulevard to the east, W. Century Boulevard to the south, and Aviation Boulevard to the west. This facility, in conjunction with the ITC, would serve a portion of commercial and private vehicular traffic for departing and arriving passengers at LAX. The GTC would provide a conventional airport landside environment for passengers at a separate location from the CTA. The GTC as proposed could include: short-term and long-term parking; e-kiosk check-in; curbfront interface for buses, private autos, taxis, limos, etc.; skycap baggage check-in; first level passenger security screening; APM interface; baggage re-claim (option for re-checked bags); and a compressed Natural Gas (CNG) fueling station.

The GTC would be divided into two parallel passenger-processing facilities with adjacent parking facilities and a commercial vehicle holding area. The passenger-processing facilities would provide access to the APM, which would extend to connect to the CTA. Access to both parking and the APM would be provided via pedestrian bridges and ramps.

##### 3.2.5.2.2 Intermodal Transportation Center (ITC)

The ITC would be located on 29 acres at the northeast corner of Imperial Highway and Aviation Boulevard, and would provide airport access for the Metro Green Line and chartered bus passengers. The primary ITC elements would be: APM and Metro Green Line access; short-term parking; and chartered bus access.

The ITC would serve the premium short-term parking needs of the Airport. Internal to the facility would be a curbfront for pick-up/drop-off of passengers prior to parking their vehicles. The ITC would provide passenger

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[13] As further discussed Section 3.2.6 below, LAWA completed the Specific Plan Amendment Study (SPAS) in 2013. The SPAS studied airfield improvements, terminal improvements, and ground access improvements, including alternatives to the GTC and construction of the APM from the GTC to the CTA as envisioned in the LAX Master Plan (Alternative D). Following completion of the SPAS, the Board of Airport Commissioners (BOAC) and the Los Angeles City Council selected the LAWA "Staff Recommended Alternative", subject to future detailed planning, engineering, and project-level environmental review. Unlike Alternative D from the LAX Master Plan, the BOAC and Los Angeles City Council selected Staff Recommended Alternative would maintain private vehicle access to the CTA.

processing, flight information, e-ticketing kiosks, public restroom facilities, and concession space. The ITC would also provide a curbfront that would specifically accommodate large buses, such as charter and tour buses. An enclosed pedestrian connection would cross over Imperial Highway and under I-105 to connect to the Metro Green Line station at Aviation Boulevard. Metro regional buses would also be accommodated at the Green Line station.

### 3.2.5.3 CONRAC Facility

Under the Modified Master Plan Alternative, the CONRAC would be located on approximately 181 acres within existing Parking Lot C. The site is bound by Nielsen Park to the north, Airport Boulevard to the east, W. 98th Street to the south and Sepulveda Boulevard to the west. Primary elements of the CONRAC under this alternative include customer service building, rental car ready/return parking area, quick turnaround area (QTA), QTA support and additional site functions, and idle storage. Projected space allocations and parking spaces for these components are shown in **Table 3-2**.

**Table 3-2: Modified Master Plan Alternative, CONRAC Space Allocation**

| CONRAC COMPONENT | FLOOR SPACE (SQ. FT.) | PARKING SPACES |
|---|---|---|
| Customer Service Building | 150,000 | N/A |
| Rental Car Ready/Return Parking Area | 2,722,500 | 9,000 |
| Quick Turnaround Area (QTA) | 200,000 | N/A |
| Idle Storage Area | 3,631,000 | 17,100 |
| QTA Support and Additional Site Functions | 120,000 | N/A |
| Bus Plaza | 82,300 | N/A |
| APM Station | 30,000 | N/A |
| Open Space (Landscape Requirements) | 1,040,200 | N/A |
| **Total:** | **7,870,000** [1/] | **26,100** [2/] |

NOTES:

1/ Total may not add exactly due to rounding.

2/ Total reflects a minimum number of spaces.

SOURCE: City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport Master Plan,* April 2004.
PREPARED BY: Ricondo & Associates, Inc., November 2016.

The ready/return garage would consist of a four-level facility connected to a customer service facility. The customer service facility would be located adjacent to the APM station and connected through a direct pedestrian bridge. A common-use QTA would be located adjacent to the ready/return garage.

Vehicle access to the CONRAC would be provided via existing roads from the north, east, and south. Rental car returns would enter on the east side of the garage off Airport Boulevard into the ready/return garage.

Customers would exit out the west side of the garage onto W. 96th Street or out of the garage onto Airport Boulevard southbound.

### 3.2.6 MODIFIED SPECIFIC PLAN AMENDMENT STUDY (SPAS) ALTERNATIVE

LAWA completed the Specific Plan Amendment Study (SPAS)[14] in 2013. The SPAS comprehensively addressed potential alternative designs, technologies, and configurations for certain LAX Master Plan projects identified as the "Yellow Light" projects[15], subject to additional planning and environmental review prior to implementation. The SPAS studied airfield improvements, terminal improvements, and ground access improvements, including alternatives to the GTC and construction of the APM from the GTC to the CTA as envisioned in the LAX Master Plan. Following completion of the SPAS, the Board of Airport Commissioners (BOAC) and the Los Angeles City Council selected the LAWA "Staff Recommended Alternative" as the best alternative to the problems the Yellow Light projects were designed to address, subject to future detailed planning, engineering, and project-level environmental review.[16] Unlike Alternative D from the LAX Master Plan, the Staff Recommended Alternative would maintain private vehicle access to the CTA. The LAX ground access improvements selected for further study as part of the Staff Recommended Alternative included, among other things, development of an ITF, CONRAC, parking outside of the CTA, and an APM linking these new facilities to the CTA and connecting them to the planned Metro facilities. The Modified SPAS Alternative is the same as the Staff Recommended Alternative, with the exception of the APM alignment within the CTA, as described below.

#### 3.2.6.1 Automated People Mover Alignment

The Modified LAX SPAS Alternative[17] is shown in **Figure 3-3**. Inside the CTA, the alignment would be the same as the Modified Master Plan Alternative. Outside the CTA, the Modified SPAS Alterative includes a single APM alignment connecting the CONRAC and ITF to the CTA. The elevated alignment of the Modified SPAS Alternative generally follows W. 98th Street from the CTA to just east of Aviation Boulevard in Manchester Square. The APM alignment would include a bridge over Sepulveda Boulevard and stops at the future Metro LAX/Crenshaw and Green Line Light Rail Station at/near Century and Aviation Boulevards.[18]

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14 City of Los Angeles, Los Angeles World Airports, *Final LAX Specific Plan Amendment Study Report*, January 2013.

15 The "Yellow Light" projects include: development of the GTC, construction of the APM from the GTC to the CTA, and on-site road improvements associated with development of the GTC and construction of the APM.

16 Los Angeles World Airports, Resolution No. 25022, February 5, 2013; City of Los Angeles, City Clerk, April 30, 2013 City Council Action on the Los Angeles International Airport (LAX) Specific Plan Amendment Study (SPAS) Final Environmental Impact Report, and Resolutions and Motions relative to SPAS and related Plan amendments (Notice mailing date: May 1, 2013).

17 The Modified SPAS Alternative is identical to Alternative 9 in the SPAS EIR, with the exception of the APM alignment within the CTA. Based on the analysis presented in **Appendix E**, only one APM alignment was considered viable within the CTA.

18 Subsequent to completion of SPAS, Metro conducted an alternatives analysis and determined that a connection to the APM at Century/Aviation was not feasible. See Los Angeles County Metropolitan Transportation Authority, "Metro Green Line to LAX, Alternatives Analysis Report," April 2012.

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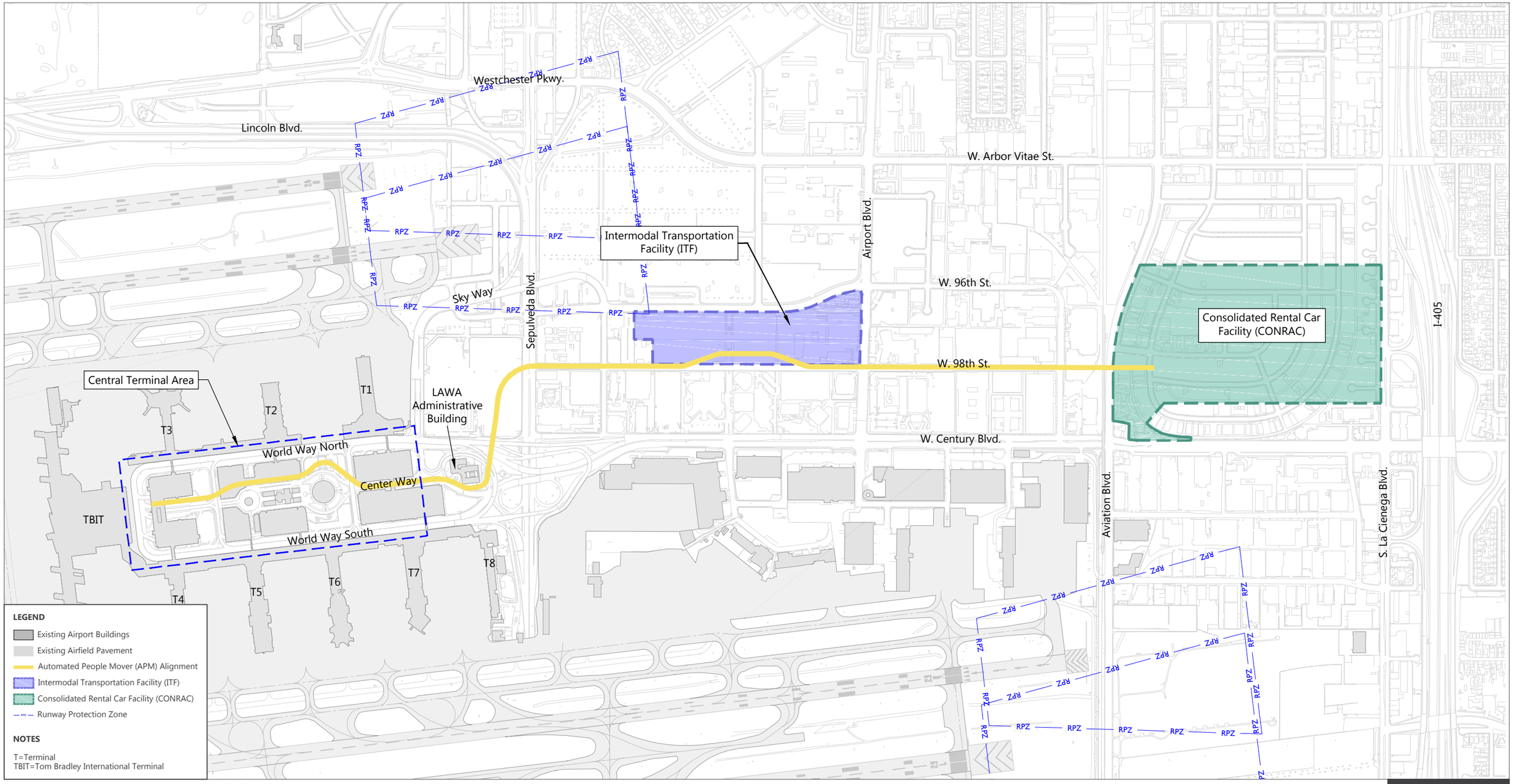
**[Preliminary Draft for Discussion Purposes Only]**




NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 3-3**

## Modified Specific Plan Amendment Study Alternative

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### 3.2.6.2 Intermodal Transportation Facilities

The Modified SPAS Alternative would include a new ITF on 14 acres between W. 96th and W. 98th Streets, between Vicksburg Avenue and Airport Boulevard. Key features of the ITF would include public parking and remote passenger pick-up/drop-off. In addition, arriving passengers could travel to the ITF to board door-to-door shuttles or scheduled buses. Development of the ITF would include approximately 4,900 short-term public parking spaces to facilitate passenger drop-off and pick-up outside of the CTA. The ITF would include public parking, remote passenger and pick-up/drop-off areas, and indoor waiting areas for passengers and meeter/greeters within a multi-story parking structure.

### 3.2.6.3 CONRAC Facility

Under the Modified SPAS Alternative, a CONRAC would be constructed in the southern portion of the area known as Manchester Square. The facility would be generally south of W. Arbor Vitae Street, west of S. La Cienega Boulevard, north of W. Century Boulevard, and east of Aviation Boulevard. The CONRAC facility would include a customer service area and a structured parking facility, accommodating approximately 1,000 parking spaces for QTA and 5,800 parking spaces for ready/return. The CONRAC would include a three-level ready/return vehicle area with a customer service area on level 4, as well as a three-level QTA area. The structured portion of the CONRAC would encompass a total of approximately 63 acres, which includes 45 acres for the ready/return facility, 5 acres for the customer service area and 13 acres for the QTA facilities. Projected space allocations and parking spaces for these components are shown in **Table 3-3**. Projected space allocations for the CONRAC were only estimated for the main facility components.

**Table 3-3: Modified SPAS Alternative, CONRAC Space Allocation**

| CONRAC COMPONENT | FLOOR SPACE (SQ. FT.) [1/] | PARKING SPACES |
|---|---|---|
| Customer Service Building | 218,000 | N/A |
| Rental Car Ready/Return Parking Area | 1,196,000 | 5,800 |
| Quick Turnaround Area (QTA) | 566,000 | 1,000 |
| Idle Storage Area | N/A | 11,000 |
| **Total:** | **3,217,000** [2/] | **17,800** |

NOTES:

N/A = not available

1/ Square footage derived from acreage.

2/ Total square footage is based on overall site acreage, not the sum of the individual CONRAC components.

SOURCE: City of Los Angeles, Los Angeles World Airports, *Preliminary Los Angeles International Airport (LAX) Specific Plan Amendment Study Report*, Appendix E2-2, July 2012.

PREPARED BY: Ricondo & Associates, Inc., February 2017.

The CONRAC would accommodate 11,000 spaces for the staging and storing of vehicles. While the CONRAC would be designed to accommodate the total demand for staging of vehicles in surface parking areas, some longer-term storage of rental car vehicles would be expected to take place at the existing individual rental car

operator sites. The Modified SPAS Alternative also assumed that heavy vehicle maintenance would not be accommodated at the Manchester Square site. Therefore, it was assumed that rental car companies would choose to retain all or a portion of their existing sites for vehicle maintenance and storage. Consequently, continued vehicle trip activity would take place between the CONRAC and the existing, individual rental car properties.

Access to and from the CONRAC would be from multiple locations. To accommodate traffic between southbound I-405 and the CONRAC, a westbound leg of the signalized intersection at La Cienega Boulevard and the I-405 southbound ramps north of Century Boulevard would be constructed. A new northbound leg of the signalized intersection at Century Boulevard and Concourse Way would also be constructed to accommodate CONRAC access. A third signalized entry/exit on Aviation Boulevard between Century Boulevard and Arbor Vitae Street is also likely, but its exact location would depend on the alignment of the CONRAC.

### 3.2.7 PROPOSED ACTION ALTERNATIVE

LAWA conducted additional planning studies after completion of the SPAS to refine the landside access elements and address planning challenges. This planning effort resulted in the Proposed Action Alternative. As part of this planning effort, LAWA considered Metro's plans for a more robust connection to the transit network, as well as coordination with the Los Angeles Department of Transportation (LADOT), California Department of Transportation (Caltrans), and the Southern California Association of Governments (SCAG) for roadway improvements.

#### 3.2.7.1 Automated People Mover Alignment

The Proposed Action Alternative is shown on **Figure 3-4**. Inside the CTA, the APM would be the same as the two previous alternatives. Outside the CTA, the Proposed Action Alternative is similar to the Modified SPAS alternative; however, instead of traveling down W. 98th Street, the alignment would generally follow W. 96th Street. This single APM alignment would connect to the CONRAC facility, two ITFs, the future Metro LAX/Crenshaw and Green Line Light Rail Station at/near W. 96th Street and Aviation Boulevard, and the CTA.

#### 3.2.7.2 Intermodal Transportation Facilities

The Proposed Action Alternative, developed as part of the LAX Landside Access Modernization Program planning process,[19] includes two ITFs: an ITF West and an ITF East, as shown on Figure 3-4. These facilities would function as new gateways to LAX, by providing convenient access to the APM system for those traveling to LAX in private or commercial vehicles. Each facility would be designed to include airport amenities, which may include valet parking, waiting areas, commercial amenities such as dining and concession services, baggage check facilities, and ticketing/information kiosks to make these facilities attractive and convenient alternatives to the CTA.

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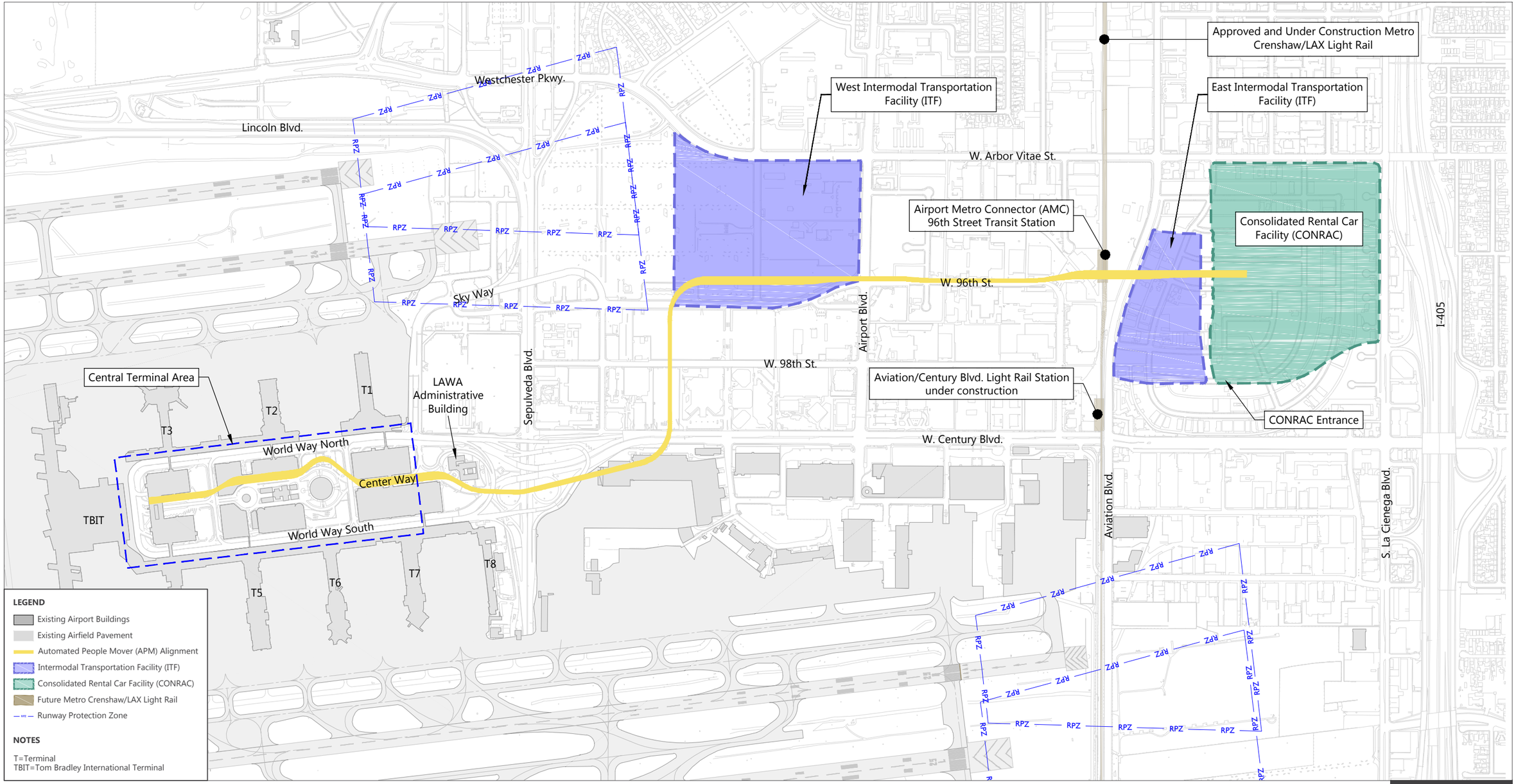
[19] MapLAX, *Los Angeles International Airport Landside Access Modernization Program, Program Brief*, January 2016.

**[Preliminary Draft for Discussion Purposes Only]**




NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 3-4**

## Proposed Action Alternative

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#### 3.2.7.2.1 ITF West

The ITF West facility would be located in the area bound by W. 98th Street to the south, Airport Boulevard to the east, Westchester Parkway to the north, and Parking Lot C parking lot to the west. Currently, this 33-acre area contains the LAX Lot C parking lot, the Metro Lot C City Bus Center, Avis Rental Car facilities, a Burger King restaurant, and LAWA-owned parking lots. The main components of the ITF West include an APM station, two new adjacent and interconnected public parking structures (one with four elevated parking decks and one with five elevated parking decks), a commercial vehicle curb, and internal circulation roads. Approximately 8,000 parking spaces would be provided at the ITF West. The ITF West would also provide curb areas for private vehicles, parking shuttles, hotel shuttles, charter vans, and public transit buses.

#### 3.2.7.2.2 ITF East

The ITF East would be located on a 22-acre site generally east of and adjacent to Aviation Boulevard between W. 96th and W. 98th Streets. The main components of the ITF East include an APM station, an adjacent and interconnected public parking structure, a commercial vehicle curb, and internal circulation roads. Additionally, the ITF East would be connected via a pedestrian walkway to provide access to the proposed Metro AMC 96th Street Transit Station.

The ITF East would provide up to 8,300 public parking spaces in a multi-level parking structure; curb areas would provide pick-up and drop-off areas for private vehicles, limousines, taxis, and other commercial vehicles. Commercial vehicles utilizing the ITF East would include shared ride vans, FlyAway buses, charter buses, transit buses, and charter vans. A short-term parking area with approximately 200 spaces would be provided for certain commercial vehicles to park or dwell while waiting for passengers.

### 3.2.7.3 CONRAC Facility

The Proposed Action Alternative's CONRAC would be located on a 69-acre site in the northeast portion of Manchester Square. Specifically, the facility would be south of W. Arbor Vitae Street, west of S. La Cienega Boulevard (and just west of I-405), north of W. Century Boulevard, and east of Aviation Boulevard. Under the Proposed Action Alternative, the CONRAC would have a footprint of approximately 6 million square feet with dimensions of 1,800 feet in length (north-south) and approximately 1,400 feet in width (east-west). Similar to the Modified Master Plan Alternative, the main components of the CONRAC facility include a customer service building, rental car ready/return parking area, QTA, QTA support and additional site functions, and idle storage. The customer service building is the public hub of the CONRAC. Similar to an airport passenger terminal, the customer service building is the area in which arriving passengers pick-up their rental contracts from the various agencies, and are provided a range of amenities such as restrooms, concession services, and seating areas with internet access. Projected space allocations and parking spaces for the various CONRAC components are shown in **Table 3-4**.

The layout for the CONRAC facility under the Proposed Action Alternative was arrived at through extensive collaboration with the various rental car agencies. The ready/return garage would be housed on the first

three levels of a four-level facility. Level 4 (roof level) would include the customer service building and adjacent APM station, as well as employee and visitor parking. The QTA portion of the CONRAC, including the QTA itself as well as support areas, would be located in two (2) three-level facilities located just to the east of the ready/return garage.

**Table 3-4: Proposed Action Alternative, CONRAC Space Allocation**

| CONRAC COMPONENT | FLOOR SPACE (SQ. FT.) | PARKING SPACES |
|---|---|---|
| Customer Service Building | 278,000 | N/A |
| Rental Car Ready/Return Parking Area | 2,400,000 | 8,000 |
| Quick Turnaround Area (QTA) | 780,000 | N/A |
| Idle Storage Area | 1,900,000 | 10,000 |
| QTA Support and Additional Site Functions | 215,000 | 340 |
| Employee and Visitor's Parking | 362,000 | 1,200 |
| Bus Plaza | 54,000 | 12 |
| APM Station | 23,000 | N/A |
| **Total:** | **6,000,000** [1/] | **19,552** |

NOTE:

1/ Totals may not add exactly due to rounding.

SOURCE: City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport Landside Access Modernization Program Draft Environmental Impact Report*, September 15, 2016.

PREPARED BY: Ricondo & Associates, Inc., November 2016.

New roadways would be constructed to provide access to the CONRAC. Access points would be constructed at Aviation Boulevard, W. Century Boulevard, S. La Cienega Boulevard, and W. Arbor Vitae Street. Access to the CONRAC for customers returning rental vehicles, employees, and visitors would be reached via eastbound and westbound W. 98th Street between extended Concourse Way and S. La Cienega Boulevard. All rental car customers would exit the facility at the northwest corner of the Ready/Return garage, onto an internal circulation road. A signalized intersection at this roadway and W. Arbor Vitae Street would allow rental car customers to make right or left turns onto W. Arbor Vitae Street.

## 3.3 Screening Process and Evaluation Criteria

This section outlines the criteria and screening process utilized to identify feasible alternatives for detailed environmental analysis. The evaluation of the alternatives in this Draft EA was performed using a two-step evaluation process:

- Step 1: Would the alternative meet the Purpose and Need of the Proposed Action, as discussed in Sections 2.2 and 2.3 of this EA?
- Step 2: Would the alternative be feasible to construct within operational and physical constraints at the Airport?

First, each alternative was evaluated to determine whether it would meet the purpose of and need for the Proposed Action. Each alternative found to meet the Step 1 criteria was then evaluated in Step 2 to determine whether or not it would be constructible, considering existing physical and operational constraints, including logistics of maintaining Airport operations during construction. The alternatives meeting all criteria were retained for further analysis of environmental impacts, as presented in Section 5, Environmental Consequences, of this Draft EA. The No Action Alternative was also retained for detailed analysis, as presented in Section 5.

### 3.3.1 STEP 1 CRITERIA: PURPOSE AND NEED

Would the alternative meet the Purpose and Need of the Proposed Action, as discussed in Sections 2.2 and 2.3 of this EA? Each project purpose is listed below with key considerations used in evaluating each alternative.

- Would the alternative improve access options and the landside travel experience for passengers?
  - *Access Redundancy:* Currently at LAX, passenger access to the terminals is provided via one access point. This criterion evaluated each alternative for its ability to provide redundant access option(s) to the CTA.
  - *Enhance the Overall Customer Experience*: This criterion evaluated the passenger experience of an alternative. The overall customer experience is a combination of several key considerations, including: total travel time, walking distances, and passenger convenience. Total travel time is calculated for moving passengers from one end of the proposed system to another. This includes dwell, vehicle, walk, and vertical transfer times. Walking distances were also evaluated to maintain accessibility for all passengers.
- Does the alternative enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways?
  - *Reduce Traffic Volumes and Trips*: This criterion evaluated whether or not an alternative would decrease the overall number of trips and volume of vehicles traveling to the CTA.
  - *Wayfinding*: Each alternative was evaluated based on the ease of passengers and other users to find their way to their destination, thereby reducing congestion in the CTA and on the surrounding street network.
- Would the alternative shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network?
  - *Traffic Decentralization*: This criterion evaluated the ability of each alternative to shift a portion of traffic away from the CTA and off of the surrounding street network.

- *Facility Location and Integration*: This criterion evaluated the location of proposed facilities under each alternative. Key considerations include passenger convenience and integration into the surrounding street network.
- *Adequate Facility Space*: This criterion evaluated the availability of curb space for passenger pick-up and drop-off at proposed facilities, as well as maximizing the availability of short-term and long-term parking.

- Would the alternative provide a direct connection to the Metro rail and transit system?
  - *Regional Transit Connection*: This criterion considered whether or not an alternative would provide direct access to an existing or proposed rail line or station that is part of the regional Metro system.
- Would the alternative improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system including: highways, local roadways, regional transit options, and LAX?
  - *Location*: This criterion considered the proximity of each alternative's individual elements to the regional ground transportation system in terms of component function. For example, rental car activities should be located near the highways to reduce congestion and wayfinding on local roadways. Facilities anticipated to serve local traffic should be easily accessible from major thoroughfares.
  - *Regional Transit Connection*: This criterion evaluated each alternative based on its ability to connect to regional transit options, including but not limited to regional buses, FlyAways, etc. A direct connection to the Metro system was evaluated in the previous criterion.

### 3.3.2 STEP 2 CRITERIA: CONSTRUCTION AND OPERATIONAL FEASIBILITY

The criteria used in the Step 2 screening evaluation addressed several key considerations:

- Would the alternative be feasible to construct within the physical constraints of the Airport environment?
  - *Physical Constraints*: This criterion evaluated the physical constructability of the alternatives' components taking into account existing infrastructure and the cost and complexity to remove or relocate existing facilities.
- Would the alternative maintain access to and within the CTA and passenger terminals?
  - *Maintaining Airport Operations during Construction*: This criterion evaluated to what extent an alternative may affect the operational capabilities of the Airport during construction. Key considerations include minimizing direct and indirect impacts to passenger gates; maintaining key terminal functions and facilities; minimizing roadway closures; and maintaining sufficient parking.

- Are the proposed components of the alternative operationally feasible?
  - *Operational Feasibility*: This criterion evaluated the feasibility of proposed operations under each alternative. These could include, for example, turning radii of proposed APM alignments, effect on APM operations and travel times, and traffic and pedestrian circulation.

# 3.4 Evaluation Results

## 3.4.1 NO ACTION ALTERNATIVE

Pursuant to 40 CFR 1502.14(d) and paragraph 6-2.1(d) of FAA Order 1050.1F and paragraph 706(d) of FAA Order 5050.4B, analysis of the No Action alternative is required.

### Step 1: Purpose and Need

***Would the alternative improve access options and the landside travel experience for passengers?***

The No Action Alternative would not improve access options to the Airport or enhance the landside travel experience for passengers. Under the No Action Alternative, none of the improvements and activities proposed for the LAX Landside Access Modernization Program would occur. Congestion within the CTA and on surrounding roadways would continue to compound, and traffic conditions would deteriorate. Options to access the Airport would be the same as existing conditions. On-Airport parking facilities would not meet current or expected demand. Similar to what happens today, private parking operators likely would expand operations in order to meet their needs and anticipated demand for rental cars. Conversations with the rental car industry during the planning stage of the LAX Landside Access Modernization Program indicated that, if the CONRAC were not constructed, they would need to undertake expansion of their facilities to meet their projected demand. That expansion could occur on their existing property in the form of garage structures or by adding additional acreage. Rental car facilities would remain in their current locations, causing wayfinding issues for passengers. Although this alternative does not meet the Purpose and Need screening criteria, it was retained for comparison to any alternatives that pass the screening criteria, as required by the CEQ regulations.

## 3.4.2 USE OF ALTERNATIVE MODES OF TRANSPORTATION

### Step 1: Purpose and Need

***Would the alternative improve access options and the landside travel experience for passengers?***

The Use of Alternative Modes of Transportation Alternative would not improve access options to the Airport or enhance the landside travel experience for passengers. The distance between the CTA and Metro's existing and planned transit stations requires passengers and employees to take a bus or shuttle between the transit station and the Airport. While some passengers will choose to do so, as they do today, the FAA and LAWA do not have the authority to compel LAX airport users to use other modes of transportation. LAWA could

encourage employees through incentives but even if the use of alternative modes of transportation could capture 20 percent of employee trips this would only address a small fraction of the existing traffic.

Moreover, the lack of a direct connection to the Airport that does not involve traveling on surface streets renders use of other transportation modes an infeasible alternative for improving access options and relieving traffic congestion at LAX. The Use of Alternative Modes of Transportation Alternative does not meet the Purpose and Need screening criteria, and was, therefore, eliminated from further consideration in this EA.

### 3.4.3 USE OF OTHER PUBLIC AIRPORTS ALTERNATIVE

#### Step 1: Purpose and Need

***Would the alternative improve access options and the landside travel experience for passengers?***

The Use of Other Public Airports Alternative would not improve access options to the Airport or enhance the landside travel experience for passengers. The primary purpose of the Proposed Action is to improve access options and the travel experience for LAX passengers, and provide a direct connection to the Metro rail and transit system. An alternative to use other area public airports to replace some or all of the air transportation activity at LAX does not meet this purpose, because the ground access components of LAX would remain unchanged. Passengers currently have the option of using other regional airports for their travel needs, but as detailed in Section 2.3.2, traffic congestion is an existing problem at LAX. Furthermore, due to federal grant obligations and federal law, LAWA does not have the authority without FAA approval to restrict airline operations or force airlines to operate at other airports.[20]

The Use of Other Public Airports Alternative does not meet the Purpose and Need screening criteria, and was, therefore, eliminated from further consideration in this EA.

### 3.4.4 TRANSPORTATION DEMAND MANAGEMENT ALTERNATIVE

#### Step 1: Purpose and Need

***Would the alternative improve access options and the landside travel experience for passengers?***

The Transportation Demand Management Alternative would not improve access options to the Airport or enhance the landside travel experience for passengers. The TDM Alternative is dependent on getting LAX employees and employees within the LAX Gateway Business Improvement District area to utilize a TDM to commute to and from work. Employee trips during the a.m. and p.m. peak periods only account for approximately 8 percent of traffic in the LAX area (see **Appendix L**). Therefore, even if the TDM Program were successful in capturing 20 percent of employee trips to the LAX area, the TDM Program would only reduce overall traffic in the area by less than 2 percent. Thus, the Transportation Demand Management Alternative

[20] Title 14, Code of Federal Regulations (CFR) Part 93.K, *High Density Traffic Airports.*

does not meet the Purpose and Need screening criteria, and was eliminated from further consideration in this EA.

### 3.4.5 MODIFIED MASTER PLAN ALTERNATIVE

#### Step 1: Purpose and Need

***Would the alternative improve access options and the landside travel experience for passengers?***

The Modified Master Plan Alternative would improve access options to the Airport and enhance the landside travel experience for passengers. As discussed in Section 3.2.5, the Modified Master Plan Alternative would include an APM, GTC, ITC and CONRAC. Implementation of an APM would improve access options by providing a redundant access option into the CTA. An APM, in general, would reduce total travel time for moving passengers from one end of the proposed system to another as compared to vehicular traffic. The APM system would connect to two ITFs (the GTC and ITC), located along major thoroughfares with convenient access to and from the I-405 and I-105. Each facility would be designed to include airport amenities, including passenger processing, flight information, e-ticketing kiosks, public restroom facilities, and concession space, thereby improving the travel experience for passengers. Additionally, implementation of a CONRAC would improve access options and the overall travel experience for passengers. By consolidating all the rental car facilities into one centralized location, wayfinding would be improved by eliminating all of the individual rental car signs. Additionally, this consolidated location would give customers one central facility to complete rental car contract paperwork for the company of their choice, as well as pick-up and drop-off their vehicles.

***Does the alternative enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways?***

The Modified Master Plan Alternative would somewhat enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways. Implementation of the GTC and ITC would provide a convenient location outside of the CTA for passenger pick-up and drop-off by private vehicles and commercial shuttles or for passengers and employees to park and take the APM to the CTA. Passengers using the GTC and ITC would be predominantly local residents or employees, which would reduce traffic on the Airport entrance roads and within the CTA. By transferring passengers from vehicles to the APM system, the ITC would reduce the number of vehicles on the CTA roadway system. Similarly, by relocating the majority, and potentially all, of the rental car operations into a centralized location and providing a direct and efficient connection to the APM system, the Modified Master Plan Alternative would eliminate over 3,200 shuttle trips a day to/from the CTA and surrounding streets. However, the majority of people using the CONRAC would be passengers visiting the Los Angeles area, and therefore would not be familiar with the local roadways. As the CONRAC under the Modified Master Plan Alternative would be located approximately 1 mile west of the I-405 and 1.5 miles north of the I-105, wayfinding would continue to be problematic for CONRAC users trying to locate the nearby freeways, and would keep all of the rental cars on the surrounding roadways, adding to traffic congestion around the Airport. This alternative would not provide easy access to the freeway system for rental car users but, would largely meet the purpose and need for the Proposed Action.

***Would the alternative shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network?***

The Modified Master Plan Alternative would shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network. The Modified Master Plan Alternative would include an APM to allow for passengers to be dropped-off or picked-up at remote facilities along the APM alignment, thereby shifting the location of where private and commercial vehicles could operate from within the CTA to outside the CTA and off of the surrounding street network. Under the Modified Master Plan Alternative, the APM would connect to two intermodal transportation facilities (the GTC and ITC) where a portion of passenger traffic would be directed. The GTC is intended for private and most commercial vehicles while the ITC would provide airport access for chartered bus passengers and short-term parking. The GTC and ITC proposed under the Modified Master Plan Alternative would provide a convenient location outside of the CTA for passenger pick-up and drop-off by private vehicles and commercial shuttles or for passengers and employees to park and take the APM to the CTA, which would reduce traffic on the Airport entrance roads and within the CTA. In addition, the CONRAC facility proposed under the Modified Master Plan Alternative would eliminate the use of rental car shuttles operating within the CTA and on the surrounding street network. The proximity to the CTA may also reduce the number of passengers that drop their parties off in the CTA before returning a rental car, thereby shifting where different modes of traffic operate.

***Would the alternative provide a direct connection to the Metro rail and transit system?***

The Modified Master Plan Alternative would provide a direct connection to the Metro rail and transit system. Under The Modified Master Plan Alternative, the ITC, located at the northeast corner of Aviation Boulevard and Imperial Highway, would be connected to the Metro Green Line Aviation/Imperial Highway Station via a pedestrian bridge under the I-105. Access to the regional bus system would also be provided from the ITC.

***Would the alternative improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system including: highways, local roadways, regional transit options, and LAX?***

The Modified Master Plan Alternative would not improve connectivity and mobility for Airport users. Under the Modified Master Plan Alternative, the ITC and GTC would be located adjacent to major thoroughfares with convenient access to the surrounding roadway network. Through the APM, the system would be connected to regional transit options, including the Metro light rail, as well as the Airport itself. However, the CONRAC facility proposed under the Modified Master Plan Alternative would be located in the existing Parking Lot C. This location is adjacent to the CTA and would not provide convenient or direct access to the I-405 freeway, which would continue to pose wayfinding issues to rental car users trying to make their way to and from this facility.

Although the Modified Master Plan Alternative would not provide an optimal location for the CONRAC, this alternative would generally satisfy many of the Purpose and Need criteria, and thus, has been retained for further analysis under the Step 2 criteria.

## Step 2: Construction and Operational Feasibility

***Would the alternative be feasible to construct within the physical constraints of the Airport environment?***

Construction of the Modified Master Plan Alternative would not be feasible within the physical constraints of the Airport. Construction of an APM alignment along W. Century would be located within LAWA property between Sepulveda Boulevard and Aviation Boulevard. However, the right-of-way on W. 98th Street between Airport Boulevard and Bellanca Boulevard is narrow, and is utilized by the existing hotels and businesses for loading and unloading, as their buildings extend right up to the street with no loading docks. Construction of an aerial APM in this area would impact existing facilities and require acquisition of several adjacent parcels. Commercial properties along W. 98th Street consist of hotels and office buildings on the north and south sides of the street. Along the north side are the Four Points by Sheraton Los Angeles International Airport hotel; the Flying Food Group facility; and the Neutrogena Corporation campus. Along the south side of W. 98th Street are the Los Angeles Airport Marriott hotel; the Airport Spectrum office building; and the Hilton Los Angeles Airport hotel. Acquisition of these buildings would be time-consuming, costly[21] and disruptive to the business district along W. 98th Street and Century Boulevard. Relocation of these facilities would be infeasible as they are mostly dependent on proximity to the Airport and suitable areas for their relocation are limited. Additionally, these facilities would need to be relocated prior to construction of the APM, which would materially delay implementation of the Proposed Action. Such delay in implementation of the Proposed Action would further exacerbate the existing traffic congestion in the area and degrade the passenger experience.

In addition, under the Modified Master Plan Alternative, the APM alignment from the CTA to the ITC would be located along the south side of Century Boulevard and turn south along Aviation Boulevard to Imperial Highway. Construction of an aerial APM alignment along Aviation Boulevard would be located within the Runway Protection Zones (RPZs) for Runway 7L-25R and Runway 7R-25L. While Advisory Circular 150/5300-13A notes that "it is desirable to clear all objects from the RPZ," it also acknowledges that "some uses are permitted" with conditions and other "land uses are prohibited."[22] Interim guidance from FAA's Office of Airports (ARP) indicates that prior to contacting the FAA for a rail facility land use within an RPZ, "the airport sponsor must identify and document the full range of alternatives that could … avoid introducing the land use issue within the RPZ."[23] Therefore, as other alternatives are available that would not introduce a land use issue within the RPZ, as well as the physical constraints along W. 98th Street, this alignment option was considered infeasible and was not retained for detailed study in this EA. Also, although not a reason for elimination, it

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21 Based on the latest data available from the City of Los Angeles ZIMAS website, acquisition of the parcels located along 98th Street would be at least approximately $340,000,000, which significantly increases the overall budget of the project when compared to alternative, lower cost options.

22 U.S. Department of Transportation, Federal Aviation Administration, "Advisory Circular 150/5300-13A, Change 1," effective February 26, 2014.

23 Federal Aviation Administration, Memorandum: "Interim Guidance on Land Uses Within a Runway Protection Zone," September 27, 2012.

should be noted that the Modified Master Plan Alternative consists of two separate APM alignments, thereby doubling the construction cost of the APM system.

***Would the alternative maintain access to and within the CTA and passenger terminals?***

Construction of the Modified Master Plan Alternative would not interfere with access to the CTA or passenger terminals. Under the Modified Master Plan Alternative, development of the APM alignment east of the CTA would generally be well-removed from the passenger terminals and adjacent access roads. Construction along W. 98th Street would not interfere with access to the CTA or any other on-Airport facilities. However, construction of any APM alignment along W. Century Boulevard, and specifically at the intersection of Sepulveda Boulevard and W. Century Boulevard (at the entrance of the CTA), would require extensive coordination and a detailed phasing plan to minimize roadway closures in this area. The proposed location for the CONRAC under the Modified Master Plan Alternative is located in the existing Parking Lot C. Development of a CONRAC facility at this location would be well-removed from the passenger terminals and adjacent access roads. Furthermore, development of the GTC facility within the Manchester Square area would be located nearly one mile east of the CTA, and development of the ITC facility at the intersection of Aviation Boulevard and Imperial Highway would be located two miles southeast of the CTA, well-removed from the passenger terminals and adjacent access roads. Construction in these areas would not interfere with access to the CTA or any other on-Airport facilities.

***Are the proposed components of the alternative operationally feasible?***

The proposed components under the Modified Master Plan Alternative would not collectively be operationally feasible. Operations of the GTC, ITC, and CONRAC would function similar to the Modified SPAS Alternative, providing adequate parking facilities and curb space for the private and commercial vehicle operations, as well as consolidated rental car facilities. Internal circulation roadways would provide efficient vehicle and pedestrian circulation. However, the operation of two separate APM routes would be operationally infeasible. Under the Modified Master Plan Alternative, one APM alignment would connect the CTA to the CONRAC and the ITC; a second APM alignment would connect the CTA to the GTC. While individually the APM alignments would be feasible, as they would meet minimum radius requirements and provide dual-track guideways to provide operations in both directions, operational coordination between two routes would be problematic. Two APM routes would result in passenger confusion on which train to take leaving the CTA, as well as decreased minimum headways to accommodate two separate travel times. Therefore, total travel times for APM passengers would increase as compared to a single APM alignment.

Because this alternative does not meet all of the Construction and Operational Feasibility criteria, it was eliminated from further consideration in this EA.

### 3.4.6 MODIFIED SPECIFIC PLAN AMENDMENT STUDY ALTERNATIVE

#### Step 1: Purpose and Need

***Would the alternative improve access options and the landside travel experience for passengers?***

The Modified SPAS Alternative would improve access options to the Airport and enhance the landside travel experience for passengers. As discussed in Section 3.2.6, the Modified SPAS Alternative would include an APM, ITF, and CONRAC. Implementation of an APM would improve access options by providing a redundant access option into the CTA. An APM, in general, would reduce total travel time for moving passengers from one end of the proposed system to another as compared to vehicular traffic. The APM under the Modified SPAS Alternative would also connect to an ITF located outside of the CTA along a major thoroughfare, with convenient access to the surrounding roadway network. The ITF would be designed to include public parking, remote passenger and pick-up/drop-off areas, and indoor waiting areas for passengers and meeter/greeters, improving the travel experience when compared to existing conditions. Additionally, implementation of a CONRAC would improve access options and the overall travel experience for passengers. By consolidating all the rental car facilities into one centralized location, wayfinding would be improved by eliminating all of the individual rental car signs. Additionally, this consolidated location would give customers one central facility to complete rental car contract paperwork for the company of their choice, as well as pick-up and drop-off their vehicles.

***Does the alternative enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways?***

The Modified SPAS Alternative would enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways. Implementation of the ITF would provide a convenient location outside of the CTA for passenger pick-up and drop-off by private vehicles and commercial shuttles or for passengers and employees to park and take the APM to the CTA, which would reduce traffic on the Airport entrance roads and within the CTA. By transferring passengers from vehicles to the APM system, the ITF would reduce the number of vehicles on the CTA roadway system. Similarly, by relocating the majority of the rental car operations into a centralized location and providing a direct and efficient connection to the APM system, the Modified SPAS Alternative would reduce trips to/from the CTA and surrounding streets. While the CONRAC facility under the Modified SPAS Alternative would be designed to accommodate the total demand for staging of vehicles in surface parking areas, some longer-term storage of rental car vehicles would be expected to take place at the existing individual rental car operator sites. Thus some trips to/from existing rental car sites and the CONRAC would continue contributing to traffic and congestion on surrounding roadways. The location of the Modified SPAS Alternative CONRAC would provide improved connectivity to the I-105 and I-405 freeways which would reduce congestion on that part of the surrounding street network.

***Would the alternative shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network?***

The Modified SPAS Alternative would shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network. The Modified SPAS Alternative would include an APM to allow for passengers to be dropped-off or picked-up at remote facilities along the APM alignment, thereby shifting the location of where private and commercial vehicles could operate from within the CTA to outside the CTA and off of the surrounding street network. The ITF proposed under the Modified SPAS Alternative would provide a convenient location outside of the CTA for passenger pick-up and drop-off by private vehicles and commercial shuttles or for passengers and employees to park and take the APM to the CTA, which would reduce traffic on the Airport entrance roads and within the CTA. Convenient access would encourage the shift of private and commercial vehicles from the CTA to the ITF.

***Would the alternative provide a direct connection to the Metro rail and transit system?***

The Modified SPAS Alternative would not provide a direct connection to the Metro rail and transit system. The APM alignment under the Modified SPAS Alternative would be the same as the Staff Recommended SPAS Alternative, in which the APM alignment would connect to the Metro LAX/Crenshaw Line and Green Line and associated station, currently under construction in the general vicinity of Aviation Boulevard and Century Boulevard. However, Metro conducted an alternatives analysis that concluded that a connection to the APM at Century/Aviation was not considered satisfactory.[24] Metro concluded that a second station at 96th Street and Aviation Boulevard would need to be constructed, resulting in an additional transfer with long walk times. As this connection was eliminated from further consideration by Metro, the Modified SPAS Alternative would not provide direct access to the Metro system.

***Would the alternative improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system including: highways, local roadways, regional transit options, and LAX?***

The Modified SPAS Alternative would improve connectivity and mobility for Airport users. Under the Modified SPAS Alternative, the ITF would be located adjacent to major thoroughfares with convenient access to the surrounding roadway network. Through the APM, the system would be connected to regional transit options, including the Metro light rail, as well as the Airport itself. Additionally, the CONRAC facility proposed under the Modified SPAS Alternative would be located adjacent to the I-405 freeway with a new direct connection to I-405 southbound ramps north of Century Boulevard.

Although the Modified SPAS Alternative would not provide a direct connection to the Metro rail and transit system, access would still be provided through a series of connections, and therefore, this alternative would

[24] Los Angeles County Metropolitan Transportation Authority, "Metro Green Line to LAX, Alternatives Analysis Report," April 2012.

generally satisfy some of the Purpose and Need criteria. As such, the Modified SPAS Alternative has been retained for further analysis under the Step 2 criteria.

## Step 2: Construction and Operational Feasibility

***Would the alternative be feasible to construct within the physical constraints of the Airport environment?***

Construction of the Modified SPAS Alternative would not be feasible within the physical constraints of the Airport. Construction of an APM alignment along W. 96th Street would be located within LAWA property between Sepulveda Boulevard and Aviation Boulevard. However, the right-of-way on W. 98th Street between Airport Boulevard and Bellanca Boulevard is narrow, and is utilized by the existing hotels and businesses for loading and unloading, as their buildings extend right up to the street with no loading docks. Construction of an aerial APM in this area would impact existing facilities and require acquisition of several adjacent parcels. Commercial properties along W. 98th Street consist of hotels and office buildings on the north and south sides of the street. Along the north side are the Four Points by Sheraton Los Angeles International Airport hotel; the Flying Food Group facility; and the Neutrogena Corporation campus. Along the south side of W. 98th Street are the Los Angeles Airport Marriott hotel; the Airport Spectrum office building; and the Hilton Los Angeles Airport hotel. Acquisition of these buildings would be time-consuming, costly[25] and disruptive to the business district along W. 98th Street and Century Boulevard. Relocation of these facilities would be infeasible as they are mostly dependent on proximity to the Airport and suitable areas for their relocation are limited. Additionally, these facilities would need to be relocated prior to construction of the APM, which would materially delay implementation of the Proposed Action. Such delay in implementation of the Proposed Action would further exacerbate the existing traffic congestion in the area and degrade the passenger experience. Due to the potential impacts to businesses and the hospitality industry in this area, as well as impacts to implementation of the Proposed Action, LAWA determined that this alternative was not feasible.

***Would the alternative maintain access to and within the CTA and passenger terminals?***

Construction of the Modified SPAS Alternative would not interfere with access to the CTA or passenger terminals. Under the Modified SPAS Alternative, development of the APM alignment east of the CTA would generally be well-removed from the passenger terminals and adjacent access roads. Construction along W. 98th Street would not interfere with access to the CTA or any other on-Airport facilities. However, construction of any APM alignment at the intersection of Sepulveda Boulevard and W. Century Boulevard (at the entrance of the CTA) would require extensive coordination and a detailed phasing plan to minimize roadway closures in this area. The proposed location for the ITF under the Modified SPAS Alternative is located west of Airport Boulevard between W. 98th Street and W. 96th Street. Development of an ITF facility

[25] Based on the latest data available from the City of Los Angeles ZIMAS website, acquisition of the parcels located along 98th Street would be at least approximately $340,000,000, which significantly increases the overall budget of the project when compared to alternative, lower cost options.

at this location would be well-removed from the passenger terminals and adjacent access roads. Construction in this area would not interfere with access to the CTA or any other on-Airport facilities. Furthermore, development of a CONRAC facility within the Manchester Square area would be located nearly one mile east of the CTA, well-removed from the passenger terminals and adjacent access roads. Construction in this area would not interfere with access to the CTA or any other on-Airport facilities.

***Are the proposed components of the alternative operationally feasible?***

The proposed components under the Modified SPAS Alternative would be operationally feasible for individual components as well as the system as a whole. The majority of the APM alignment proposed under Modified SPAS Alternative is a straight-away. This alignment only requires three turning movements outside of the CTA which would accommodate the turning radii of the APM trains. A dual-track guideway provides simultaneous operations in two directions, both to and from the CTA. Operations of the proposed ITF under the Modified SPAS Alternative would provide adequate parking facilities and curb space for the private and commercial vehicle operations. Internal circulation roadways have been planned for efficient vehicle and pedestrian circulation. Pedestrian walkways would provide access to the adjacent APM station to provide time-certain access to the CTA. Additionally, in general, consolidated rental car facilities are planned and designed by consultants specific to each location. Operations of a CONRAC under the Modified SPAS Alternative would be designed to ensure efficient functionality and vehicular and pedestrian circulation.

Because this alternative does not meet all of the Construction and Operational Feasibility criteria, it was eliminated from further consideration in this EA.

### 3.4.7 PROPOSED ACTION ALTERNATIVE

#### Step 1: Purpose and Need

***Would the alternative improve access options and the landside travel experience for passengers?***

The Proposed Action Alternative would improve access options to the Airport and enhance the landside travel experience for passengers. As discussed in Section 3.2.7, the Proposed Action Alternative would include an APM, two ITFs, and CONRAC. Implementation of an APM would improve access options by providing a redundant access option into the CTA. An APM, in general, would reduce total travel time for moving passengers from one end of the proposed system to another as compared to vehicular traffic. The APM under the Proposed Action Alternative would also connect to two ITFs. These ITFs are located in areas designed to capture traffic from the main vehicular entrance corridors to LAX. The West ITF is designed to capture traffic traveling from the north and south, and the East ITF is designed to capture traffic traveling from the east and the I-405. Each facility would be designed to include airport amenities, which may include valet parking, waiting areas, commercial amenities such as dining and concession services, baggage check facilities, and ticketing/information kiosks, thereby improving the travel experience for passengers. Additionally, implementation of a CONRAC would improve access options and the overall travel experience for passengers. By consolidating all the rental car facilities into one centralized location, wayfinding would be improved by eliminating all of the individual rental car signs. Additionally, this consolidated location would give customers

one central facility to complete rental car contract paperwork for the company of their choice, as well as pick-up and drop-off their vehicles.

***Does the alternative enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways?***

The Proposed Action Alternative would enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways. The Proposed Action Alternative would provide convenient locations for passenger pick-up and drop-off with a connection to the APM system, thereby shifting traffic patterns and reducing the number of vehicles entering the CTA roadway system and on the surrounding streets. Similarly, by relocating the majority, and potentially all, of the rental car operations into a centralized location and providing a direct and efficient connection to the APM system, the Proposed Action Alternative would eliminate over 3,200 shuttle trips a day to/from the CTA and surrounding streets. The location of the CONRAC also provides improved connectivity to the I-105 and I-405 freeways which would reduce congestion on the surrounding street network.

***Would the alternative shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network?***

The Proposed Action Alternative would shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network. The Proposed Action Alternative would include an APM to allow for passengers to be dropped-off or picked-up at remote facilities along the APM alignment, thereby shifting the location of where private and commercial vehicles could operate from within the CTA to outside the CTA and off of the surrounding street network. The ITFs would provide convenient locations outside of the CTA for passenger pick-up and drop-off by private vehicles and commercial shuttles or for passengers and employees to park and take the APM to the CTA. Commercial vehicles would be assigned to either of the ITFs instead of traveling to/from the CTA. Additionally, the CONRAC facility proposed under the Proposed Action Alternative would eliminate the use of rental car shuttles operating within the CTA and on the surrounding street network. The CONRAC would also provide a bus plaza to serve any off-Airport rental agency shuttles and other commercial vehicles. Therefore, various modes of traffic would either be eliminated or relocated from the CTA to the CONRAC.

***Would the alternative provide a direct connection to the Metro rail and transit system?***

The Proposed Action Alternative would provide a direct connection to the Metro rail and transit system. As part of the Proposed Action Alternative, the ITF East would include a pedestrian walkway connecting directly to the proposed Metro AMC 96th Street Transit Station located at Aviation Boulevard and W. 96th Street. The proposed Metro Station would connect to the LAX/Crenshaw Line, the Green Line, the regional bus system, and bicycle facilities.

***Would the alternative improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system, including: highways, local roadways, regional transit options, and LAX?***

The Proposed Action Alternative would improve connectivity and mobility for Airport users. Under the Proposed Action Alternative, both ITFs would be located on major thoroughfares with convenient access to the surrounding roadway network. The ITF West is designed to capture traffic traveling from the north and south, and the ITF East is designed to capture traffic traveling from the east and the I-405. Additionally, the ITF East would provide a direct connection to the Metro rail and transit system through a pedestrian walkway. Further, the CONRAC facility proposed would be located adjacent to the I-405 freeway with a new direct connection to the on- and off-ramps. The site would also be located adjacent to and connected with the proposed Metro AMC 96th Street Transit Station via a pedestrian walkway.

Thus, the Proposed Action Alternative meets all of the purpose and need criteria and was assessed under the Step 2 criteria.

## Step 2: Construction and Operational Feasibility

***Would the alternative be feasible to construct within the physical constraints of the Airport environment?***

Construction of the Proposed Action Alternative would be feasible within the physical constraints of the Airport. Under the Proposed Action Alternative, construction of the APM alignment along W. 96th Street would be located within LAWA property between Sepulveda Boulevard and Aviation Boulevard. Additionally, the right of way along W. 96th Street from Airport Boulevard to Bellanca Boulevard is wider than W. 98th Street and would provide adequate space for the APM support columns. However, this alternative would require an easement through existing properties located along the proposed alignment between Bellanca Boulevard and Aviation Boulevard. The Proposed Action Alternative also includes the construction of the ITF West, the ITF East and the CONRAC. The ITF West would be constructed in what is generally occupied by the existing Parking Lot C. There are no physical constraints that would prohibit development of an ITF in this area. The proposed site for the ITF East and the CONRAC is located within the previously residential area of Manchester Square. Existing conditions in this area consist mostly of vacant land as a result of the on-going Aircraft Noise Mitigation Program and therefore does not present any physical constraints, once the remaining parcels are acquired.

***Would the alternative maintain access to and within the CTA and passenger terminals?***

Construction of the Proposed Action Alternative would not interfere with access to the CTA or passenger terminals. Under the Proposed Project Alternative, development of the APM alignment east of the CTA would generally be well-removed from the passenger terminals and adjacent access roads. Construction along W. 96th Street would not interfere with access to the CTA or any other on-Airport facilities. However, construction of any APM alignment at the intersection of Sepulveda Boulevard and W. Century Boulevard (at the entrance of the CTA) would require extensive coordination and a detailed phasing plan to minimize roadway closures in this area. Development of the ITF facilities within the existing Parking Lot C and the

Manchester Square area, as well as the construction of the CONRAC in the Manchester Square area, would be well-removed from the passenger terminals and adjacent access roads. Construction in these areas would not interfere with access to the CTA or any other on-Airport facilities.

***Are the proposed components of the alternative operationally feasible?***

The proposed components under the Proposed Action Alternative would be operationally feasible for individual components as well as the system as a whole. The majority of the APM alignment proposed under the Proposed Action Alternative is a straight-away. This alignment only requires two turning movements outside of the CTA which would accommodate the turning radii of the APM trains. A dual-track guideway provides simultaneous operations in two directions, both to and from the CTA. Operations of the proposed ITFs under the Proposed Action Alternative would provide adequate parking facilities and curb space for the private and commercial vehicle operations. Internal circulation roadways have been planned for efficient vehicle and pedestrian circulation. Pedestrian walkways would provide access to the adjacent APM stations to provide time-certain access to the CTA. Additionally, LAWA and its consultants have worked with various rental car companies regarding the location of the CONRAC for over 24 months. Facility planners and representatives for the rental car companies have thoroughly analyzed the operations of this facility to ensure efficient functionality and vehicular and pedestrian circulation.

Thus, the Proposed Action Alternative meets all of the construction and operational feasibility criteria and was retained for further evaluation.

## 3.5 Alternatives Screening Process Results Summary

Each of the alternatives was evaluated against the Step 1 evaluation criteria. If an alternative did not pass all evaluation criteria in that step, it was eliminated from further consideration and not carried forward to Step 2. Similarly, in the Step 2 evaluation, retained alternatives that did not pass evaluation criteria in that step were eliminated. The exception is the No Action Alternative, which is retained pursuant to NEPA as implemented by the CEQ regulations. **Table 3-5** summarizes the results of the alternatives screening evaluation. **Table 3-6** summarizes the evaluation criteria for each alternative.

## 3.6 Sponsor's Preferred Alternative

The LAX Landside Access Modernization Program is comprised of three major ground transportation elements: an APM, ITF(s), and a CONRAC. The description of the Proposed Action Alternative, described in detail in Section 1.2 and **Appendix A**, is subject to modification during final design, including surveys and FAA approvals.

**Table 3-5: Summary of Alternatives Screening Evaluation**

| ALTERNATIVE | ALTERNATIVE PASS TO THE NEXT STEP | | RETAINED FOR FURTHER ANALYSIS IN THE DRAFT EA? |
|---|---|---|---|
| | STEP 1 | STEP 2 | |
| No Action Alternative | No | | **Yes** |
| Use of Alternative Modes of Transportation | No | | No |
| Use of Other Public Airports Alternative | No | | No |
| Transportation Demand Management Alternative | No | | No |
| Modified Master Plan Alternative | Yes | No | No |
| Modified SPAS Alternative | Yes | No | No |
| Proposed Action Alternative | Yes | Yes | **Yes** |

SOURCE: Ricondo & Associates, Inc., February 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

**Table 3-6 (1 of 3): Evaluation Criteria Summary**

| | NO ACTION ALTERNATIVE | USE OF ALTERNATIVE MODES OF TRANSPORTATION | USE OF OTHER PUBLIC AIRPORTS ALTERNATIVE | TDM ALTERNATIVE | MODIFIED MASTER PLAN ALTERNATIVE | MODIFIED SPAS ALTERNATIVE | PROPOSED ACTION ALTERNATIVE |
|---|---|---|---|---|---|---|---|
| Step 1: Purpose and Need | | | | | | | |
| **Would the alternative improve access options and the landside travel experience for passengers?** | **No** | **No** | **No** | **No** | Yes | Yes | Yes |
| Access Redundancy | Would not provide redundant access to the CTA | Would not provide redundant access to the CTA | Would not provide redundant access to the CTA | Would not provide redundant access to the CTA | Would provide redundant access to the CTA via an APM | Would provide redundant access to the CTA via an APM | Would provide redundant access to the CTA via an APM |
| Enhance the Overall Customer Experience | Would not enhance the landside travel experience | Would not enhance the landside travel experience | Would not enhance the landside travel experience | Would not enhance the landside travel experience | Additional amenities, improved wayfinding | Additional amenities, improved wayfinding | Additional amenities, improved wayfinding |
| **Does the alternative enhance efficiency and alleviate delays and congestion of on-Airport and surrounding roadways?** | N/A | N/A | N/A | N/A | Yes | Yes | Yes |
| Reduce Traffic Volumes and Trips | N/A | N/A | N/A | N/A | Would provide GTC and ITC and consolidate CONRAC shuttles but not remove rental car traffic from surrounding roadways | Would provide improved connectivity to freeways to reduce traffic from surrounding roadways | Would provide improved connectivity to freeways to reduce traffic from surrounding roadways |
| Wayfinding | N/A | N/A | N/A | N/A | Improved Wayfinding | Improved Wayfinding | Improved Wayfinding |
| **Would the alternative shift a portion of traffic from the CTA to outside the CTA and off of the surrounding street network?** | N/A | N/A | N/A | N/A | Yes | Yes | Yes |
| Traffic Decentralization | N/A | N/A | N/A | N/A | Would provide facilities away from the CTA | Would provide facilities away from the CTA | Would provide facilities away from the CTA |

**Table 3-6 (2 of 3): Evaluation Criteria Summary**

| | NO ACTION ALTERNATIVE | USE OF ALTERNATIVE MODES OF TRANSPORTATION | USE OF OTHER PUBLIC AIRPORTS ALTERNATIVE | TDM ALTERNATIVE | MODIFIED MASTER PLAN ALTERNATIVE | MODIFIED SPAS ALTERNATIVE | PROPOSED ACTION ALTERNATIVE |
|---|---|---|---|---|---|---|---|
| Facility Location and Integration | N/A | N/A | N/A | N/A | Would slightly improve connectivity to freeways | Would provide improved connectivity to freeways | Would provide improved connectivity to freeways |
| Adequate Facility Space | N/A | N/A | N/A | N/A | Sufficient space would be provided for proposed facilities | Sufficient space would be provided for proposed facilities | Sufficient space would be provided for proposed facilities |
| **Would the alternative provide a direct connection to the Metro rail and transit system?** | N/A | N/A | N/A | N/A | Yes | **No** | Yes |
| Regional Transit Connection | N/A | N/A | N/A | N/A | Pedestrian bridge from the ITC would connect to existing Metro Station | CONRAC and APM would be located adjacent to existing and proposed Metro Stations | ITF and CONRAC would be located adjacent to and connected to the proposed Metro Station |
| **Would the alternative improve connectivity and mobility for Airport passengers, visitors, and employees between the regional ground transportation system including: highways, local roadways, regional transit options, and LAX?** | N/A | N/A | N/A | N/A | **No** | Yes | Yes |
| Location/Regional Transit Connection | N/A | N/A | N/A | N/A | The location of the CONRAC would not provide convenient access to the freeways | Would provide improved connectivity to freeways and regional transit | Would provide improved connectivity to freeways and regional transit |

**Table 3-6 (3 of 3): Evaluation Criteria Summary**

| | NO ACTION ALTERNATIVE | USE OF ALTERNATIVE MODES OF TRANSPORTATION | USE OF OTHER PUBLIC AIRPORTS ALTERNATIVE | TDM ALTERNATIVE | MODIFIED MASTER PLAN ALTERNATIVE | MODIFIED SPAS ALTERNATIVE | PROPOSED ACTION ALTERNATIVE |
|---|---|---|---|---|---|---|---|
| Step 2: Construction and Operational Feasibility | | | | | | | |
| **Would the alternative be feasible to construct within the physical constraints of the Airport environment?** | N/A | N/A | N/A | N/A | **No** | **No** | Yes |
| Physical Constraints | N/A | N/A | N/A | N/A | Construction of an APM along W. 98th Street is not considered feasible; an APM along Aviation Blvd would be in existing RPZs | Construction of an APM along W. 98th Street is not considered feasible | Parcel acquisition as part of on-going Aircraft Noise Mitigation Program |
| **Would the alternative maintain access to and within the CTA and passenger terminals?** | No | N/A | N/A | N/A | Yes | Yes | Yes |
| Maintaining Airport Operations during Construction | N/A | N/A | N/A | N/A | Construction would not interfere with access to the CTA or other on-Airport facilities | Construction would not interfere with access to the CTA or other on-Airport facilities | Construction would not interfere with access to the CTA or other on-Airport facilities |
| **Are the proposed components of the alternative operationally feasible?** | N/A | N/A | N/A | N/A | **No** | Yes | Yes |
| Operational Feasibility | N/A | N/A | N/A | N/A | Operational coordination between two APM routes would be unsatisfactory | All facilities would sufficiently accommodate proposed functions | All facilities would sufficiently accommodate proposed functions |

SOURCE: Ricondo & Associates, Inc., April 2017.
PREPARED BY: Ricondo & Associates, Inc., April 2017.

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# 4. Affected Environment

This section describes the existing conditions and resources within the geographic area that could potentially be directly or indirectly affected by the implementation of the Proposed Action. The Council on Environmental Quality (CEQ) regulations define direct effects as those "which are caused by the action and occur at the same time and place."[1] Indirect effects are defined by the CEQ regulations as those "which are caused by the action and are later in time and farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems."[2] In accordance with FAA Orders 1050.1F[3] and 5050.4B,[4] those resources that could potentially be affected by the Proposed Action are discussed herein. This section identifies the geographic areas potentially affected by the Proposed Action, identifies environmental resources that would not be affected by the Proposed Action, and documents existing conditions for potentially affected resources.

## 4.1 Identification and Description of Study Area

### 4.1.1 PROPOSED PROJECT AREA

For the purposes of assessing the potential direct and indirect effects of the Proposed Action and the No Action Alternative on environmental resources, a study area, referred to as the Proposed Project Area, was defined to encompass the overall area containing all components of the Proposed Action. The Proposed Project Area encompasses approximately 775 acres and is generally bound by Tom Bradley International Terminal (TBIT) to the west, Interstate 405 (I-405) to the east, Westchester Parkway/W. Arbor Vitae Street to the north, and Interstate 105 (I-105) to the south. To facilitate analysis, the Proposed Project Area, shown on **Figure 4-1**, was divided into three zones: 1) the Central Terminal Area (CTA), 2) East of the Central Terminal

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1 President's Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) § 1508.8(a).

2 President's Council on Environmental Quality (CEQ) Regulations 40 Code of Federal Regulations (CFR) § 1508.8(b).

3 U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

4 U.S. Department of Transportation, Federal Aviation Administration, Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, effective April 28, 2006.

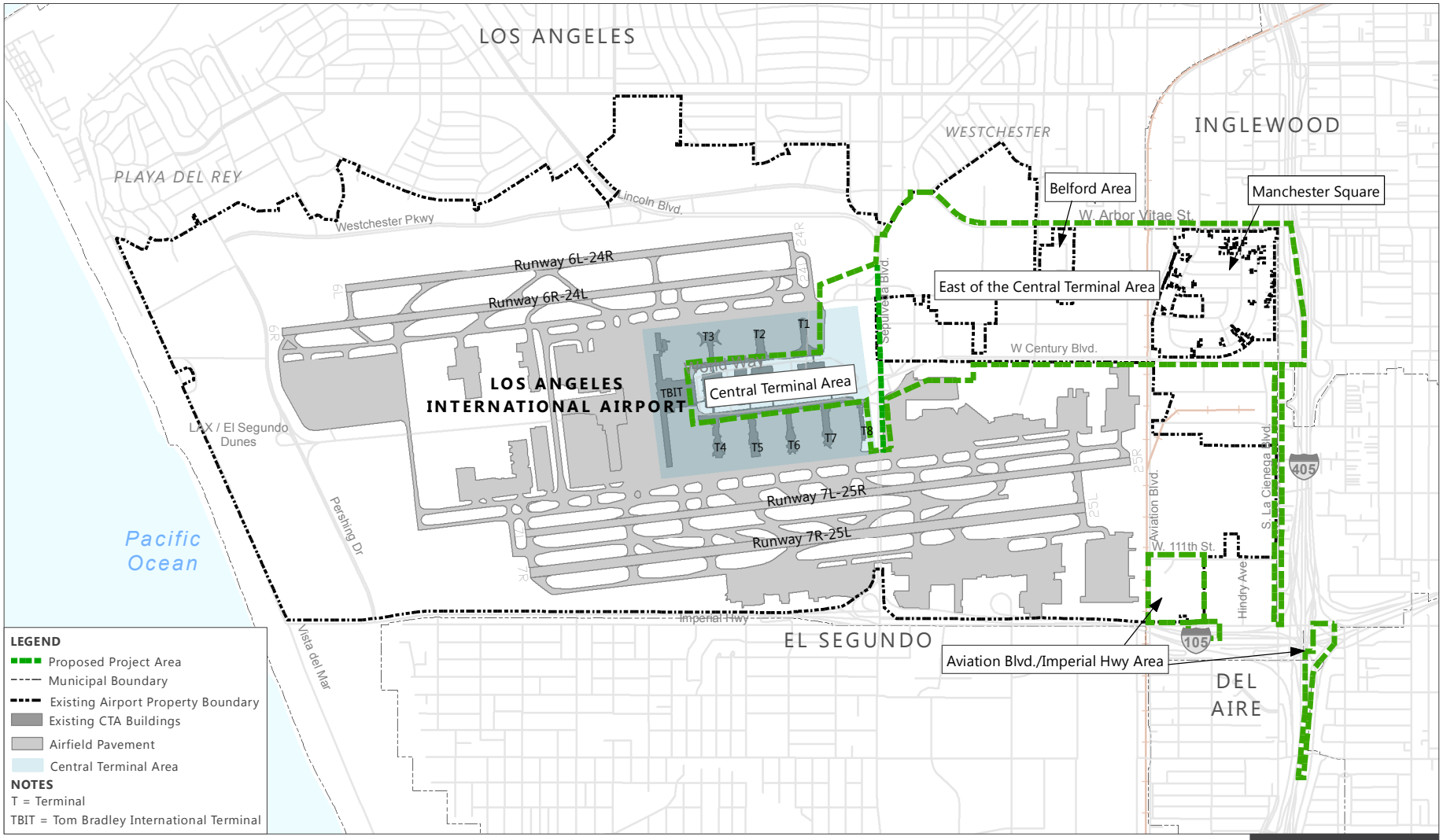
Area, and 3) Aviation Boulevard/Imperial Highway Area. The CTA is the area located west of Sepulveda Boulevard and encompasses the LAX passenger terminals along World Way.

The East of the Central Terminal Area is bounded by W. Arbor Vitae Street/LAX property boundary to the north, I-405 to the east, W. Century Boulevard to the south, and Sepulveda Boulevard on the west. The Aviation Boulevard/Imperial Highway Area is bounded by W. 111th Street to the north, Hindry Avenue to the east, Imperial Highway and I-105 to the south, and Aviation Boulevard to the west. The I-405 Northbound Auxiliary Lane and the Imperial Highway exit ramp are also included in the Aviation Boulevard/Imperial Highway Area. The Proposed Project Area is primarily developed with various aviation-related, commercial, and medium-density residential land uses, with some vacant areas associated with the Belford and Manchester Square Areas.

The Proposed Project Area, as shown on Figure 4-1, encompasses the physical components of the Proposed Action. Construction of the Proposed Action would occur within the Proposed Project Area, except for some of the roadway project proposed design features, discussed further below. **Figure 4-2** identifies the proposed construction staging areas and haul routes. For some resources, including air quality, surface transportation/traffic, and historic resources, a larger study area was required in order to capture the full effects of the Proposed Action. The Traffic Study Area, as discussed in detail in Section 4.11.2.3 and shown on Figure 4-11, covers approximately eight square miles and extends into adjacent jurisdictions; this area was used to analyze traffic impacts and impacts to air quality as a result of surface traffic. The Traffic Study Area also encompasses the project proposed design features, incorporated into the Proposed Action to avoid and minimize traffic impacts on area roadways in the surrounding jurisdictions (see **Appendix A**). The project proposed design features include, but are not limited to, signal modifications, restriping, Closed Circuit TV (CCTV) Cameras, and Changeable Message Signs (CMS), which involve minimal construction and would all occur within existing roadway right-of-way. For historic resources, an Area of Potential Effect (APE) was delineated to identify the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. The APE is further discussed in Section 4.7.2.

Two largely vacant residential neighborhoods are located within the East of the Central Terminal Area, identified as the Belford Area and Manchester Square on Figure 4-1. The Belford Area is approximately 19 acres and is generally bounded by W. Arbor Vitae Street to the north, Belford Avenue to the east, W. 98th Street to the south, and Airport Boulevard to the west. The area was formerly occupied by residential uses, but is now largely vacant, having been included in a voluntary acquisition/relocation program established in 2000 at the request of the homeowners and residents to be relocated out of the area in lieu of soundproofing.

[Preliminary Draft for Discussion Purposes Only]




SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
National Geographic World Map, ESRI Database, 2011.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

**FIGURE 4-1**

Proposed Project Area

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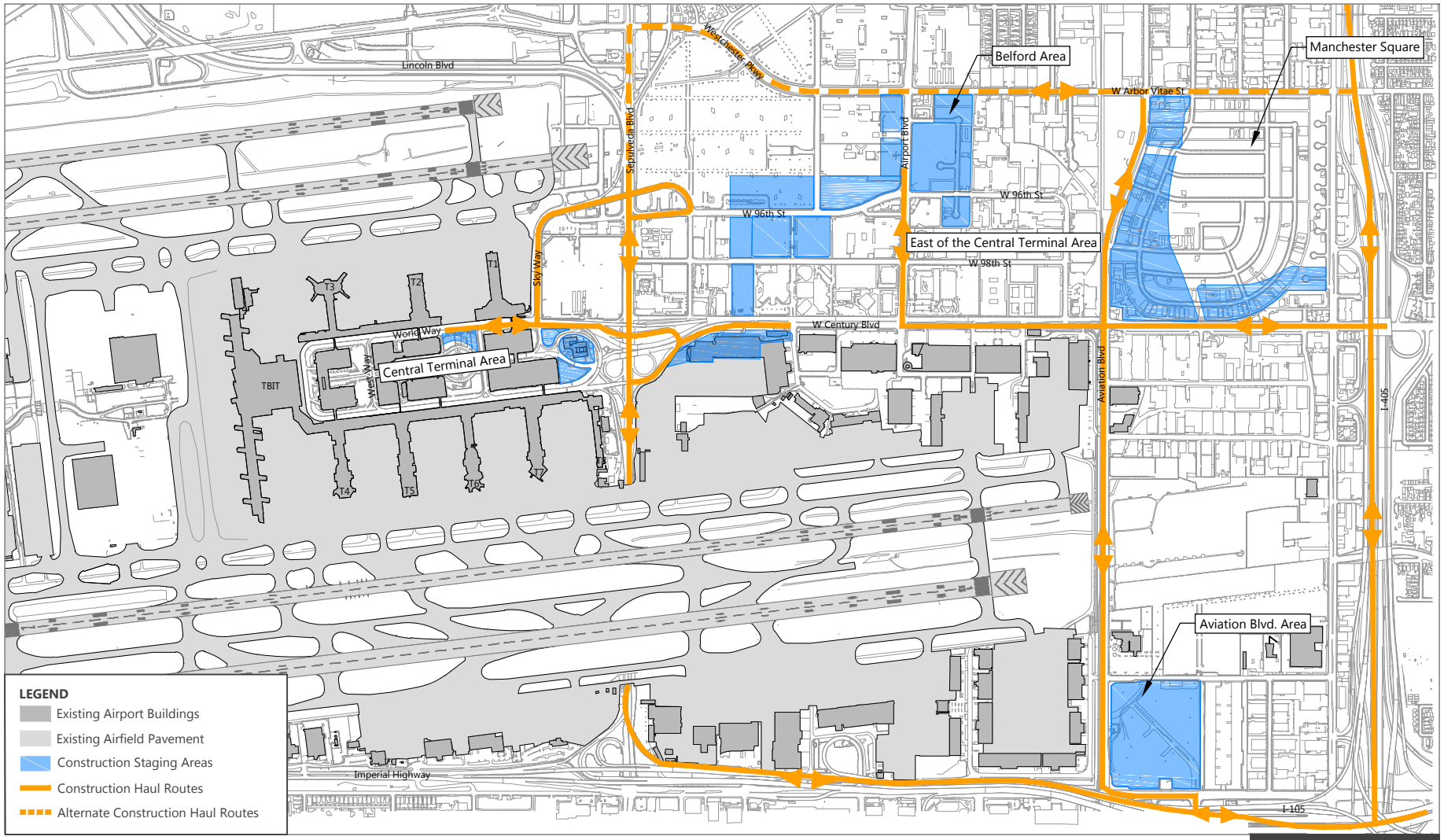
**[Preliminary Draft for Discussion Purposes Only]**




SOURCE: HNTB Corp., Los Angeles International airport Layout Plan, July 2012; Ricondo & Associates, Inc., December 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 4-2**

NORTH 0 1,700 ft.

## Proposed Haul Routes and Staging Areas

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Belford once contained 583 multi-family residential units within 49 different properties, but, as of August 2016, only one multi-family residential structure remains at the corner of Belford Avenue and West 96th Street. Using 2010 U.S. Census records and the City of Los Angeles Geographic Information System data, it has been estimated that approximately 22 residents remain in the Belford area.[5,6]

The Manchester Square area comprises approximately 135 acres and is generally bounded by W. Arbor Vitae Street to the north, S. La Cienega Boulevard to the east, Century Boulevard to the south, and Aviation Boulevard to the west. Similar to the Belford Area described above, Manchester Square was once primarily occupied by residential uses, but is now largely vacant as a result of participation in the voluntary acquisition/relocation program. Approximately 280 single-family residences and 1,705 multi-family residences on approximately 519 properties previously existed in Manchester Square; however, as of August 2016, 6 single-family residential structures and 31 multi-family residential units remain. Using 2010 U.S. Census records and the City of Los Angeles Geographic Information System data, it has been estimated that approximately 508 residents remain in Manchester Square.[7,8] There are also currently two public school facilities situated in the western portion of Manchester Square: the Stella Middle Charter Academy (grades 7-8) and the Bright Star Secondary Charter Academy (grades 9-12) are located at 5431 W. 98th Street. The 2014–2015 enrollments for these schools were 509 students and 552 students, respectively.[9] As part of the existing Aircraft Noise Mitigation Program (ANMP), the schools have been previously identified for acquisition and relocation. As such, LAWA plans to purchase both facilities under the ANMP from the Los Angeles Unified School District (see **Appendix A**).

### 4.1.2 STUDY YEARS

Temporary effects and ground disturbance effects associated with construction of the Proposed Action would occur in two phases, as discussed in Section 1.3. Phase 1 would be constructed between 2018 and 2024, and Phase 2 would begin in 2025 and be completed by 2030. Section 5, Environmental Consequences, analyzes interim years for construction (Phase 1: 2018-2024 and Phase 2: 2025-2030), and operational years 2024, 2030, and 2035.

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5 U.S. Department of Commerce, U.S. Census Bureau, 2010 Decennial Census Data, Available: http://factfinder.census.gov/, accessed February 24, 2016.

6 City of Los Angeles, *Zone Info and Map Access System*, Available: http://zimas.lacity.org/, accessed February 24, 2016.

7 U.S. Department of Commerce, U.S. Census Bureau, 2010 Decennial Census Data, Available: http://factfinder.census.gov/, accessed February 24, 2016.

8 City of Los Angeles, *Zone Info and Map Access System*, Available: http://zimas.lacity.org/, accessed February 24, 2016.

9 California Department of Education, Educational Demographics Unit, "Data Quest," Available: http://dq.cde.ca.gov/dataquest/dataquest.asp, accessed May 11, 2017.

## 4.2 Environmental Resources Not Affected

Of the environmental impact categories defined in FAA Order 1050.1F, the following resources have been eliminated from further consideration, because they either do not exist within the Proposed Project Area or would otherwise not be affected by the Proposed Action:

- Biological Resources – The Proposed Project Area is located on previously disturbed and developed land with airport-related or urban uses. Previous site surveys and database searches revealed that there are no federal or state threatened, endangered, or protected species with the potential to occur in the vicinity of the Proposed Project Area. Additionally no known habitat for these species is present within the Proposed Project Area.
- Coastal Resources — The Coastal Zone Management Act provides for the management of U.S. coastal resources. The eastern border of the California coastal zone is located approximately two miles west of the Proposed Project Area and includes Dockweiler Beach State Park and the Los Angeles Airport/El Segundo Dunes.
- Farmlands — No prime or unique farmlands are present in the Proposed Project Area. The area is entirely paved, with the exception of a few landscaped areas maintained along roadways.
- Floodplains — A review of the most current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps for the LAX area (September 26, 2008) indicates that no 100-year floodplain areas are located within the Proposed Project Area.[10] Further, the Proposed Action does not involve the construction of housing. Therefore, no impacts resulting from the placement of housing or other structures within a 100-year floodplain would occur, and no mitigation measures are required.
- Wetlands — No federally protected wetlands are present in the Proposed Project Area (inclusive of construction staging areas).
- Wild and Scenic Rivers — No Wild and Scenic Rivers are located within the Proposed Project Area.

## 4.3 Air Quality

This section summarizes the documentation of air quality standards, requirements, and existing conditions, which are provided in more detail in **Appendix F**. An Air Quality Protocol for analysis of air quality effects of the Proposed Action was developed by LAWA, in consultation with FAA. The draft Air Quality Protocol was submitted by FAA to the United States Environmental Protection Agency (USEPA), Federal Highway Administration (FHWA), California Air Resources Board (CARB), California Department of Transportation

[10] Federal Emergency Management Agency, *Flood Insurance Rate Map Panel 1760_Map Number 06037C1760F*, September 26, 2008; Federal Emergency Management Agency, *Flood Insurance Rate Map Panel 1780_Map Number 06037C1780F*, September 26, 2008.

(Caltrans), and South Coast Air Quality Management District (SCAQMD) for review and comment. LAWA and FAA considered comments of these agencies before preparing the final Air Quality Protocol.

### 4.3.1 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 USEPA in coordination with state and local governments. Additionally, air quality in California is governed by regulations under the California Clean Air Act (CCAA), administered by 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 SCAQMD. Mobile source emissions are also regulated by several additional agencies, including the FHWA, Federal Transit Administration, Caltrans, and the Southern California Association of Governments (SCAG), which is also the regional Metropolitan Planning Organization (MPO)[11].

#### 4.3.1.1 Federal

The USEPA is responsible for enforcing the CAA. The CAA as enacted in 1970 and amended in 1977 and 1990 is the comprehensive federal law regulating air pollutant emissions from stationary and mobile sources. The CAA requires the USEPA to establish minimum National Ambient Air Quality Standards (NAAQS), and assigns primary responsibility to individual states to assure compliance with the NAAQS. Areas not meeting the NAAQS, referred to as nonattainment areas, are required to implement specific air pollution control measures.

Under the authority granted by the CAA, USEPA has established NAAQS for the following criteria pollutants: sulfur dioxide ($SO_2$), carbon monoxide (CO), particulate matter with an aerodynamic diameter less than or equal to 10 micrometers ($PM_{10}$), particulate matter with an aerodynamic diameter less than or equal to 2.5 micrometers ($PM_{2.5}$), lead (Pb), nitrogen dioxide ($NO_2$), and ozone ($O_3$), addressed through its precursors volatile organic compounds (VOC) and oxides of nitrogen ($NO_x$). $O_3$ is a secondary pollutant, meaning that it is formed from reactions of "precursor" compounds under certain conditions. **Table 4-1** presents the NAAQS that are currently in effect for criteria air pollutants. The CAA also specifies future dates for achieving compliance with the NAAQS for areas not meeting these standards and mandates that states submit and implement a State Implementation Plan (SIP). These plans must include pollution control measures that demonstrate how the standards will be met.

[11] An MPO is a federally mandated and federally funded transportation policy-making organization made up of representatives from local governments and governmental transportation authorities. Introduced by the Federal Aid Highway Act of 1962, the formation of an MPO is required for any urbanized area with a population greater than 50,000. Federal funding for transportation projects and programs are channeled through the MPO. Congress created MPOs to ensure that existing and future expenditures of governmental funds for transportation projects and programs are based on a continuing, cooperative, and comprehensive planning process.

**Table 4-1: National and State Ambient Air Quality Standards**

| POLLUTANT | AVERAGING TIME | CAAQS | NAAQS | |
|---|---|---|---|---|
| | | | PRIMARY | SECONDARY |
| Ozone ($O_3$) | 8-hour | 0.070 ppm (137 µg/m$^3$) | 0.070 ppm (147 µg/m$^3$) | Same as Primary |
| | 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 1/ |
| | 1-Hour | 0.18 ppm (339 µg/m$^3$) | 100 ppb (188 µg/m$^3$) | N/A |
| Sulfur Dioxide ($SO_2$) 2/ | Annual | N/A | 0.03 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 ($PM_{10}$) | AAM | 20 µg/m$^3$ | N/A | N/A |
| | 24-Hour | 50 µg/m$^3$ | 150 µg/m$^3$ | Same as Primary |
| Fine Particulate Matter ($PM_{2.5}$) | AAM | 12 µg/m$^3$ | 12.0 µg/m$^3$ | 15 µg/m$^3$ |
| | 24-Hour | N/A | 35 µg/m$^3$ | Same as Primary |
| Lead (Pb) | Rolling 3-Month Average | N/A | 0.15 µg/m$^3$ | Same as Primary |
| | Monthly | 1.5 µg/m$^3$ | N/A | N/A |
| Visibility Reducing Particles | 8-Hour | Extinction of 0.23 per kilometer | N/A | N/A |
| Sulfates | 24-Hour | 25 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
AAM = Annual arithmetic mean
ppb = parts per billion

1/ On March 20, 2012, the USEPA took final action to retain the current secondary NAAQS for $NO_2$ (0.053 ppm averaged over a year) and $SO_2$ (0.5 ppm averaged over three hours, not to be exceeded more than once per year) (77 Federal Register [FR] 20264).

2/ 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) remains in effect until one year after an area is designated for the 2010 NAAQS (75 FR 35520).

SOURCE: California Air Resources Board, *Ambient Air Quality Standards Chart*, Available: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed August 5, 2016.
PREPARED BY: Ricondo & Associates, Inc., December 2016.

The California SIP is comprised of a comprehensive statewide strategy and individual plans developed at the regional or local level, which includes the SCAQMD Air Quality Management Plans (AQMP) (as further discussed in **Appendix F**). The California SIP is designed to attain federal $O_3$ and fine particulate matter ($PM_{2.5}$) air quality standards through a combination of reduction measures and new technologies. In 2013, CARB adopted the 2012 South Coast AQMP as an update to the State strategy for Southern California. Minor revisions were adopted in 2015 by CARB. Additionally, SCAQMD released the Draft Final 2016 AQMP for public review in December 2016 and adopted the Final 2016 AQMP on March 3, 2017.[12]

Section 176(c) of the CAA prohibits federal funding, permitting, or assistance to any activity that does not conform to the applicable SIP. The implementing regulations identify two categories for conformity: Transportation Conformity and General Conformity.

#### 4.3.1.2 State

The CCAA, administered by CARB, requires all air districts in the State to achieve and maintain the California Ambient Air Quality Standards (CAAQS) by the earliest practicable date. Table 4-1 presents the CAAQS that are currently in effect for criteria air pollutants. In addition to administering the CCAA, CARB has been granted jurisdiction to develop emission standards (subject to USEPA approval) for on-road motor vehicles, stationary sources, and some off-road mobile sources. In turn, CARB has delegated authority to the local air quality management districts to issue air quality permits and enforce permit conditions at the regional and local level. The SCAQMD is the local air quality management district for the Proposed Project Area.

#### 4.3.1.3 South Coast Air Quality Management District

SCAQMD is an air pollution control agency that has jurisdiction over Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The South Coast Air Basin is a sub-region of SCAQMD's jurisdiction. While air quality in this area has improved substantially over the years, the South Coast Air Basin requires continued diligence to meet federal and state air quality standards.

Since 1997, the SCAQMD has adopted a series of AQMPs to meet the CAAQS and NAAQS. Each iteration of the Plan is an update from the previous version to outline a strategy for meeting federal requirements while incorporating the latest technical planning information. The Final 2012 AQMP was adopted by the SCAQMD Governing Board and submitted to the USEPA in December 2012.[13] In 2015, AQMD approved a supplement to the 2012 AQMP demonstrating the 24-hour $PM_{2.5}$ standard would be attained. SCAQMD approved the 2016 AQMP on March 3, 2017, which is a comprehensive and integrated Plan primarily focused on addressing $O_3$ standards. EPA is reviewing this amendment to the SIP pursuant to the CAA.

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12 South Coast Air Quality Management District, *Final 2016 Air Quality Management Plan*, March 2017.

13 South Coast Air Quality Management District, "Air Quality Management Plans (AQMP)," http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan (accessed January 7, 2015).

#### 4.3.1.4 Southern California Association of Governments

The SCAG is the 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. Additionally, the SCAG Transportation Conformity Working Group (TCWG) conducts monthly meetings to support interagency coordination to maintain transportation conformity in Southern California.

### 4.3.2 AFFECTED ENVIRONMENT

LAX is located in the South Coast Air Basin. The South Coast Air Basin is designated as a federal nonattainment area for $O_3$, $PM_{2.5}$, and Pb; and a state nonattainment area for $O_3$, $PM_{10}$, and $PM_{2.5}$. Nonattainment designations under the CAA for $O_3$ and $PM_{2.5}$ are categorized into levels of severity based on the level of concentrations above the standard, which is also used to set the required attainment date. 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 (maintained). **Table 4-2** presents the federal and State attainment designations for each of the criteria air pollutants.

**Table 4-2: South Coast Air Basin Attainment Status**

| POLLUTANT | NATIONAL STANDARDS [1/] | STATE STANDARDS |
|---|---|---|
| Ozone ($O_3$) 8-Hour Standard | Nonattainment – Extreme | Nonattainment |
| Ozone ($O_3$) 1-Hour Standard | (Nonattainment – Extreme) [2/] | n/a |
| Carbon Monoxide (CO) | Attainment – Maintenance | Attainment |
| Nitrogen Dioxide ($NO_2$) | Attainment – Maintenance | Attainment |
| Sulfur Dioxide ($SO_2$) | Attainment | Attainment |
| Respirable Particulate Matter ($PM_{10}$) | Attainment – Maintenance | Nonattainment |
| Fine Particulate Matter ($PM_{2.5}$) | Nonattainment – Serious [3/] | Nonattainment |
| Lead (Pb) | Nonattainment | Attainment |

NOTES:

n/a – not applicable, no State standard.

1/ Status as of June 17, 2016.

2/ The South Coast Air Basin had not attained the 1-hour $O_3$ standard by the time it was replaced with the 1997 8-hour $O_3$ standard. Therefore, the State Implementation Plan for the South Coast must still contain demonstrations that the 1-hour $O_3$ standard will be attained.

3/ Classified as attainment for 1997 NAAQS, moderate nonattainment for 2012 NAAQS and serious nonattainment for 2006 NAAQS. Thus, for conformity purposes, the serious nonattainment de minimis threshold will be used.

SOURCE: U.S. Environmental Protection Agency, "Green Book Nonattainment Areas," April 22, 2016, available: https://www3.epa.gov/airquality/greenbook/index.html (accessed May 24, 2016); California Air Resources Board, "State Area Designation Maps," available: http://www.arb.ca.gov/desig/adm/adm.htm, effective December 2015; U.S. Environmental Protection Agency. Federal Register vol. 81 No. 142 48350. Available: https://www.federalregister.gov/documents/2016/07/25/2016-17410/clean-data-determination-for-1997-pm25, effective August 24, 2016.

PREPARED BY: Ricondo & Associates, Inc., September 2016.

The SCAQMD maintains a network of air quality monitoring stations located throughout the South Coast Air Basin. The closest monitoring station to LAX is the Southwest Coastal Los Angeles Monitoring Station located at 7201 W. Westchester Parkway (LAX Hastings site). This station monitors $O_3$, CO, $SO_2$, $NO_2$, and $PM_{10}$. Data available from this monitoring station is summarized for the five-year period of 2011 to 2015 in **Table 4-3**. However, as $PM_{2.5}$ has not been historically monitored at the LAX Hastings station, data for this pollutant was obtained from the South Coastal Los Angeles County Monitoring Station located at 3648 North Long Beach Boulevard (North Long Beach).

**Table 4-3: Ambient Air Quality Measurements**

| POLLUTANT | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|
| **Ozone ($O_3$)** [1/] | | | | | |
| Maximum Concentration 1-hr period, ppm | 0.106 | 0.105 | 0.114 | 0.096 | 0.087 |
| Maximum National Concentration 8-hr period, ppm | 0.075 | 0.081 | 0.080 | 0.077 | 0.080 |
| Maximum California Concentration 8-hr period, ppm | 0.075 | 0.082 | 0.080 | 0.078 | 0.080 |
| **Carbon Monoxide (CO)** [1/] | | | | | |
| Maximum Concentration 1-hr period, ppm | 2.8 | 3.1 | 2.7 | 1.7 | 1.6 |
| Maximum National Concentration 8-hr period, ppm | 1.51 | 0 | 1.9 | --- [2/] | 1.3 |
| Maximum California Concentration 8-hr period, ppm | 1.73 | 2.51 | 1.9 | --- [2/] | 1.3 |
| **Nitrogen Dioxide ($NO_2$)** [1/] | | | | | |
| Maximum Concentration 1-hr period, ppm | 0.077 | 0.078 | 0.087 | 0.087 | 0.082 |
| Annual Arithmetic Mean (AAM), ppm | 0.010 | 0.012 | 0.012 | 0.011 | 0.010 |
| **Sulfur Dioxide ($SO_2$)** [1/] | | | | | |
| Maximum Concentration 1-hr period, ppm | 0.0050 | 0.0095 | 0.0154 | 0.0150 | 0.010 |
| Maximum Concentration 24-hr period, ppm | 0.0013 | 0.0019 | 0.0025 | 0.0016 | 0.0019 |
| Annual Arithmetic Mean (AAM), ppm | ---[2/] | --- [2/] | --- [2/] | 0.0005 | 0.0006 |
| **Respirable Particulate Matter ($PM_{10}$)** [1/] | | | | | |
| Maximum National Concentration 24-hr period, µg/m$^3$ | 31 | 38 | 46 | 42 | 43 |
| Maximum California Concentration 24-hr period, µg/m$^3$ | 30 | 37 | 45 | 42 | --- [2/] |
| Annual National Concentration, µg/m$^3$ | 19.8 | 20.8 | 22.1 | 21.2 | 21.6 |
| Annual California Concentration, µg/m$^3$ | 19.6 | --- [2/] | 21.9 | --- [2/] | --- [2/] |
| **Fine Particulate Matter ($PM_{2.5}$)** [3/] | | | | | |
| Maximum National Concentration 24-hr period, µg/m$^3$ | 49.8 | 47.2 | 51.5 | 48.8 | 29.3 |
| Maximum California Concentration 24-hr period, µg/m$^3$ | 58.6 | 51.7 | 51.4 | 48.8 | 29.3 |
| Annual National Concentration, µg/m$^3$ | 10.3 | 11.3 | 11.4 | 12.9 | 10.3 |

NOTES:
1/ Air Quality data from the Southwest Coastal Los Angeles Monitoring Station located at 7201 W. Westchester Parkway (LAX Hastings site).
2/ --- = insufficient data was available to determine the value
3/ $PM_{2.5}$ data is from north Long Beach (south coastal) monitoring station.

SOURCE: California Air Resources Board, iADAM: Air Quality Data Statistics, Available: http://www.arb.ca.gov/adam/, accessed May 24, 2015; California Air Resources Board, AQMIS2, Available: http://www.arb.ca.gov/aqmis2/aqmis2.php, accessed July 17, 2017.
Prepared by: Ricondo & Associates, Inc., July 2017.

Although Pb is a criteria pollutant, it was not evaluated in this EA because the Proposed Action would have negligible impacts on Pb levels in the South Coast Air Basin. Section 4.6 discusses potential for lead-based paint to be present in structures constructed prior to 1980 and procedures to minimize the generation of lead emissions during demolition. The only source of Pb emissions from LAX is aviation gasoline (AvGas) associated with piston-engine general aviation aircraft; however the Proposed Action would not affect aircraft operations; very few, if any, piston engine aircraft fly into LAX; and, AvGas is no longer stored at the fuel farm operated by LAXFUELS.

Sources of operational air pollutant emissions within the Proposed Project Area are typical sources associated with commercial airports in urban areas and include aircraft operations, motor vehicle activities (e.g., personal, delivery trucks, buses, etc.) on Airport roads and the surrounding roadway network, and industrial uses.

# 4.4 Climate

## 4.4.1 REGULATORY SETTING

Research has shown there is a direct correlation between fuel combustion and greenhouse gas (GHG) emissions. GHGs, known to trap heat in the earth's atmosphere, include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), $O_3$, and fluorinated gases.[14] GHGs result primarily from combustion of fuels; thus, there is a direct relationship between fuel combustion and GHG emissions. In terms of U.S. contributions, the General Accountability Office (GAO) reports that "domestic aviation contributes about 3 percent of total carbon dioxide emissions, according to the U.S. Environmental Protection Agency (USEPA) data," compared with other industrial sources including the remainder of the transportation sector (20 percent) and power generation (41 percent).[15] The International Civil Aviation Organization (ICAO) estimates that GHG emissions from aircraft account for roughly 3 percent of all anthropogenic GHG emissions globally.[16]

The scientific community is continuing efforts to better understand the impact of aviation emissions on the global atmosphere. The FAA is leading and participating in a number of initiatives intended to clarify the role that commercial aviation plays in GHG emissions and climate. The FAA, with support from the U.S. Global Change Research Program and its participating federal agencies (e.g., National Aeronautics and Space Administration (NASA), National Oceanographic and Atmospheric Administration (NOAA), USEPA, and Department of Energy (DOE)), has developed the Aviation Climate Change Research Initiative (ACCRI) in an effort to advance scientific understanding of regional and global climate impacts of aircraft emissions. FAA

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14 U.S. Environmental Protection Agency, Overview of Greenhouse Gases, http://www3.epa.gov/climatechange/ghgemissions/gases.html (accessed May 11, 2017).

15 U.S. General Accountability Office, Report to Congressional Committees, *Aviation and Climate Change,* (2009). http://www.gao.gov/new.items/d09554.pdf, accessed: April 6, 2017.

16 Melrose, Alan, The International Civil Aviation Organization Environmental Report, "European ATM and Climate Adaptation: A Scoping Study," (2010).

also funds the Partnership for Air Transportation Noise & Emissions Reduction (PARTNER) Center of Excellence research initiative to quantify the effects of aircraft exhaust and contrails[17] on global and U. S. climate and atmospheric composition. Similar research topics are being examined at the international level by the ICAO.[18]

### 4.4.2 AFFECTED ENVIRONMENT

Baseline operational emissions from Airport landside and building sources, including on-Airport and off-Airport roadways, are shown on **Table 4-4**. The traffic emissions are for Airport-related trips on the local roadway network. Implementation of the Proposed Action would not increase the number of flights or type of aircraft using the airfield because it would affect only efficiency of the landside/roadway system. The Proposed Action would not result in changes to air traffic flight patterns or aircraft taxi patterns. Finally, the Proposed Action would not change the projected number of passengers that would use LAX in the future; it would only change how they access the Airport and terminal facilities, as discussed in **Appendix D**. Therefore, the only passenger-related changes from the Proposed Action would be in surface vehicle traffic patterns and vehicle trips. As a result, the only passenger-related emissions considered in this EA are from surface vehicles and those that would result from new structures constructed as part of the Proposed Action; airfield emission sources such as aircraft, ground service equipment, or auxiliary power units were not inventoried or evaluated.

**Table 4-4: 2015 Existing Airport Operational GHG Emissions**

| | ANNUAL EMISSIONS (METRIC TONS $CO_2e$ PER YEAR) | | | |
|---|---|---|---|---|
| **EMISSION SOURCE** [1/] | **$CO_2$** | **$CH_4$** | **$N_2O$** | **TOTAL ($CO_2e$)** [2/] |
| Autos | 322,478 | 3,356 | 4,402 | 330,236 |
| Trucks | 47,342 | 150 | 231 | 47,722 |
| Parking | 22,948 | 239 | 313 | 23,500 |
| Indirect Electrical Demand | 26,843 | 279 | 366 | 27,488 |
| **TOTAL** [2/] | **419,611** | **4,024** | **5,312** | **428,946** |

NOTES:

$CO_2e$ – carbon dioxide equivalent $CO_2$ – carbon dioxide $CH_4$ – methane $N_2O$ – nitrous oxide

1/ GHG emissions do not include aircraft, ground service equipment, or auxiliary power unit emissions.

2/ Totals may not add exactly because of rounding.

SOURCE: CDM Smith, August 2016.
PREPARED BY: Ricondo & Associates, Inc., December 2016.

[17] Contrails are line-shaped clouds or "condensation trails," composed of ice particles, that are visible behind jet aircraft engines, typically at cruise altitudes in the upper atmosphere.

[18] Maurice and Lee, Final Report of the International Civil Aviation Organization (ICAO) Committee on Aviation and Environmental Protection (CAEP) Workshop. October 29th –November 2nd, 2007, *Chapter 5: Aviation Impacts on Climate*, 2007.

# 4.5 Department of Transportation Act, Section 4(f) and Land and Water Conservation Fund Act, Section 6(f) Resources

The Department of Transportation (DOT) Act, Section 4(f) provisions, (Section 4(f) of the DOT Act), which is codified as Section 303(c) of 49 U.S.C., provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, State, or local significance or land from an historic site of national, State, or local significance as determined by the officials having jurisdiction thereof, unless there is no feasible and prudent alternative to the use of such land and such program, and the project includes all possible planning to minimize harm resulting from the use. Historic or archeological properties that are listed, or eligible for inclusion, on the National Register of Historic Places are protected under Section 4(f).[19]

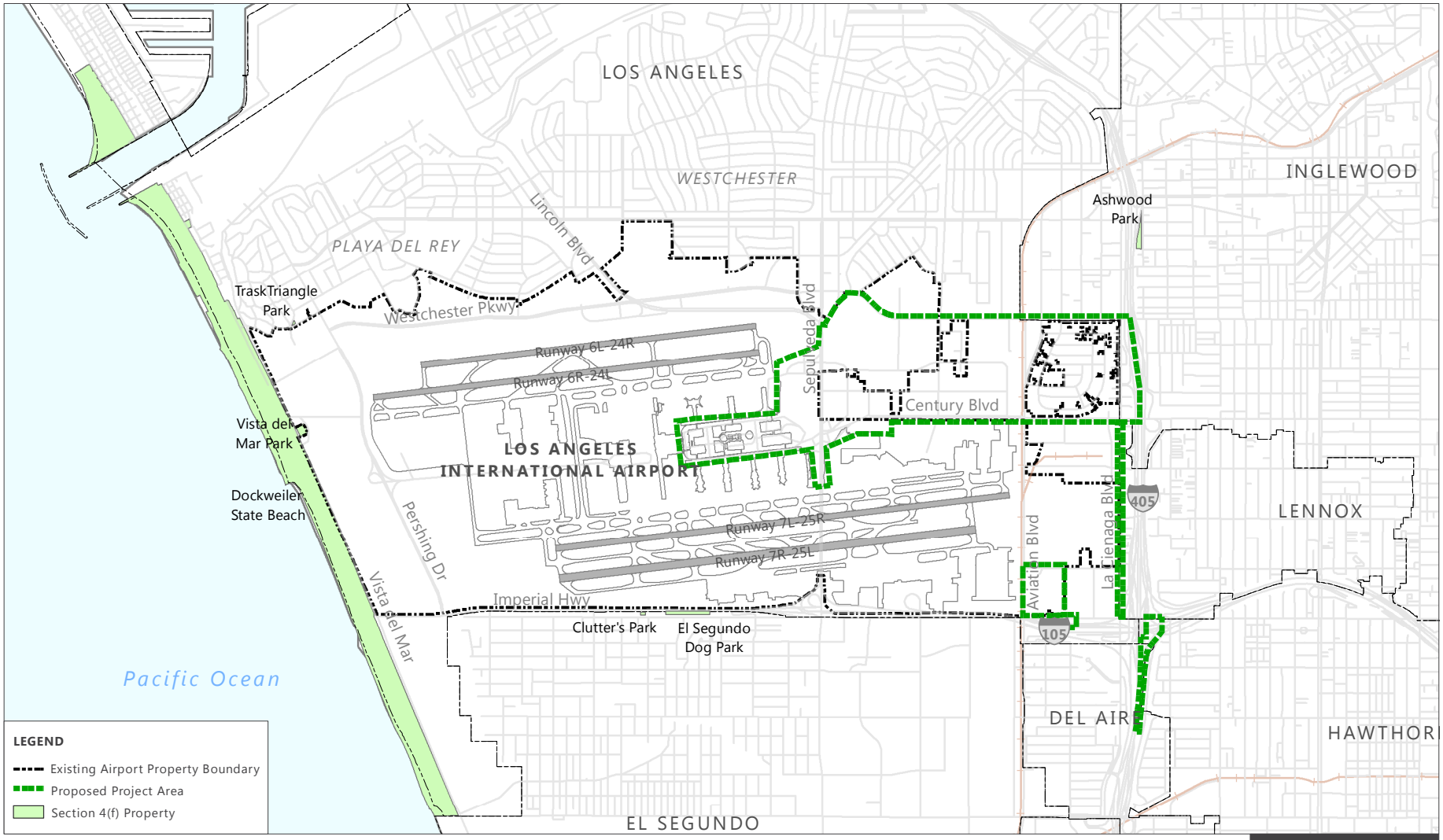
For Section 4(f) purposes, the term "use" not only includes actual physical takings of Section 4(f) lands, but also adverse indirect impacts, or constructive use. Constructive use only occurs if Section 4(f) lands are substantially impaired by a Proposed Action or its action alternatives, which includes substantially diminishing the activities, features, or attributes of the Section 4(f) resource that contribute to its significance or enjoyment.

Section 6(f) of the National Park Service (NPS) Land and Water Conservation Fund (LWCF) Act contains provisions for the protection of federal investments in land and water resources. The LWCF Act discourages the conversion of parks or recreational facilities to other uses.

## 4.5.1 SECTION 4(F) RESOURCES LOCATED WITHIN AND ADJACENT TO THE PROPOSED PROJECT AREA

The Proposed Project Area does not include any parks or wildlife refuges. Six municipal parks and parklands that qualify as Section 4(f) properties are located adjacent to or in the vicinity of the Proposed Project Area: Dockweiler Beach State Park, Vista Del Mar Park, Trask Triangle Park, Clutter's Park, El Segundo Dog Park, and Ashwood Park (**Figure 4-3**).

[19] U.S. Department of Transportation, Federal Aviation Administration, *Order 1050.1F, Environmental Impacts: Policies and Procedures*, July 16, 2015.




SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets, Land Uses); Los Angeles County, L.A. County GIS Data Portal, County Data, Accessed Online, August 2014;
LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, ariport property boundary).
National Geographic World Map, ESRI Database, 2011.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

**FIGURE 4-3**

## Parks and Recreation Areas Subject to Section 4(f)

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The Proposed Project Area does not contain any land that is considered a park or is used for recreational purposes. There are no current or proposed Habitat Conservation Plans or Natural Community Conservation Plan areas covering the Proposed Project Area. Ashwood Park is located approximately 0.4-mile north of the easternmost portion of the Proposed Project Area between I-405 and S. Ash Avenue in the City of Inglewood. The 2-acre linear park offers playground equipment, courts for tennis, volleyball, and basketball, and a workout area.

Section 4.7 provides information on listed or eligible historical sites within the Proposed Project Area that are also considered DOT Section 4(f) resources.

### 4.5.2 SECTION 6(F) RESOURCES LOCATED WITHIN AND ADJACENT TO THE PROPOSED PROJECT AREA

Three parks and facilities have received funding from the LWCF Act in the vicinity of the Proposed Project Area: Dockweiler Beach State Park and the South Bay Bicycle Trail (both located west of the Proposed Project Area), and Jesse Owens County Park (located 3.2 miles east of the Proposed Project Area).[20] However, none of these parks and facilities would be converted for other uses under the Proposed Action and, therefore, no Section 6(f) resources would be affected.

## 4.6 Hazardous Materials, Solid Waste, and Pollution Prevention

This section provides a discussion of hazardous materials, existing contamination, and waste streams present in the Proposed Project Area. This section is organized to discuss:

- Hazardous materials and waste
- Solid waste
- Pollution prevention measures

### 4.6.1 HAZARDOUS MATERIALS AND WASTE

#### 4.6.1.1 Regulatory Setting

*Federal*

At the federal level, hazardous materials are regulated by a number of federal laws and regulations, most of which are promulgated by the USEPA. The two statutes most applicable to airport projects are the Resource Conservation and Recovery Act (RCRA, as amended by the Federal Facilities Compliance Act of 1992) and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended (also known

[20] U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR,* 2005.

as Superfund). RCRA governs the generation, treatment, storage, and disposal of hazardous wastes. CERCLA provides for cleanup of any release of a hazardous substance (excluding petroleum) in the environment. In addition to RCRA and CERCLA, the Hazardous Materials Transportation Act (HMTA) and the Emergency Planning and Community Right to Know Act (EPCRA) serve as additional requirements governing the storage, use, and transportation of hazardous and other regulated materials from their time of origin to their ultimate disposal. These laws also govern the recovery and cleanup of environmental contamination resulting from the accidental or unlawful release of hazardous materials and substances. Additional laws related to hazardous materials include:

- Clean Water Act (CWA)—Regulates discharges and spills of pollutants (including hazardous materials) to surface and groundwater.
- Safe Drinking Water Act—Regulates discharges of pollutants to underground aquifers.
- Clean Air Act—Regulates discharges of air pollutant emissions (including hazardous air pollutants) to the ambient (i.e., outside) air.

The Occupational Safety and Health Act (OSHA) establishes procedures and standards for the safe handling and storage of hazardous chemicals. OHSA also establishes standards for safe worker exposure limits for chemical hazards.

### *State*

At the state level, the California Code of Regulations Title 22, Division 4.5, *Environmental Health Standards for the Management of Hazardous Waste,* regulates the disposal and management of hazardous waste within the State of California. The California Environmental Protection Agency (CalEPA) oversees a Unified Program to ensure statewide consistency in hazardous waste and materials administrative requirements, permits, inspections, and enforcement. In addition to CalEPA, the following four state agencies are involved with implementing the Unified Program: Department of Toxic Substances Control, Governor's Office of Emergency Services, Department of Forestry and Fire Protection (CAL FIRE) Office of the State Fire Marshall, and the State Water Resources Control Board (SWRCB). Local government agencies are certified by CalEPA to implement the hazardous waste and materials standards of these five state agencies. [21]

The California Occupational Safety and Health Act (CalOSHA) regulates worker health and safety through the establishment of exposure limits for certain air contaminants. CalOSHA also enforces the Hazard Communications Standard that requires employers to provide employees with effective information on hazardous chemicals in the work area, and training on how to protect employees in the event of a spill or leak of hazardous chemicals.

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[21] California Environmental Protection Agency, *Unified Program*, http://www.calepa.ca.gov/cupa/ (accessed August 19, 2016).

*Regional*

Remediation of contamination has the potential to expose workers to hazardous materials or substances. The SCAQMD regulates emissions from soil remediation activities through Rule 1166, *Volatile Organic Compound Emissions from Decontamination of Soil*. This rule requires development and approval of a mitigation plan, monitoring of VOC concentrations, and implementation of a mitigation plan if VOC-contaminated soil is detected.

SCAQMD Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The rule's requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and cleanup procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials (ACWM).

*Local*

LAWA prepared the *Procedure for the Management of Contaminated Materials Encountered During Construction* ("the Procedure") in 2005 for application to all LAX Master Plan projects and it continues to be used today for other projects at LAX.[22] The Procedure requires the preparation of detailed plans for handling previously unknown contaminated soil encountered during construction, as well as spills of hazardous materials or substances that may occur during construction. It also requires the preparation of detailed health and safety and soils management plans, and includes provisions for testing and segregation of contaminated soils for proper disposal. The Procedure focuses on previously unknown contaminated materials, its provisions for handling, storing, and disposing of contaminated materials; however these provisions also apply to contaminated materials that LAWA has already identified.

The Los Angeles Fire Department (LAFD) is the lead agency that regulates hazardous materials and issues permits for hazardous materials handling for the City of Los Angeles, and administers the applicable sections of the Los Angeles City Fire Code, including Chapter 50, *Hazardous Materials – General Provisions*. Businesses that store hazardous waste or hazardous materials in the City of Los Angeles must submit a Certificate of Disclosure to the LAFD.

### 4.6.1.2 Affected Environment

A Hazardous Materials Assessment (HMA) for the Proposed Action was conducted in October 2015 by Ninyo & Moore to identify contaminated or potentially contaminated areas and other potential hazardous materials issues within the Proposed Project Area. The HMA study area encompassed approximately 2,000 acres and included the Proposed Project Area. The HMA included site reconnaissance, database search, and review of existing environmental reports. The HMA has been included as **Appendix G**. **Table 4-5** provides a list of the databases that were searched.

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[22] City of Los Angeles, Los Angeles World Airports, *Final Draft, LAX Master Plan Mitigation Monitoring & Reporting Program: Procedure for the Management of Contaminated Materials Encountered During Construction,* Revised December 2005.

## Table 4-5 (1 of 2): Environmental Database Search

| DATABASE(S) | DESCRIPTION |
|---|---|
| **FEDERAL DATABASES** | |
| NPL | The NPL is the EPA's database of uncontrolled or abandoned hazardous waste facilities that have been listed for priority remedial actions under the Superfund Program. Updated quarterly. |
| CERCLIS/ NFRAP | The CERCLIS database is a compilation of facilities which the EPA has investigated or is currently investigating for a release or threatened release of hazardous substances pursuant to the CERCLA of 1980. NFRAP refers to facilities that have been removed and archived from its inventory of CERCLA sites. |
| Institutional Control/Engineering Control | Superfund sites that have either an engineering or an institutional control. The data includes the control and the media contaminated. |
| RCRA CORRACTS/ TSD | The EPA maintains a database of RCRA facilities associated with TSD of hazardous materials that are undergoing "corrective action." A "Corrective action" order is issued when there has been a release of hazardous waste or constituents into the environment from a RCRA facility. |
| RCRA Non-CORRACTS/ TSD | The RCRA Non-CORRACTS/TSD Database is a compilation by the EPA of facilities that report storage, transportation, treatment, or disposal of hazardous waste. Unlike the RCRA CORRACTS/TSD database, the RCRA Non-CORRACTS/TSD database does not include RCRA facilities where corrective action is required. |
| RCRA Generators | The RCRA Generators database, maintained by the EPA, lists facilities that generate hazardous waste as part of their normal business practices. Generators are listed as large, small, or conditionally exempt. LQGs produce at least 1,000 kg/month of on-acutely hazardous waste or 1 kg/month of acutely hazardous waste. SQGs produce 100 to 1,000 kg/month of non-acutely hazardous waste. CESQGs are those that generate less than 100 kg/month of non-acutely hazardous waste. |
| ERNS | ERNS records and stores information on reported releases of oil and hazardous substances. |
| **STATE DATABASES** | |
| Cal Sites | The Cal Sites database is maintained by the Cal-EPA, DTSC. This database contains information on AWP, and both known and potentially contaminated properties. Two- thirds of these properties have been classified, based on available information, as needing NFA by the DTSC. The remaining properties are in various stages of review and remediation to determine if a problem exists. |
| EnviroStor | DTSC electronic database system with information about sites that are known to be contaminated with hazardous substances as well as information about sites that are known to be contaminated with hazardous substances as well as information on uncharacterized properties where further studies may reveal problems. |
| SLIC | The SLIC database is maintained by the RWQCB. |
| SWF/LF | The SWF/LF database consists of open and closed solid waste disposal facilities and transfer stations. The data comes from the IWMB's SWIS database. |
| LUST | Databases of the LUST information system are maintained by the SWRCB and RWQCB. |
| UST/AST | The UST Information System and AST database are maintained by the SWRCB, which may include the owner and location of the USTs/ASTs. |
| VCP | The VCP database is a Cal-EPA listing of properties involved in the voluntary remediation program |
| Brownfields | This database is a DTSC tracking system of California Brownfields sites. |
| **STATE DATABASES** | |
| Indian Reservation | USGS map layer portrays Indian administered land within the United States with an area equal to or greater than 640 acres. |
| Tribal LUST | This is a database maintained by the EPA of LUSTs on Indian land in Arizona, California, New Mexico, and Nevada. |
| Tribal UST | This is a database maintained by the EPA of USTs on Indian land. |

## Table 4-5 (2 of 2): Environmental Database Search

| DATABASE(S) | DESCRIPTION |
|---|---|
| | **NON-ASTM DATABASES** |
| HAZNET | The HAZNET database contains facility and manifest data. |
| Hist UST | The Hist UST database lists historical registered USTs. |
| CA FID USTs | The FID UST contains active and inactive UST locations and is maintained by the SWRCB. |
| SWEEPS USTs | This UST listing was updated and maintained by a company contracted by the SWRCB in the early 1990s. The listing is no longer updated or maintained. |
| CHMIRS | The CHMIRS contains information on hazardous materials reporting. |
| WMUDS/SWAT | The WMUDS/SWAT is used for program tracking and inventory of waste management units. The system is maintained by the SWRCB. |
| Hist CORTESE | The Hist CORTESE database is designated by the SWRCB LUST, IWB SWF/LF, and the DTSC Cal Sites. This listing is no longer updated by the state agency. |
| CA Drycleaners | The CA Drycleaners is a list of drycleaner related facilities that have an EPA ID number. |
| EDR US Hist Auto Stat | The EDR US Hist Auto Stat database is a list of potential gasoline service stations available to EDR researchers. |
| EDR US Hist Cleaners | The EDR US Hist Cleaners database is a list of potential drycleaner sites available to EDR researchers |

NOTES:

AST – Aboveground Storage Tank

Auto stat – Auto Station

AWP – Annual Work Plan Properties

CA – California

CA FID – California Facility Inventory Database

Cal-EPA – California Environmental Protection Agency

CERCLA – Comprehensive Environmental Response, Compensation and Liability Act

CERCLIS – Comprehensive Environmental Response, Compensation, and Liability Information System

CESQG – Conditionally Exempt Small Quantity Generators

CHMIRS – California Hazardous Materials Information Reporting System

CORRACTS – Corrective Action Report

CORTESE – "Cortese" Hazardous Waste & Substances Sites List

DTSC – Department of Toxic Substances Control

EDR – Environmental Data Resources, Inc.

EPA – United States Environmental Protection Agency

ERNS – Emergency Response Notification System

HAZNET – Facility and Manifest Data

His – historical

IWMB – Integrated Waste Management Board

kg – kilograms

LQG – Large Quantity Generator

LUST – Leaking Underground Storage Tanks

NFA – No Further Action

NFRAP – No Further Remedial Action Planned

NPL – National Priorities List

RCRA – Resource Conservation and the Recovery Act

RWQCB – Regional Water Quality Control Board

SLIC – Spills, Leaks, Investigations, and Cleanups Program

SQG – Small Quantity Generators

SWEEPS – Statewide Environmental Evaluation and Planning System

SWF/LF – Solid Waste Facility/Landfill

SWIS – Solid Waste Information System

SWRCB – State Water Resources Control Board

TSD – Treatment, Storage, and Disposal

US – United States

USGS – United States Geological Survey

UST – Underground Storage Tank

VCP – Voluntary Cleanup Program

WMUDS/SWAT – Waste Management Unit Database System/Solid Waste Assessment Test

SOURCE: Ninyo & Moore, H*azardous Materials Assessment, Landside Access Modernization Program, Los Angeles International Airport, Los Angeles, California*, October 14, 2015;

PREPARED BY: Ricondo & Associates, Inc., October 2016.

To evaluate the likelihood of encountering hazardous substances during construction activities, an evaluation of the Proposed Project Area and adjoining properties was performed with regard to the potential presence of hazardous substances. A database radii search of readily available government and regulatory agency environmental lists for the Proposed Project Area and for properties within one-eighth mile of the Proposed Project Area was used to assess potential impacts related to the location of hazardous materials.

The HMA identified 15 specific properties of concern near the Proposed Project Area, presented in **Table 4-6**. The locations of each of these properties are shown on **Figure 4-4**. Properties of concern are those that were evaluated and classified as having high or moderate potential for detrimental impacts during construction activities associated with the Proposed Action. Properties categorized as high or moderate risk were evaluated based on the information obtained and the likelihood that hazardous materials might impact soil and/or groundwater likely to be disturbed during construction. Hazardous Materials Impacts (HMIs) were identified in the HMA to categorize types of potential impacts that could occur within the specific properties of concern as a result of the Proposed Action. The HMIs identified in Table 4-6 are defined below:

- HMI-1: Demolition of structures built prior to 1980 may result in the exposure of the public and/or the environment to ACMs and/or lead-based paint (LBP).
- HMI-2: Construction activities may encounter previously unidentified underground storage tanks (USTs), hazardous materials, petroleum hydrocarbons, or hazardous or solid wastes and may result in the exposure of the public and/or the environment to hazardous materials.
- HMI-3: Construction activities, including demolition, may encounter or generate hazardous or solid wastes and debris and may result in the exposure of the public and/or the environment to hazardous materials.
- HMI-4: Construction activities may result in exposure of the public and/or the environment to contaminated soil.

**Table 4-7** provides a list of California hazardous waste disposal facilities. Both facilities are over 100 miles north of the Proposed Project Area and have significant capacity remaining.

## Table 4-6 (1 of 2): Known Hazardous Materials Sites of Concern

| MAP ID NO. | PROPERTY NAME/OWNER/ ADDRESS | DISTANCE/ DIRECTION FROM PROPOSED PROJECT SITE | SITE SUMMARY [1/] | STATUS | DATA SOURCE [2/] | RISK CLASS [3/] | APPLICABLE HMI |
|---|---|---|---|---|---|---|---|
| 1 [4/] | Allied Aviation Service Co. facility<br>6501 West 96th St. | On-Site | Listed on the CA FID UST database as having three USTs ranging from 600 to 10,000 gallons, containing waste oil and gasoline and an open unauthorized release case affecting soil and groundwater. The facility is also listed on the Historic UST database. | Inactive | D | H | 2,3,4 |
| 2 | Allied-Signal Inc./Park One/ Honeywell International Inc.<br>9851 South Sepulveda Blvd. | On-Site | Listed on the SLIC database as having petroleum hydrocarbons and halogenated volatile organic compounds affecting groundwater and soil vapor. The facility is also listed on the Historic UST database, and on the LUST database as "Remedial Action Underway". | Open-Remediation | D, R | H | 2,3,4 |
| 3 | King Delivery, Inc.<br>5600 West Arbor Vitae St. | On-Site | Fuel storage: listed on the LUST database; USTs | Assessment and Interim Remedial Action | D, R | M | 2,3,4 |
| 4 | National Car Sales<br>9200 Airport Blvd. | On-Site | Fuel storage: listed on the LUST database; USTs | Open Site-Assessment | D, R | M | 2,3,4 |
| 5 | National Car Rental<br>9419 Airport Blvd. | On-Site | Fuel storage: listed on the LUST database; USTs | Verification Monitoring | D, R | M | 2,3,4 |
| 6 | Budget Rent-A-Car<br>9775 Airport Blvd. | On-Site | Fuel storage: listed on the LUST database; USTs; unauthorized release affecting soil and groundwater | Open Remediation | D, R | H | 2,3,4 |
| 7 | Hertz Corporation/Honeywell International<br>9225 Aviation Road | On-Site | Listed on the SLIC database for former aerospace manufacturer: listed on the AST database; USTs; clarifiers; degreasers | Open Cleanup | D, R | H | 1,2,3,4 |
| 8 | Union Bank/Estate of Joseph Collins<br>9007–9121 Aviation Blvd. | Adjacent to the north | Listed on the SLIC database for former metal treating facility: unauthorized release of TPH and VOCs affecting soil and groundwater | Open-Remediation | D | H | 1,2,3,4 |
| 9 | Princeland Property<br>1237 West Arbor Vitae | On-Site | Listed on the SLIC database for former degreasing operations, plastic extrusion, and furniture distribution facility: elevated levels of VOCs in soil and groundwater | Open-Remediation | D | H | 1,2,3,4 |
| 10 | Tetra Graphics Site<br>10310 Glasgow [5/] | Adjacent to the west | Former aircraft manufacturer: Listed on the SLIC database for unauthorized release of VOCs in groundwater and soil vapor; Listed on the EnviroStor database | Open-Remediation | D, R | H | 1,2,3,4 |
| 11 | Thrifty Car Rental<br>5440 West Century Blvd. [5/] | Adjacent to the south | Listed on the LUST database; Unauthorized release of aviation fuel affecting soil and groundwater | Open-Remediation | D, R | H | 1,2,3,4 |

## Table 4-6 (2 of 2): Known Hazardous Materials Sites of Concern

| MAP ID NO. | PROPERTY NAME/OWNER/ ADDRESS | DISTANCE/ DIRECTION FROM PROPOSED PROJECT SITE | SITE SUMMARY [1/] | STATUS | DATA SOURCE [2/] | RISK CLASS [3/] | APPLICABLE HMI |
|---|---|---|---|---|---|---|---|
| 12 | Fan Steel/Precision Sheet Metal 5235 West 104th St. [5/] | 0.16 mile south | Listed on the SLIC database as "Open – Site Assessment" for a release of VOCs into groundwater and soil vapor; Unauthorized release of VOCs in groundwater and soil vapor | Open Site-Assessment | D | H | 2,3,4 |
| 13 | Dollar Car Rental 9150 Aviation Blvd. | Adjacent to the north | ASTs; Rental car lot reported to be dumping substance into storm drains | NA | R | M | 2,3,4 |
| 14 | Pro-Tech Design MFG 5220 West 104th St. [5/] | Adjacent to the south/west | Drycleaner; listed on the California Drycleaners database | Inactive | D | M | 2,3,4 |
| 15 | Los Angeles Department of Water and Power Distribution Station No. 47 | On-Site | Electrical transformers used at distribution facility since at least 1938 | NA | R, H | H | 1,2,3,4 |

NOTES:

ASTs = above ground storage tanks

Blvd. = Boulevard

LUST = leaking underground storage tank

SLIC = Spills, Leaks, Investigations, and Cleanups Program

St. = Street

SVE = Soil Vapor Extraction

TPH = Total Petroleum Hydrocarbon

USTs = underground storage tanks

VOC = Volatile Organic Compound

HMI = Hazardous Materials Impacts

NA = Not Available

1/ Description of site operations/primary reasons for risk class

2/ Indicates primary information sources for listing: R = Reconnaissance, D = Database, H = Historical Documentation

3/ Risk Class: H = high, M = moderate

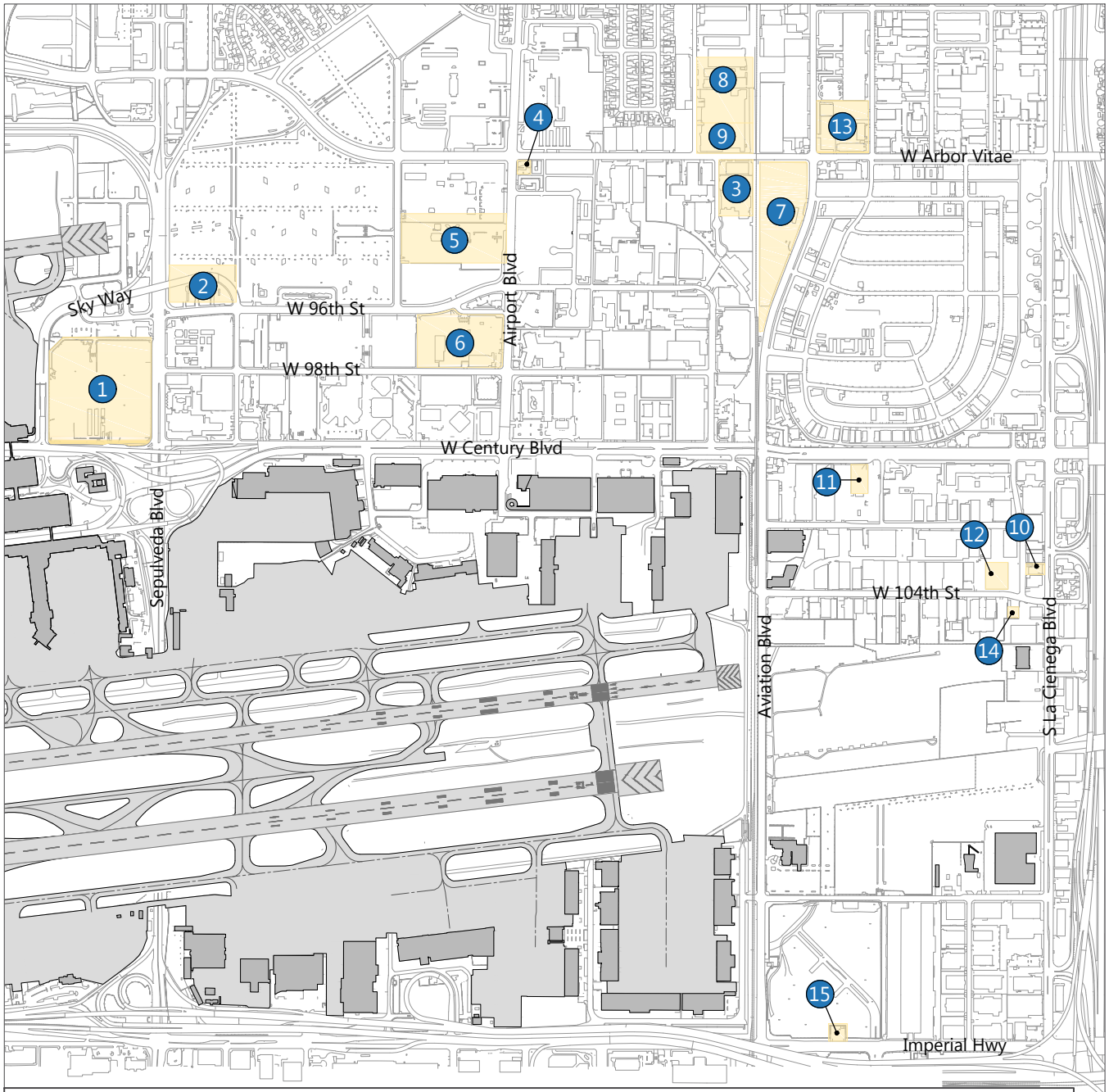
4/ TPH contamination in the jet fuel range and VOCs have been detected in the soil and groundwater beneath the hydrant fuel system to the north/northwest end of the Terminal 2 concourse. Portions of the groundwater plumes appear to be defined; however, additional assessment, including the installation and monitoring of three additional groundwater wells, is necessary. Further characterization of the site to identify the vertical and lateral extent of soil contamination and lateral extent of groundwater contamination is underway by LAWA under the Los Angeles RWQCB oversight. As the known extent of contamination is not located within, and is substantially north of the Proposed Project Area, the risk class is low.

5/ Property not located within the Proposed Project Area. However, property is evaluated based on its likelihood to impact soil and/or groundwater during construction of the Proposed Action.

SOURCE: Ninyo & Moore, Hazardous Materials Assessment, Landside Access Modernization Program, Los Angeles International Airport, Los Angeles, California, October 14, 2015; Ninyo & Moore, Addendum Letter–Hazardous Materials Assessment, Landside Access Modernization Program, Los Angeles International Airport, Los Angeles, California, June 29, 2016; Alta Environmental, Workplan for Additional Groundwater Investigation, Terminal 2 Fuel Hydrant Facility, 250 North World Way, Los Angeles International Airport, July 7, 2015, Available: http://geotracker.waterboards.ca.gov/view_documents.asp?global_id=T10000004322&document_id=5859621.

PREPARED BY: Ricondo & Associates, Inc., October 2016.

**[Preliminary Draft for Discussion Purposes Only]**




**LEGEND**

- Existing Airport Buildings
- Existing Airfield Pavement
- Known Hazardous Materials Sites of Concern

**NOTE:** LADWP = Los Angeles Department of Water and Power

**KEY**

1. Park One/Honeywell International
2. Allied Aviation Service Company
3. King Delivery
4. National Car Sales
5. National Car Rental
6. Budget Rent-A-Car
7. Hertz Copr/Honeywell International
8. Union Bank/Estate of J. Collins
9. Princeland Property
10. Tetra Graphics Site
11. Thrifty Car Rental
12. Fan Steel/Precision Sheet Metal
13. Dollar Car Rental
14. Pro-Tech Design MFG
15. LADWP Distribution Station

SOURCE: Ninyo & Moore, October 2015.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 4-4**

NORTH 0 1,400 ft.

## Known Hazardous Materials Sites of Concern

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**Table 4-7: California Hazardous Waste Disposal Facilities**

| EPA ID | SITE NAME | ADDRESS | APPROXIMATE DISTANCE FROM PROPOSED PROJECT AREA (MILES) | TOTAL ANNUAL LANDFILLED QUANTITY OF HAZARDOUS WASTE AND OTHER WASTES (TONS) | TOTAL CURRENTLY PERMITTED AND AVAILABLE LANDFILL CAPACITY (TONS) | ANTICIPATED EXPANSION UNDER PERMIT MODIFICATION/ RENEWAL (TONS) | YEAR OF PERMIT MODIFICATION/ RENEWAL |
|---|---|---|---|---|---|---|---|
| CAD980675276 | Clean Harbors Buttonwillow, LLC | 2500 Lokern Rd, McKittrick, CA 93251 | 140 | 350,000 | 9,362,500 | 875,000 | In progress |
| CAT000646117 | Chemical Waste Management, Inc. (Kettleman Hills Landfill) | 35251 Old Skyline Road Kettleman City, CA 93239 | 180 | 6,718 | 6,874,216 | Not Available | 2014 |

SOURCE: U.S. Environmental Protection Agency, National Capacity Assessment Report: Capacity Planning Pursuant to CERCLA Section 104(c)(9), March 25, 2015.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

## 4.6.2 SOLID WASTE

### 4.6.2.1 Regulatory Setting

#### *Federal*

The USEPA regulates household, industrial, and manufacturing solid wastes under RCRA. Subtitle D of RCRA establishes the Solid Waste Program, which encourages states to develop comprehensive plans to manage nonhazardous solid waste, sets criteria for municipal solid waste landfills, and prohibits the open dumping of solid waste.

#### *State*

The California Code of Regulations, Titles 14 and 27, contain regulations related to waste management. The regulations are enforced by the California Department of Resources Recycling and Recovery (CalRecycle). CalRecycle regulates the collection, processing, storage, handling, and disposal of solid waste and the associated facilities.

#### *Local*

In December 2010, the Los Angeles City Council adopted Ordinance No. 181519 (signed by Mayor Antonio Villaraigosa in January 2011), which amended sections of the City's municipal code to require that construction and demolition waste generated within the City of Los Angeles be taken to a City-certified construction demolition waste processing facility.[23]

The California Integrated Waste Management Act of 1989 requires each county to prepare and administer a Countywide Integrated Waste Management Plan. The Los Angeles County Department of Public Works (LACDPW) is responsible for preparing and administering the Los Angeles County Countywide Integrated Waste Management Plan.

### 4.6.2.2 Affected Environment

There are eight major landfills and several smaller landfills currently accepting municipal solid waste in Los Angeles County. The total remaining permitted inert waste capacity in Los Angeles County was estimated to be approximately 59.8 million tons, as of December 31, 2014. Based on the average countywide disposal rate, this capacity would not be exhausted for approximately 31 years.[24]

LAWA has had a comprehensive, facility-wide recycling program to reduce solid waste generation and disposal at LAX since 1992. This program includes collection of recyclable materials generated by LAWA and within

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[23] City of Los Angeles, Ordinance No. 181,519, January 6, 2011, http://clkrep.lacity.org/onlinedocs/2009/09-3029_ord_181519.pdf, accessed December 8, 2016.

[24] County of Los Angeles, Department of Public Works, *Countywide Integrated Waste Management Plan, 2014 Annual Report*, December 2015.

airport terminals and airfield areas; collection of materials from airlines and tenants; independent airline and tenant recycling programs; and source reduction through purchase of recycled products and reuse of materials. In 2015, LAX diverted over 26,800 tons of material from landfills and incinerators, achieving a 66 percent waste diversion rate.[25] Solid waste that cannot be recycled is transferred to the Sunshine Canyon Landfill in Sylmar for disposal. As of December 31, 2014, Sunshine Canyon Landfill had a remaining capacity of 65 million tons, and estimated remaining life of 23 years.[26]

## 4.6.3 POLLUTION PREVENTION

### 4.6.3.1 Regulatory Setting

#### *Section 311 of the CWA, Spill Prevention, Control, and Countermeasure (SPCC) Regulation*

The USEPA is responsible for the administration and enforcement of Spill Prevention Control and Countermeasures (SPCC) Plan requirements. The requirements are intended to prevent oil from reaching navigable waters through measures to prevent, control, and mitigate oil spills. An SPCC Plan must be prepared for a facility if the potential exists for oil to discharge to a navigable water and if 1,320 gallons or greater of oil, including petroleum, is stored in aboveground storage tanks (ASTs) of 55 gallons and greater or if 42,000 gallons or greater is stored in USTs.

#### *Section 402 of the CWA, National Pollutant Discharge Elimination System (NPDES) Program*

The CWA makes it illegal to discharge pollutants from a point source to Waters of the United States. Section 402 of the CWA creates the National Pollutant Discharge Elimination System (NPDES) regulatory program. To comply with Section 402(p) of the CWA, the USEPA developed a two-phase NPDES stormwater program to address stormwater discharges from industrial sources and municipalities. The Los Angeles metropolitan area and LAX are currently regulated under Phase I of the NPDES Stormwater Program. Phase I began in 1990 and applied to large and medium municipal separate storm sewer systems (MS4). MS4s are described as storm drain systems and include streets, gutters, conduits, natural or artificial drains, channels and water courses, or other facilities that are owned, operated, maintained, or controlled by permittees (cities and counties) for the purpose of collecting, storing, transporting, or disposing stormwater.

The CWA requires permits for storm drain systems to (1) be issued on a system or jurisdiction wide basis; (2) include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and (3) require controls to reduce the discharge of pollutants to the maximum extent practical (MEP), including management practices, control techniques and system, design, and engineering methods. Under this program, the Los Angeles Regional Water Quality Control Board (RWQCB) developed requirements for the Standard Urban

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[25] City of Los Angeles, Los Angeles World Airports, *Los Angeles World Airports Sustainability Report 2015*, http://www.laxsustainability.org/documents/Sustainability_Report_2015.pdf (accessed September 6, 2016).

[26] County of Los Angeles, Department of Public Works, *Countywide Integrated Waste Management Plan, 2014 Annual Report*, December 2015.

Stormwater Mitigation Plan (SUSMP), which addresses stormwater pollution from new development and redevelopment projects. The SUSMP is a model guidance document for use by permittees to select post-construction best management practices (BMPs). The SUSMP program applies to specified project types.

BMPs are defined in the SUSMP as any program, technology, process, sitting criteria, operational methods or measures, or engineered systems, which, when implemented, prevent, control, remove or reduce pollution.[27] The general requirements of the SUSMP include:

- Controlling peak stormwater runoff discharge rates
- Conserving natural areas
- Minimizing stormwater pollutants of concern
- Protecting slopes and channels
- Providing storm drain stenciling and signage
- Property designing outdoor material storage areas
- Property designing trash storage areas
- Providing a proof of ongoing BMP maintenance

Three types of BMPs are described in the SUSMP: source control, structural, and treatment control BMPs.[28] The SUSMP also specifies design standards for structure or treatment control BMPs to either infiltrate or treat stormwater runoff and to control peak flow discharge.

### *Porter-Cologne Water Quality Act*

Division 7 of the California Water Code (CWC), also known as the Porter-Cologne Water Quality Control Act, contains provisions that cover water quality protection and management for Waters of the State. The Porter-Cologne Water Quality Control Act applies to surface waters, wetlands, and groundwater that are Waters of the State, and to both point and nonpoint sources of pollution. Provisions contained in the act implement the NPDES program, dredge and fill programs, and civil and administrative penalties.

The Porter-Cologne Water Quality Control Act establishes the SWRCB and the nine RWQCBs as the principal state agencies responsible for the protection, and, where possible, the enhancement of water quality. The SWRCB sets statewide policy, and together with the RWQCBs, implements State and federal laws and regulations pertaining to water quality. Each RWQCB is required to prepare and periodically update a Water Quality Control Plan (Basin Plan) that identifies existing and potential beneficial uses for specific water bodies. The Basin Plan is the master policy document that contains descriptions of the legal, technical, and

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[27] Regional Board Executive Officer, *Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County,* March 8, 2000.

[28] Regional Board Executive Officer, *Standard Urban Storm Water Mitigation Plan for Los Angeles County and Cities in Los Angeles County,* March 8, 2000.

programmatic basis for water quality regulation in each region. All discretionary projects requiring permits from the RWQCB (i.e., waste discharge requirements and NPDES permits) must meet Basin Plan requirements (i.e., water quality standards), taking into consideration the beneficial uses of State waters to be protected.

### *NPDES Construction General Permit*

Pursuant to the CWA, the SWRCB issued a statewide NPDES general permit for stormwater discharges associated with construction activities.[29] Under this permit, construction activity that results in soil disturbances of at least 1-acre is required to obtain an individual NPDES permit or coverage under the Statewide General Construction Activity Stormwater Permit (GCASP). This requirement applies to both private and public agency construction projects, including projects undertaken at LAWA. Construction activities subject to this GCASP include clearing, grading, and disturbances to the ground such as stockpiling or excavation. Compliance involves preparing and implementing a site-specific Stormwater Pollution Prevention Plan (SWPPP) to minimize pollution from construction activities. The SWPPP has two major objectives: (1) to help identify the sources of sediment and other pollutants that affect the quality of stormwater discharges and (2) to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges.

### *NPDES Industrial General Permit*

The NPDES permit programs in California are administered by the SWRCB and by the nine RWQCBs that issue NPDES permits and enforce regulations within their respective region.[30] Pursuant to the CWA, the SWRCB re-issued a statewide Industrial Stormwater General Permit effective on July 1, 2015.[31] The Permit regulates the discharge of 10 categories of industrial activity, including transportation facilities. The General Industrial Permit requires the implementation of the BAT, the Best Available Technology Economically Achievable, and the development of an Industrial SWPPP and a monitoring plan. Through the Industrial SWPPP, sources of pollutants are to be identified and the means to manage the sources in order to reduce stormwater pollution are described.

### *NPDES Municipal Separate Storm Sewer (MS4) Permit*

MS4 Permits require each regulated entity to develop a stormwater management program designed to prevent harmful pollutants from impacting water quality via stormwater runoff. The MS4 Permit establishes the waste discharge requirement for stormwater and non-stormwater discharges within the watersheds of Los Angeles County. The MS4 Permit identifies conditions, requirements, and programs that municipalities must comply with to protect regional water resources from adverse impacts associated with pollutants in

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29 National Pollutant Discharge Elimination System, *General Permit for Discharges from Construction Activities,* effective February 16, 2012 through February 16, 2017.

30 LAX is located within the jurisdiction of the Los Angeles RWQCB.

31 National Pollutant Discharge Elimination System, *General Permit for Storm Water Discharges Associated with Industrial Activities,* effective July 1, 2015 through June 30, 2020.

stormwater and urban runoff. Under the MS4 Permit, permittees reduce pollutants in stormwater discharges to the MEP. The MS4 Permit contains effluent limitations, water quality-based effluent limitations (WQBELS), receiving water limits (RWLs), Minimum Control Measures (MCMs), and Total Maximum Daily Load (TMDL) provisions (see Section 4.13.1.1 for a description of the TMDL program).

### 4.6.3.2 Affected Environment

The Los Angeles RWQCB developed the Basin Plan for the Los Angeles Region, which guides conservation and enhancement of water resources and establishes beneficial uses for inland surface waters, tidal prisms, harbors, and groundwater basins within the region.[32] Beneficial uses are designated so that water quality objectives can be established and programs that enhance or maintain water quality can be implemented. The Basin Plan was amended in December 2002 to incorporate implementation provisions for the region's bacteria objectives and to incorporate a wet weather bacteria TMDL and dry weather bacterial TMDL for Santa Monica beaches. The Basin Plan will be further amended after the USEPA approves recently adopted TMDLs, such as the debris TMDL for Santa Monica Bay nearshore.

The County of Los Angeles Municipal Stormwater NPDES Permit contains a requirement for Permittees to develop and implement programs for stormwater management within the County of Los Angeles. One specific requirement from the Development Planning Model Program is to develop a SUSMP. The SUSMP serves as a model guidance document for use by builders, land developers, engineers, planners, and others in selecting post-construction BMPs and in obtaining municipal approval for the urban stormwater runoff mitigation plan for a designated project prior to the issuance of building and grading permits. Permittees must implement minimum control measures that identify modifications that address watershed priorities, including (1) a Development Construction Program; (2) an Industrial/Commercial Facilities Program; (3) an Illicit Connection and Illicit Discharges Detection and Elimination Program; (4) a Public Agency Activities Program; and (5) a Public Information and Participation Program.

Since 1990, operators of large MS4s have been regulated under NPDES permits. Effective December 28, 2012, the Los Angeles RWQCB reissued the County of Los Angeles Municipal NPDES Permit (Order No. R4-2012-0175), which supersedes Order No. 01-182 (the old MS4 Permit). This serves as the NPDES Permit for MS4 stormwater and non-stormwater discharges within the County of Los Angeles. The purpose of the MS4 Permit is to ensure Permittees are not causing or contributing to exceedances of water quality objectives or impairments of beneficial uses in the receiving waters of the Los Angeles region. The storm sewer systems regulated under MS4s include curbs and gutters, man-made channels, catch basins, and storm drains throughout the Los Angeles region. The Los Angeles County Flood Control District (LACFCD), the County of Los Angeles, and 85 incorporated cities therein, including the City of Los Angeles, LAX, and the entirety of the Proposed Project Area (collectively referred to as Permittees), are jointly covered under a single MS4 Permit

[32] California Regional Water Quality Control Board, Los Angeles Region 4, *Water Quality Control Plan, Los Angeles Region – Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties,* adopted June 13, 1994.

(Order No. R4-2012-0175; NPDES Permit No. CAS004001) for the discharge of urban runoff to waters of the United States.

# 4.7 Historic, Architectural, Archaeological, and Cultural Resources

## 4.7.1 REGULATORY SETTING

### *Federal*

Cultural resources are prehistoric and historic sites, districts, structures, artifacts, or any other physical evidence of human activity considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. Numerous laws and regulations require that possible effects on cultural resources be considered during the planning and execution of federal actions. These laws and regulations stipulate a process of compliance, define the responsibilities of the federal agency proposing the actions, and prescribe the relationships among involved agencies. NEPA directs federal agencies to assess the environmental impacts of proposed actions, including impacts to historic and cultural resources.

The primary federal laws that pertain to the treatment of cultural resources are:

- The National Historic Preservation Act (NHPA) establishes the National Register of Historic Places (NRHP), and Section 106 of the NHPA requires federal agencies to consider whether proposed activities have the potential to have an adverse effect on historic properties that are already listed, determined eligible, or not yet evaluated under the NRHP criteria. Properties that are either listed in or eligible for listing in the NRHP are provided the same measure of protection under Section 106. Federal agencies are required to consider the effects of proposed undertakings on historic properties through consultation with the State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officers (THPOs).
- The American Indian Religious Freedom Act requires federal agencies to consult with Native American groups concerning federal actions that may affect sacred sites.
- The Archeological and Historic Preservation Act provides for the preservation of historical and archaeological data that might otherwise be destroyed or irreparably lost due to a federal action.
- The Native American Graves Protection and Repatriation Act addresses the disposition of certain Native American cultural items, including human remains, and governs the inadvertent discovery of Native American cultural items on federal and tribal lands.

The National Register has established four Criteria for Evaluation to determine the significance of a resource:

A. It is associated with events that have made a significant contribution to the broad patterns of our history;

B. It is associated with the lives of persons significant in our past;

C. It embodies the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. It yields, or may be likely to yield, information important in prehistory or history.[33]

Districts, sites, buildings, structures, and objects of potential significance that are at least 50 years in age must meet one or more of the above criteria. However, the National Register does not prohibit the consideration of properties less than 50 years in age whose exceptional contribution to the development of American history, architecture, archaeology, engineering, and culture can clearly be demonstrated. In addition to meeting the Criteria for Evaluation, a property must have integrity. "Integrity is the ability of a property to convey its significance."[34]

## 4.7.2 AFFECTED ENVIRONMENT

The Area of Potential Effect (APE) is defined as the geographic area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties. As required by 36 CFR 800.4 (a)(1), the FAA established the APE, shown on **Figure 4-5**, and submitted it to the SHPO for review and concurrence (see **Appendix H**). The SHPO concurred on the use of the APE for evaluation of the proposed undertaking by letter dated February 13, 2017 (see **Appendix H**).

### 4.7.2.1 Historic Resources

Potential historical resources within the APE were identified through a review of previous surveys records and reports on file, and a historic resources assessment conducted February 2015 through February 2016. The surveys and assessment identified 10 properties as either designated or potentially eligible for federal designation within or adjacent to the APE.[35] These properties are listed in **Table 4-8** and depicted on Figure 4-5. Detailed information about the Section 106 process and photos of these properties are in **Appendix H**.

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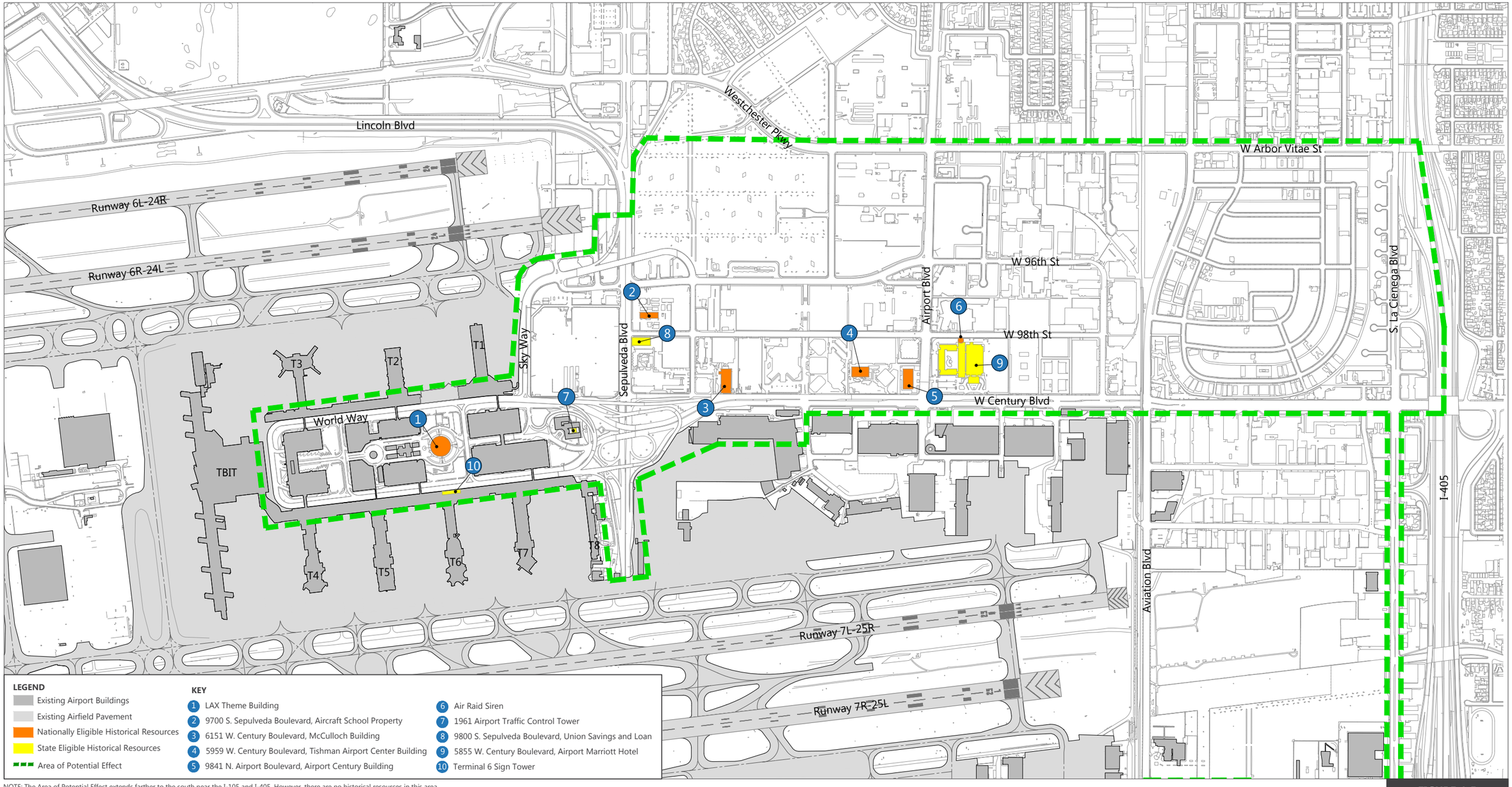
33 U.S. Department of the Interior, National Park Service, *National Register Bulletin 16, Guidelines for Completing National Register of Historic Places Forms*, revised 1997. This bulletin contains technical information on comprehensive planning, survey of cultural resources, and registration in the National Register.

34 U.S. Department of the Interior, National Park Service, *National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation*, 1995, p. 44.

35 Historic Resources Group, *LAX Landside Access Modernization Program, Section 106 Assessment*, (see Appendix H of this EA), February 2017.

**[Preliminary Draft for Discussion Purposes Only]**




NOTE: The Area of Potential Effect extends farther to the south near the I-105 and I-405. However, there are no historical resources in this area.
SOURCE: Los Angeles World Airports; HNTB, July 2012; Historic Resources Group, LAX Landside Transportation Project Resources Assessment, January 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 4-5**

Historical Resources Identified Within the Area of Potential Effect

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**Table 4-8: Historic Resources Identified within the Area of Potential Effect**

| MAP ID NO. (FIG. 4-5) | PROPERTY | LOCATION | YEAR BUILT | NR |
|---|---|---|---|---|
| 1 | The Theme Building<br>201 World Way | CTA | 1961–1962 | Eligible |
| 2 | Aircraft School Property<br>9700 S. Sepulveda Boulevard | Outside CTA | 1941–1945 | Eligible[3/] |
| 3 | The McCulloch Building<br>6151 W. Century Boulevard | Outside CTA | 1964 | Ineligible[1/] |
| 4 | Tishman Airport Center Building<br>5959 W. Century Boulevard | Outside CTA | 1966 | Eligible[3/] |
| 5 | Airport Century Building<br>9841 N. Airport Boulevard | Outside CTA | 1968 | Eligible[3/] |
| 6 | Air Raid Siren | Outside CTA | 1940 | Eligible[3/] |
| 7 | 1961 Airport Traffic Control Tower[2/]<br>1 World Way | CTA | 1961 | Ineligible |
| 8 | Union Savings and Loan<br>9800 S. Sepulveda Boulevard | Outside CTA | 1964 | Ineligible |
| 9 | Airport Marriott Hotel<br>5855 W. Century Boulevard | Outside CTA | 1972 | Ineligible |
| 10 | Terminal 6 Sign Tower<br>World Way | CTA | 1962 | Ineligible |

NOTES: NR = National Register of Historic Places

1/ Although the *Section 106 Assessment* Report identified the McCulloch Building as eligible for the National Register under Criterion C, subsequent to the evaluation, the building owners have undertaken a conversion of the building to a hotel. Based on this conversion, the FAA has determined that the McCulloch Building no longer retains integrity and is not eligible for inclusion in the National Register (see letter from FAA to SHPO dated March 20, 2017 in **Appendix H**). In a letter dated June 28, 2017 (see **Appendix H**), the SHPO stated that additional information on the historic significance of the McCulloch Building would be needed before concurring with FAA's determination of eligibility. However, the SHPO also stated that considering that the undertaking would not affect this property, SHPO will consider this building eligible for listing on the NRHP for purposes of this undertaking.

2/ Due to extensive alteration of the 2-story Administration Building portion and alterations to the Tower portion, the building no longer retains integrity of design, setting, materials, or workmanship and therefore does not retain sufficient integrity to be eligible for listing in the National Register under Criteria A or C.

3/ In a letter dated June 28, 2017 (see **Appendix H**), the SHPO stated that additional information on the historic significance of the Aircraft School, Tishman Airport Center Building, Airport Century Building, and Air Raid Siren No. 150 would be needed before concurring with FAA's determination of eligibility. However, the SHPO also stated that considering that the undertaking would not affect these properties, SHPO will consider these buildings and structures are eligible for listing on the NRHP for purposes of this undertaking.

SOURCE: Historic Resources Group, *LAX Landside Access Modernization Program, Section 106 Assessment*, December 2016.
PREPARED BY: Ricondo & Associates, Inc., December 2016.

### *The Theme Building*

The Theme Building is situated at the center of the CTA between the existing concourse and terminal facilities. It was previously determined eligible for listing in the National Register under Criterion C for its unique architecture, which has become symbolic not only of the Airport but of the City of Los Angeles as a whole.[36] Through the prior LAX Master Plan Supplemental Section 106 process, the FAA reconfirmed that the Theme Building satisfies National Register criteria for a property achieving exceptional significance in a building less than 50 years old (at the time of the analysis) and determined it was eligible for listing in the National Register.[37]

### *1961 Airport Traffic Control Tower*

Because the Tower portion retains its vertical form and control cab, it is still recognizable as a control tower from the period of significance, the Jet Age redesign of LAX. However, the Tower is ineligible for federal listing (see pages 27-29 of the *Section 106 Assessment* Report in **Appendix H**). Due to extensive alteration, the building no longer retains integrity of design, setting, materials, or workmanship and therefore does not retain sufficient integrity to be eligible for listing in the National Register under Criteria A or C.

### *Airport Century Building*

The Airport Century Building is a mid-rise office building constructed in 1968. It was designed by the architectural firm of Welton Beckett & Associates as part of the International Airport Center commercial development located on the north side of Century Boulevard, just east of the CTA. The Airport Century Building was found eligible under Criterion C for the National Register.[38]

### *Tishman Airport Center Building*

The Tishman Airport Center Building is a 12-story office building that was part of the International Airport Center commercial development located on the north side of Century Boulevard just east of the CTA. Constructed in 1966, this mid-rise commercial office building was found eligible under Criterion C for the National Register.[39]

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[36] City of Los Angeles, Los Angeles World Airports, *Draft Environmental Impact Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study, Section 4.5, Cultural Resources,* July 2012.

[37] City of Los Angeles, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements, Appendix I, Section 106 Report*, January 2001, and *Appendix S-G, Supplemental Section 106 Report,* June 2003.

[38] Historic Resources Group, *LAX Landside Access Modernization Program, Section 106 Assessment*, (see Appendix H of this EA), February 2017.

[39] Historic Resources Group, *LAX Landside Access Modernization Program, Section 106 Assessment,* (see Appendix H of this EA), February 2017.

### *The McCulloch Building*

The McCulloch Building is a 12-story office building that was part of the International Airport Center project. Constructed in 1964, this mid-rise commercial office building was found eligible under Criterion C for the National Register by SurveyLA in 2013.[40] However, this building, including the exterior, is currently being remodeled from an office building to a hotel and has thus, lost integrity. Based on the loss of integrity, FAA determined that the McCulloch Building is not eligible for inclusion into the National Register (see letter from FAA to SHPO dated March 20, 2017 in **Appendix H**).[41]

### *Union Savings and Loan*

Union Savings and Loan is an eight-story office building originally constructed in 1964. The building was part of the International Airport Center commercial development located on the north side of Century Boulevard just east of the CTA. This mid-rise commercial office building is not eligible for the National Register.[42]

### *Air Raid Siren*

Located on the south side of West 98th Street just east of Airport Boulevard, this rotating air raid siren on a freestanding pole was identified as eligible for the National Register under Criterion A.[43] Constructed in 1940, the siren was evaluated as historically significant for its association with World War II and Cold War military infrastructure.

### *Aircraft School Property*

The property, originally developed by the Los Angeles City High School District in 1941, contains a handful of modest single-story buildings set within an expanse of surface parking. The largest of the buildings is rectangular in plan, with a bow-truss roof and monitor, horizontal wood cladding, and metal-frame, multi-light casement windows. Two smaller buildings with gable roofs and a rectangular masonry building with a flat roof and attached shade canopy are clustered just south of the bow-truss roof building. A rectangular building of more recent vintage is set apart from the others at the northwest corner of the site.

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[40] Historic Resources Group, *LAX Landside Access Modernization Program, Section 106 Assessment,* (see Appendix H of this EA), February 2017.

[41] In a letter dated June 28, 2017 (see **Appendix H**), the SHPO stated that additional information on the historic significance of the McCulloch Building would be needed before concurring with FAA's determination of eligibility. However, the SHPO also stated that considering that the undertaking would not affect this property, SHPO will consider this building eligible for listing on the NRHP for purposes of this undertaking.

[42] Historic Resources Group, *LAX Landside Access Modernization Program, Section 106 Assessment,* (see Appendix H of this EA), February 2017.

[43] City of Los Angeles, Department of City Planning, *SurveyLA Historic Resources Survey Report: Westchester–Playa Del Rey Community Plan Area,* November 27, 2013, p. 31.

Evidence suggests that the property has a long historic association with training in the aircraft trades in service of the explosive post–World War II growth of the aerospace industry in Southern California. As such, it appears the property is eligible under National Register Criterion A.

### *Airport Marriott Hotel*

The hotel property was constructed in 1972 as the Airport Marriott Hotel and officially opened in September of 1973. The Airport Marriott Hotel has not been previously identified as historically significant but it appears to retain the majority of its original features and appears to be significant on the local level as a rare, intact example of a large hotel property from the early 1970s. However, the Airport Marriott Hotel is 44 years old and does not appear to be of "exceptional importance" required under National Register Criteria Consideration G for properties less than fifty years of age. Therefore, the Airport Marriott Hotel is not eligible for listing in the National Register.

### *Terminal 6 Sign Tower*

The original 1962 Terminal 6 sign tower is a freestanding, 4-story tube steel sign tower bearing the terminal's numerical designation. Of the six original terminal sign towers, four have been extensively altered, truncated, and relocated, and one is nonexistent. The Terminal 6 sign tower is not eligible for the National Register as an individual resource.

FAA reviewed and examined the *Section 106 Assessment* Report prepared for this EA (see **Appendix H**).[44] FAA determined that the Theme Building, one of the Aircraft School buildings located at 9700 S. Sepulveda Boulevard, the Tishman Airport Center Building located at 5959 W. Century Boulevard, the Airport Century Building located at 9841 N. Airport Boulevard, and Air Raid Siren No. 150 are eligible for inclusion in the National Register. Because the McCulloch Building located at 6151 W. Century Boulevard is undergoing conversion from an office building to a hotel, the FAA determined that it no longer retains integrity and is therefore ineligible for inclusion in the National Register under any of the four criteria specified in Title 36, CFR Section 60.4. FAA consulted with the California SHPO on its determination of eligibility by letter dated March 20, 2017. The SHPO responded on June 28, 2017 that more information would be needed to determine the eligibility of the Aircraft School, Tishman Airport Center Building, McCulloch Building, Airport Century Building, and Air Raid Siren No. 150 for the National Register. However, "considering that the undertaking will not affect these properties, SHPO will consider these buildings and structures eligible for listing on the NRHP for the purposes of this undertaking." The SHPO concurred with the other findings discussed in this EA. The correspondence is included in **Appendix H**.

[44] Historic Resources Group, *LAX Landside Access Modernization Program, Section 106 Assessment,* (see Appendix H of this EA), February 2017.

#### 4.7.2.2 Sacred Lands File Search

A Sacred Lands File (SLF) records search for the APE was commissioned on December 30, 2014 through the California Native American Heritage Commission (NAHC) to determine whether any Native American cultural resources in the NAHC database were located within the APE. Results of the SLF search did not indicate any newly inventoried Native American cultural resources within the APE (see **Appendix H**). The NAHC results also noted, however, that the absence or resource information in the SLF inventory does not preclude the discovery of cultural resources within any project area.[45] FAA received a listing of Native American contacts for the proposed undertaking from the NAHC on October 17, 2016 for the proposed LAX Landside Access Modernization Program. The NAHC recommended FAA contact the Gabrielino Band of Mission Indians – Kizh Nation, and four different representatives of the Gabrielino-Tongva Tribe.

On November 2, 2016, FAA provided project information about the proposed undertaking and APE for the proposed LAX Landside Access Modernization Program to the tribal contacts provided by the NAHC by U.S. mail. FAA did not receive any comments from any of the tribal contacts.

#### 4.7.2.3 Archaeological Resources

As part of the LAX Master Plan, LAWA prepared an Archaeological Treatment Plan (ATP) to ensure the long-term protection and proper treatment of archaeological discoveries of federal, state, and/or local significance encountered during LAX Master Plan implementation.[46] LAWA also requires compliance with the ATP for all non-LAX Master Plan development projects at LAX that involve grading and/or excavation in native and undisturbed soils. The ATP establishes requirements for monitoring during grading and/or excavation in native and undisturbed soils by a qualified archaeologist and protocols for the identification, evaluation, and recovery of archaeological resources, consistent with federal and state requirements, if such resources are discovered.

A cultural resource records search was conducted on December 11, 2014 at the South Central Coastal Information Center (SCCIC), which included a review of all recorded archaeological and historical resources within a half-mile radius of the APE. Results of the records search indicated no archaeological resources have been recorded within the APE. The records search also indicated that more than 15 cultural resource studies have been conducted within the APE. These studies were conducted for various projects across LAX from 1974 to 2005 and encompass approximately 50 percent of the APE.

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[45] Sanchez, Katy, State of California, Native American Heritage Commission to Christopher W. Purtell, PCR Services Corporation, regarding Landside Transportation Program at Los Angeles International Airport, City of Los Angeles, Los Angeles County, January 8, 2015.

[46] City of Los Angeles, Los Angeles World Airports, *Final LAX Master Plan: Mitigation Monitoring & Reporting Program - Archaeological Treatment Plan*, prepared by Brian F. Smith and Associates, June 2005.

# 4.8 Land Use

## 4.8.1 REGULATORY SETTING

### *Federal*

Pursuant to 49 U.S.C. § 47107(a)(10), the airport sponsor is required to provide written assurance that appropriate action has been, or will be, taken to ensure existing and planned land uses adjacent to or in the immediate vicinity of an airport are compatible with normal airport operations. Additionally, pursuant to 49 U.S.C. § 47106(a)(1), the airport sponsor must provide assurance that a proposed action is reasonably consistent with plans of public agencies authorized by the State in which the airport is located to for the development of the area surrounding the airport.

### *State/Regional*

Pursuant to the California State Aeronautics Act (California Public Utilities Code §§ 21670 et seq.), every county that contains an airport with scheduled airline service is required to establish an airport land use commission (ALUC). The ALUC is required to develop and implement an airport land use compatibility plan (ALUCP) to provide for the orderly growth of a public airport and the area surrounding the airport. The ALUCP should reflect the anticipated growth of the airport during the next 20 years.

Jurisdictions with planning and development authority within the area covered by an ALUCP are required to ensure that their planning documents and zoning ordinances are consistent with the ALUCP, or take specific steps to override the ALUCP.

The Los Angeles County Regional Planning Commission is the designated ALUC for airports within Los Angeles County. The Los Angeles County Airport Land Use Plan (ALUP) establishes a planning boundary for each commercial airport within Los Angeles County to delineate areas subject to noise impacts and safety hazards.[47] The ALUP is implemented through General Plan, Specific Plan, and zoning amendments.[48]

As required under 49 U.S.C. § 47107(a)(10), LAWA, as Airport Sponsor, has provided FAA assurance that appropriate action, including the adoption of zoning laws, has been or will be taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities compatible with normal airport operations, including landing and takeoff of aircraft. A copy of the letter documenting this assurance is provided in **Appendix I**.

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[47] Los Angeles County, Airport Land Use Commission, Department of Regional Planning, *Los Angeles County Airport Land Use Plan*, adopted December 19, 1991, revised December 1, 2004, Available: http://planning.lacounty.gov/view/alup/.

[48] California Public Utilities Code Section 21676.

SCAG is a federally designated MPO representing six counties (Ventura, Orange, San Bernardino, Riverside, Imperial, and Los Angeles). SCAG is mandated by federal and state law to develop a Regional Transportation Plan, Transportation Improvement Program and a Sustainable Communities Strategy. It develops a regional growth forecast that is the foundation for these plans and also for regional air quality plans developed by the SCAQMD. SCAG is responsible for reviewing regionally significant plans, projects, and programs for consistency with adopted regional plans.

### *Local*

The City of Los Angeles General Plan Framework Element establishes the conceptual basis for the City's General Plan. In addition, the Mobility Plan 2035, adopted in 2015 and subsequently amended in 2016, is the new General Plan Transportation Element for the City of Los Angeles.

The LAX Plan is the community plan for the LAX area and was adopted concurrently with the LAX Master Plan, approved by the Los Angeles City Council in December 2004 and amended in 2013.[49] The LAX Plan is part of the Land Use Element of the City of Los Angeles General Plan. The LAX Plan establishes the land use policy for LAX and is intended to promote an arrangement of airport uses that encourages and contributes to the modernization of the Airport in an orderly and flexible manner within the context of the City and region.

The LAX Specific Plan, approved by the City Council in 2004 and amended in 2007, 2013, and 2016, contains land use regulations and procedures for the processing of future individual projects and activities under the LAX Plan.[50] While the LAX Plan identifies goals, objectives, and policies, the LAX Specific Plan details use limitations and design regulations within the plan area.

## 4.8.2 AFFECTED ENVIRONMENT

LAX is bordered on the north by the City of Los Angeles communities of Westchester and Playa del Rey; on the south by the City of El Segundo; on the southeast by the unincorporated Los Angeles County community of Del Aire and the City of Hawthorne; and on the east by the City of Inglewood and the unincorporated Los Angeles County community of Lennox. Vista del Mar, Dockweiler State Beach, and the Santa Monica Bay are located to the west of the Airport. All of these cities and communities are located within Los Angeles County. The majority of the Proposed Project Area contains LAX property and airport-related uses, intermixed with some non-airport uses (i.e., residential, commercial, and light industrial uses).

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[49] City of Los Angeles, Department of City Planning, *LAX Plan*, adopted December 14, 2004, last amended May 24, 2013, Available: http://planning.lacity.org/complan/specplan/pdf/LAXPLAN_AMENDED20130524_FINAL(SECURED).pdf.

[50] City of Los Angeles, Department of City Planning, *Los Angeles International Airport (LAX) Specific Plan*, adopted December 14, 2004, last amended June 14, 2016, Available: http://clkrep.lacity.org/onlinedocs/2013/13-0285-s3_ORD_184348_6-15-16.pdf.

### 4.8.2.1 Surrounding Land Uses

The following describes the existing land uses surrounding the Proposed Project Area, which are generally represented by the existing zoning designations shown in **Figure 4-6**.

#### *City of Los Angeles*

The City of Los Angeles community of Westchester is located just north of the boundaries of LAX, outside and north of the Proposed Project Area. Existing uses within that area are characterized primarily by commercial, residential, and industrial uses. Existing land uses for non-Airport areas within the Proposed Project Area include commercial uses, consisting mostly of hotels, parking structures, and office buildings, educational (i.e., property at northeast corner of Sepulveda Boulevard and 96th Street, which contains two former airplane hangars which West Los Angeles College reports it currently uses for the warehousing of movie set props and for instruction to support its Film/Television Production Crafts certificate program), and some light-industrial uses.

The Proposed Project Area is primarily located within the LAX Plan boundaries, although a small portion along the northern boundary is located within the Westchester–Playa del Rey Community Plan Area. The Westchester-Playa del Rey Community Plan recognizes the intertwined relationship between LAX and the Westchester–Playa del Rey community. One of the stated goals of the plan is to coordinate the development of LAX with the surrounding communities, to provide adequate buffer (comprised of compatible development) and transitional land uses, and to help stimulate the revitalization of various business districts in Westchester.[51]

#### *City of El Segundo*

The City of El Segundo is approximately 3,488 acres in size and is located outside and to the southwest of the Proposed Project Area. Existing uses in El Segundo nearest to the Proposed Project Area include office and industrial development.

#### *City of Hawthorne*

The City of Hawthorne is approximately 3,892 acres in size and is separated from the Proposed Project Area by the interchange for I-105 and I-405. Land uses adjacent to I-105 and I-405 include single- and multi-family residential, and commercial.

#### *City of Inglewood*

The City of Inglewood is located east of LAX and covers approximately 5,823 acres. The predominant land uses in Inglewood that are located within and adjacent to the Proposed Project Area are Airport commercial and other commercial uses. Multi-family residential uses are located east of I-405.

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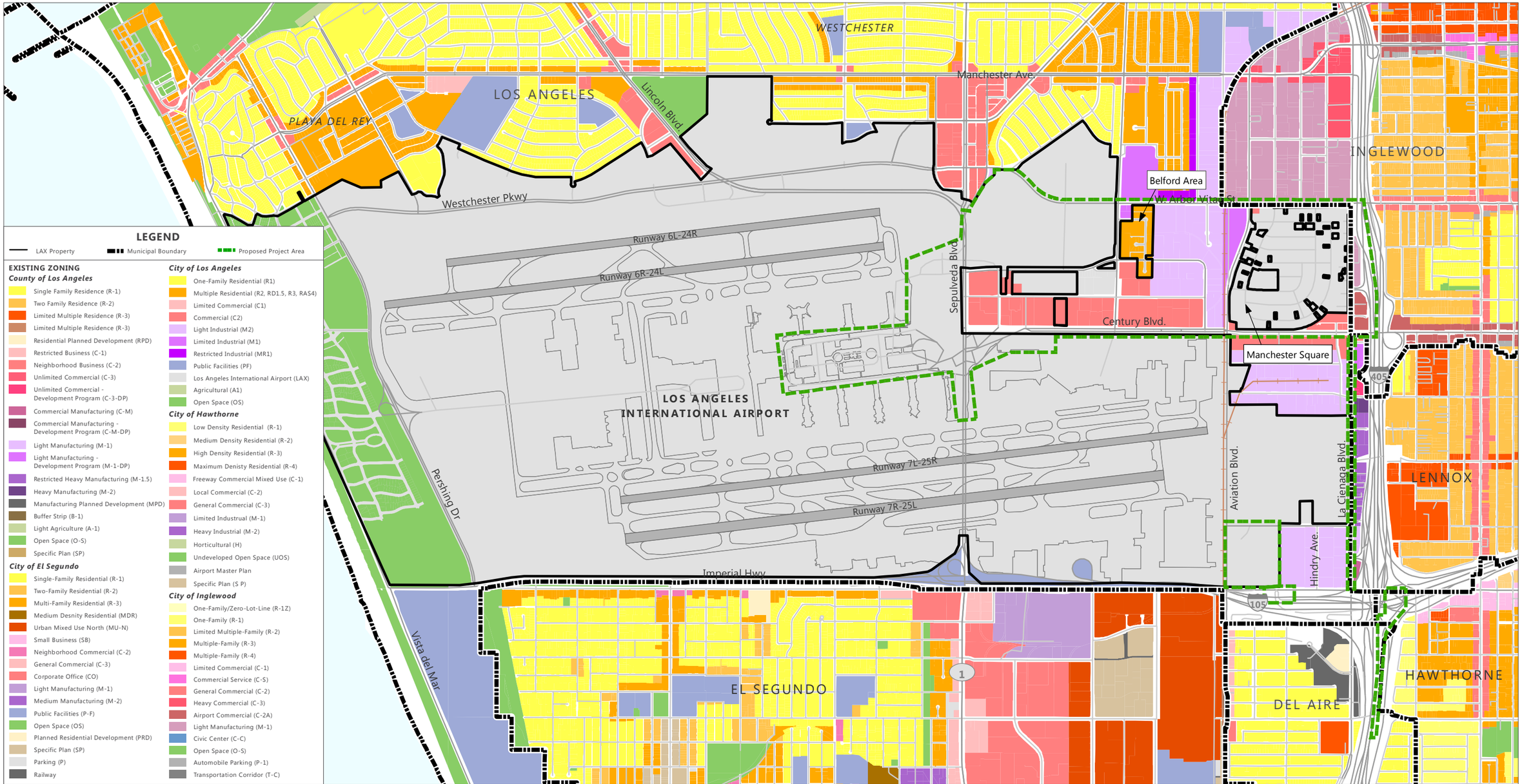
[51] City of Los Angeles, Department of City Planning, *Westchester – Playa del Rey Community Plan*, adopted April 13, 2004, as amended.

**[Preliminary Draft for Discussion Purposes Only]**




**LEGEND**

LAX Property | Municipal Boundary | Proposed Project Area

**EXISTING ZONING**

***County of Los Angeles***

- Single Family Residence (R-1)
- Two Family Residence (R-2)
- Limited Multiple Residence (R-3)
- Limited Multiple Residence (R-3)
- Residential Planned Development (RPD)
- Restricted Business (C-1)
- Neighborhood Business (C-2)
- Unlimited Commercial (C-3)
- Unlimited Commercial - Development Program (C-3-DP)
- Commercial Manufacturing (C-M)
- Commercial Manufacturing - Development Program (C-M-DP)
- Light Manufacturing (M-1)
- Light Manufacturing - Development Program (M-1-DP)
- Restricted Heavy Manufacturing (M-1.5)
- Heavy Manufacturing (M-2)
- Manufacturing Planned Development (MPD)
- Buffer Strip (B-1)
- Light Agriculture (A-1)
- Open Space (O-S)
- Specific Plan (SP)

***City of El Segundo***

- Single-Family Residential (R-1)
- Two-Family Residential (R-2)
- Multi-Family Residential (R-3)
- Medium Desnity Residential (MDR)
- Urban Mixed Use North (MU-N)
- Small Business (SB)
- Neighborhood Commercial (C-2)
- General Commercial (C-3)
- Corporate Office (CO)
- Light Manufacturing (M-1)
- Medium Manufacturing (M-2)
- Public Facilities (P-F)
- Open Space (OS)
- Planned Residential Development (PRD)
- Specific Plan (SP)
- Parking (P)
- Railway

***City of Los Angeles***

- One-Family Residential (R1)
- Multiple Residential (R2, RD1.5, R3, RAS4)
- Limited Commercial (C1)
- Commercial (C2)
- Light Industrial (M2)
- Limited Industrial (M1)
- Restricted Industrial (MR1)
- Public Facilities (PF)
- Los Angeles International Airport (LAX)
- Agricultural (A1)
- Open Space (OS)

***City of Hawthorne***

- Low Density Residential (R-1)
- Medium Density Residential (R-2)
- High Density Residential (R-3)
- Maximum Denisty Residential (R-4)
- Freeway Commercial Mixed Use (C-1)
- Local Commercial (C-2)
- General Commercial (C-3)
- Limited Industrial (M-1)
- Heavy Industrial (M-2)
- Horticultural (H)
- Undeveloped Open Space (UOS)
- Airport Master Plan
- Specific Plan (S P)

***City of Inglewood***

- One-Family/Zero-Lot-Line (R-1Z)
- One-Family (R-1)
- Limited Multiple-Family (R-2)
- Multiple-Family (R-3)
- Multiple-Family (R-4)
- Limited Commercial (C-1)
- Commercial Service (C-S)
- General Commercial (C-2)
- Heavy Commercial (C-3)
- Airport Commercial (C-2A)
- Light Manufacturing (M-1)
- Civic Center (C-C)
- Open Space (O-S)
- Automobile Parking (P-1)
- Transportation Corridor (T-C)

SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2015 (runways, taxiways, terminal area, ariport property boundary).
South California Association of Governments (land use), 2008.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

NORTH 0 2,000 ft.

**FIGURE 4-6**

Existing Zoning in the Vicinity of LAX

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*Unincorporated Los Angeles County*

The community of Lennox is located east of I-405 within unincorporated Los Angeles County. A small segment of Lennox extends along the east portion of the Proposed Project Area, between S. La Cienega Boulevard and I-405. Land uses in this area include manufacturing and commercial development. Residential land uses are east of I-405, outside the Proposed Project Area.

The community of Del Aire is approximately 650 acres in size and located south of LAX and I-105, outside of the Proposed Project Area. Existing land uses within Del Aire near I-105 and I-405 include residential, manufacturing, office, and commercial development.

# 4.9 Natural Resources and Energy Supply

## 4.9.1 REGULATORY SETTING

Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, establishes an integrated strategy towards sustainability in the federal government and makes reduction of GHG emissions a priority for federal agencies.

## 4.9.2 AFFECTED ENVIRONMENT

Electrical power within the City of Los Angeles, including LAX, is supplied by the Los Angeles Department of Water and Power (LADWP), which serves approximately 3.8 million people. The LADWP service area used approximately 23,800,000 megawatt-hours (MWh) of electricity in 2015. LADWP obtains electricity from various generating sources that utilize coal, nuclear, natural gas, hydroelectric, and renewable resources to generate power. Its current instantaneous electric system capacity (i.e., the amount of capacity it can provide at any given moment) is 7,640 megawatts (MW). The highest peak demand event occurred in 2014 at 6,396 MW.

Electricity is primarily used at LAX for lighting, cooling, and equipment operation in buildings, and for airfield lighting and operations. Electricity is also used indirectly in the delivery, treatment, and distribution of water used at the Airport and the treatment of wastewater. Total electricity consumption for LAX was approximately 184,400 MWh for 2015.[52] This represents a 13.5 percent decrease compared to 2014.

Sempra Utilities now owns the Southern California Gas Company (SoCalGas), which supplies natural gas to nearly all of Southern and Central California, including the City of Los Angeles. In 2015, approximately 2,559 million cubic feet (MMcf) of natural gas per day (934,035 MMcf annually) was consumed in Southern

[52] City of Los Angeles, Los Angeles World Airports, *Los Angeles World Airports Sustainability Report 2015*, Available: http://www.laxsustainability.org/documents/Sustainability_Report_2015.pdf.

California.[53] SoCalGas projects total gas demand to decline at an annual rate of 0.6 percent from 2016 to 2035.

Natural gas is primarily used at LAX for electricity generation, space heating, food preparation, and maintenance activities. Baseline (2015) natural gas consumption at LAX is approximately 3,067,196 therms (306.6 MMcf) per year.[54] This represents an increase over 2014 consumption, however the trend over the past five years has been a decrease in natural gas consumption at LAX such that current consumption is less than half of 2011 consumption levels. LAX's natural gas consumption is approximately 0.03 percent of the total Southern California regional demand.

The LADWP is responsible for supplying, treating, and distributing water for domestic, industrial, agricultural, and firefighting purposes within the City, including LAX. LADWP obtains the majority of its water through purchases from the Metropolitan Water District of Southern California (MWD), the largest water wholesaler in Southern California. The MWD has more than 5.0 million acre-feet (AF) of storage capacity available in reservoirs and banking/transfer programs, with approximately 2.37 million AF available; of that, approximately 626 thousand AF was in emergency storage as of January 1, 2014.[55]

The Hyperion Treatment Plant (HTP), located southwest of LAX in Playa del Rey, provides treatment capacity for all wastewater flows generated within the Project area. In 1998, the HTP was upgraded to provide full secondary treatment for all influent based on an average dry weather flow of 450 million gallons per day (mgd). The HTP currently processes average wastewater flows of approximately 275 mgd.[56]

## 4.10 Noise and Noise-Compatible Land Use

Noise levels are measured using a variety of scientific metrics. As a result of extensive research into the characteristics of noise and human response to that noise, standard noise descriptors have been developed for noise exposure analyses. The descriptors used in this noise analysis are described below. All noise levels provided in this analysis are for outdoor conditions, unless otherwise stated specifically to be interior noise levels.

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53 The California Gas and Electric Utilities, *2016 California Gas Report*, 2016, Available: https://www.socalgas.com/regulatory/cgr.shtml.

54 City of Los Angeles, Los Angeles World Airports, *Los Angeles World Airports Sustainability Report 2015*, Available: http://www.laxsustainability.org/documents/Sustainability_Report_2015.pdf.

55 City of Los Angeles, Office of the Mayor, *Sustainable City pLAn*, *Transforming Los Angeles, Environment - Economy - Equity*, April 2015, Available: http://www.lamayor.org/sites/g/files/wph446/f/landing_pages/files/The%20pLAn.pdf.

56 City of Los Angeles, Department of Public Works, Bureau of Sanitation, Hyperion Water Reclamation Plant, Available: https://www.lacitysan.org/san/faces/home/portal/s-lsh-wwd/s-lsh-wwd-cw/s-lsh-wwd-cw-p/s-lsh-wwd-cw-p-hwrp?_adf.ctrl-state=sss4mlm4a_4&_afrLoop=30183617555210428#!, accessed March 29, 2016.

**A-Weighted Sound Pressure Level (dBA):** The decibel (dB) is a unit used to describe sound pressure level. When expressed in dBA, the sound has been filtered to reduce the effect of very low and very high frequency sounds, much as the human ear filters sound frequencies. Without this filtering, calculated and measured sound levels would include events that the human ear cannot hear (e.g., dog whistles and low-frequency sounds, such as the groaning sounds emanating from large buildings with changes in temperature and wind). With A-weighting, calculations and sound-monitoring equipment approximate the sensitivity of the human ear to sounds of different frequencies.

**Equivalent Continuous Noise Level ($L_{eq}$):** $L_{eq}$ is the sound level, expressed in dBA, of a steady sound that has the same A-weighted sound energy as the time-varying sound over the averaging period. $L_{eq}$ is the average sound level for a specified time period (e.g., 24 hours, 8 hours, 1 hour, etc.). $L_{eq}$ is calculated by integrating the sound energy from all noise events over a given time period and applying a factor for the number of events. $L_{eq}$ can be expressed for any time interval; for example, the $L_{eq}$ representing an averaged level over an 8-hour period would be expressed as $L_{eq(8)}$.

**Day-Night Average Sound Level (DNL):** DNL, formerly referred to as $L_{dn}$, is expressed in dBA and represents the noise level over a 24-hour period. Because environmental noise fluctuates over time, DNL was devised to relate noise exposure over time to human response. DNL is a 24-hour average of the hourly $L_{eq}$, but with penalties to account for the increased sensitivity to noise events that occur during the more sensitive nighttime periods. Specifically, DNL penalizes noise 10 dB during the nighttime time period (10:00 p.m. to 7:00 a.m.). The USEPA introduced the metric in 1976 as a single-number measurement of community noise exposure. The FAA adopted DNL as the noise metric for measuring cumulative aircraft noise under Federal Aviation Regulations (FAR) Part 150, Airport Noise Compatibility Planning. The Department of Housing and Urban Development, the Veterans Administration, the Department of Defense, the United States Coast Guard, and the Federal Transit Administration have also adopted DNL for measuring cumulative noise exposure. DNL is used to describe existing and predicted noise exposure in communities in airport environs based on the average daily operations during the year and the average annual operational conditions at an airport. Therefore, at a specific location, the noise exposure on a particular day is likely to be higher or lower than the annual average noise exposure, depending on the specific traffic levels on that day. The DNL metric is not utilized in California; instead the very similar Community Noise Equivalent Level (CNEL), expressed in dBA as described below, is used by FAA and state agencies as the standard metric to represent cumulative noise exposure.

**Community Noise Equivalent Level (CNEL):** CNEL, expressed in dBA, is the standard metric used in California to represent cumulative noise exposure. The metric provides a single-number description of the sound energy to which a person or community is exposed over a period of 24 hours similar to DNL. CNEL includes penalties applied to noise events occurring after 7:00 p.m. and before 7:00 a.m., when noise is considered more intrusive. The penalized time period is further subdivided into evening (7:00 p.m. through 9:59 p.m.) and nighttime (10:00 p.m. to 6:59 a.m.). When a noise event occurs in the evening, a penalty of 4.77 dBA is added to the nominal sound level (equivalent to a threefold increase in aircraft operations). A 10 dBA penalty is added to nighttime noise events (equivalent to a tenfold increase in aircraft operations). The evening weighting is the only difference between CNEL and DNL.

### 4.10.1 REGULATORY SETTING

The FAA has laws and regulations that provide a basis for local development of airport plans, analysis of potential impacts from airport development, and compatibility policies. As the Proposed Action Alternative and No Action Alternative would not result in any changes to aircraft operations, departures and arrivals runway utilization, or runway configuration; noise from aircraft operations would not be affected by the Proposed Action Alternative or No Action Alternative. Therefore, analysis of the affected noise environment for this EA focuses on the ambient noise conditions from the airport and roadway noise. Noise analysis guidance defined in FAA Order 1050.1F states that: "surface transportation impacts, including construction noise, should be conducted using accepted methodologies from the appropriate modal administration, such as the FHWA for highway noise."[57] In accordance with FAA Order 1050.1F guidance, FHWA guidance has been used to assess existing roadway noise conditions. Additionally, FHWA provides guidelines for roadway construction and operational noise, however defers to the state authority to provide specific guidance.[58] Therefore, Caltrans noise standards have been utilized in this EA.

### 4.10.2 AFFECTED ENVIRONMENT

In general, the noise setting at and around LAX is influenced primarily by aircraft operations (takeoffs and landings). In addition to aircraft activities, the noise setting around LAX is influenced by major freeways, including I-405 and I-105, and several major arterial roads, including but not limited to Imperial Highway, Sepulveda Boulevard, Century Boulevard, and Lincoln Boulevard. Noise-sensitive receptors in proximity to LAX include residential uses, schools, places of worship, parks, and library uses in Westchester and Playa del Rey to the north, Inglewood and Lennox to the east, and El Segundo and Del Aire to the south and southeast, respectively. There are currently residential units within the Manchester Square and Belford areas, as well as two charter school facilities within Manchester Square. Both the Manchester Square and Belford areas are part of the LAX voluntary acquisition program, which is intended to remove existing noise-sensitive residential units from areas subject to high noise levels overflights; most of Manchester Square and Belford has been vacated.

#### 4.10.2.1 Ambient Noise

Ambient levels of existing noise were measured (24-hour CNEL) at 15 representative locations in the Proposed Project Area, as shown on **Figure 4-7**. The results of the noise monitoring are presented in **Table 4-9**. As shown, 24-hour CNEL values within the Proposed Project Area ranged from a high of 77.4 dBA (RP2 – LAX Sheraton Gateway Hotel) to a low of 62.7 dBA (RP14 – Residential Development).

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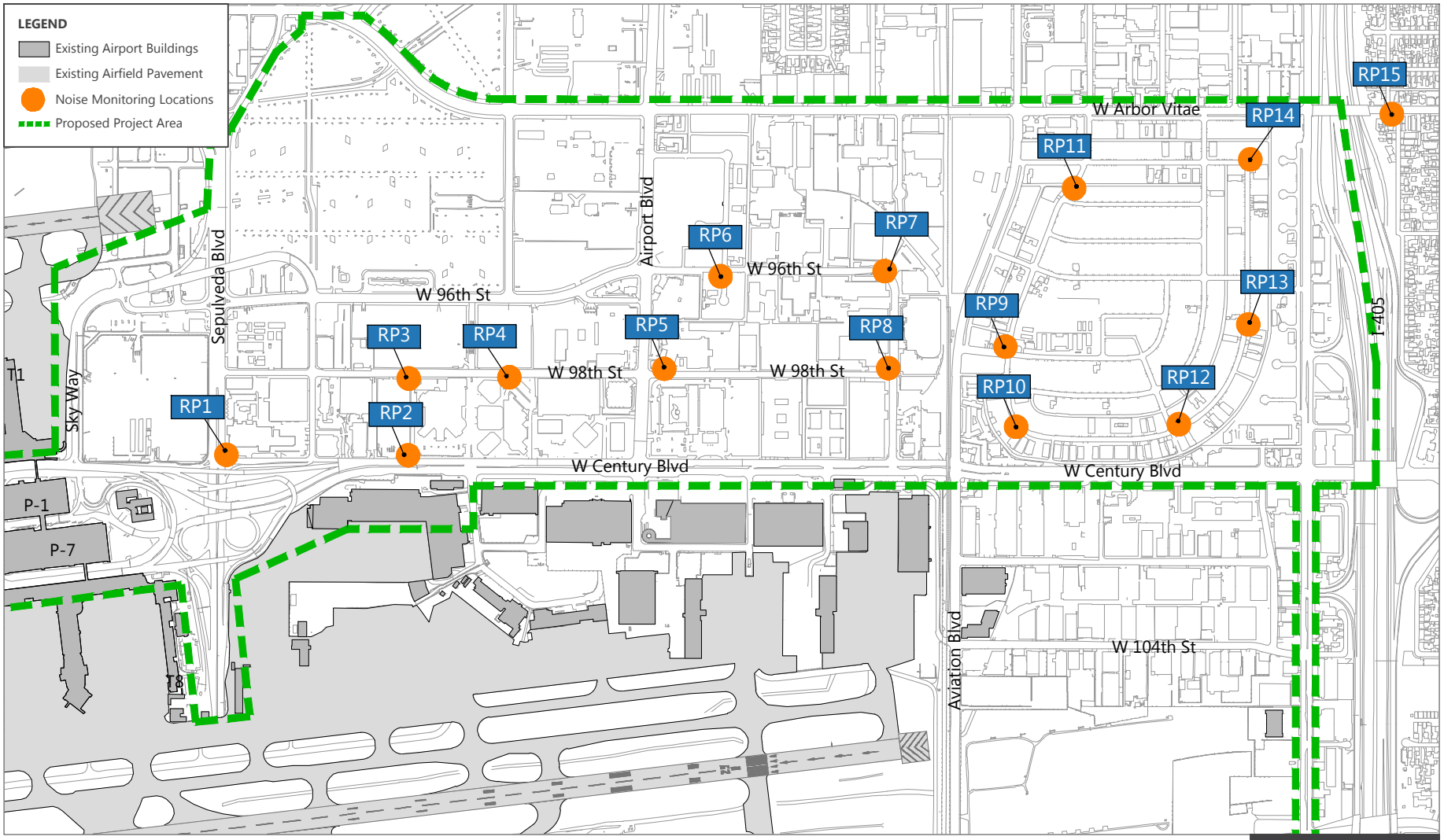
[57] U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2016.

[58] U.S. Department of Transportation, Federal Highway Administration, *Highway Traffic Noise: Analysis and Abatement Guidance*, December 2011.

**[Preliminary Draft for Discussion Purposes Only]**




SOURCE: Los Angeles World Airports; Parsons Brinckerhoff, November 2015.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 4-7**

NORTH 0 1,100 ft.

## Project Area Noise Monitoring Locations

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**Table 4-9: Proposed Project Area Existing Ambient Noise Levels**

| RECEPTOR ID | EXISTING LAND USE | DURATION | 24-HR CNEL (dBA) | PEAK HOUR $L_{eq}$ (dBA) |
|---|---|---|---|---|
| RP1 | Concourse Hotel [1/] | 1 hour | 76.3 [2/] | 76.3 [3/] |
| RP2 | LAX Sheraton Gateway Hotel | 24 hours | 77.4 | 75.3 |
| RP3 | LAX Sheraton Gateway Hotel | 24 hours | 72.4 | 71.4 |
| RP4 | Office Building | 24 hours | 75.9 | 75.6 |
| RP5 | Four Points Sheraton Hotel | 24 hours | 71.7 | 71.7 |
| RP6 | Residential Development | 24 hours | 68.2 | 66.4 |
| RP7 | Warehousing/Freight Forwarding | 24 hours | 71.7 | 70.7 |
| RP8 | Neutrogena | 24 hours | 72.4 | 72.7 |
| RP9 | Bright Star Secondary Charter Academy/Residential Development | 24 hours | 67.3 | 67.6 |
| RP10 | Residential Development | 24 hours | 64.7 | 63.3 |
| RP11 | Residential Development | 24 hours | 70.0 | 69.3 |
| RP12 | Residential Development | 24 hours | 62.7 | 65.5 |
| RP13 | Residential Development | 24-hours | 64.4 | 65.4 |
| RP14 | Residential Development | 24 hours | 69.9 | 69.7 |
| RP15 | Residential Development | 24 hours | 69.8 | 67.3 |

NOTES:

$L_{eq}$ – equivalent continuous noise level

dBA – A-weighted sound pressure level

1/ At the time the noise measurements were taken, the hotel at 6225 W. Century Boulevard was named the Concourse Hotel. In October 2016, the Concourse Hotel was renamed as the Hyatt Regency Los Angeles International Airport.

2/ Due to technical complications with the 24-hour measurement, it was not possible to calculate the existing ambient CNEL. As a conservative assumption, the 24-hour CNEL for this receptor was assumed to be the same as the 1-hour maximum Leq; however, as indicated by other receptor locations nearby (i.e., RP2 through RP4), CNEL values are typically higher than the 1-hour values. The comparatively higher CNEL values reflect the fact that noise events occurring during evening and nighttime hours are assigned 5 dB and 10 dB "noise penalties" as would be the case for airport-related uses in the subject area (i.e., hotels, parking lots, and major roadways) having relatively higher activity levels during such hours, as compared to other areas such as residential development to the east (i.e., RP10 through RP15).

3/ Two peak-hour measurements at the Concourse Hotel were supplemented due to technical complications with the 24-hour measurement. The higher of the two peak-hour measurements at the Concourse Hotel was 76.3 dBA.

SOURCE: Appendix J of this EA.
PREPARED BY: Ricondo & Associates, Inc., September 2016.

Existing ambient noise levels in the area of Playa del Rey closest to the Airport are estimated to be approximately 58 dBA CNEL to 71 dBA CNEL based on the noise monitoring data gathered at LAWA Noise Monitoring Stations PDR1 and PDR2.[59] This estimate is based on the locations of those areas relative to nearby dominant noise sources such as aircraft and roadway operations.

Existing ambient noise levels at the residential development in Manchester Square and within the communities of Inglewood and Lennox located closest to the Airport, are estimated to be between 56 dBA CNEL to 79 dBA CNEL, based on the noise monitoring data gathered at LAWA Noise Monitoring Stations ING1 though ING8 and LNX1 through LNX4.[60] This estimate is based on the locations of those areas relative to nearby dominant noise sources such as aircraft and their proximity to I-405.

Detailed information regarding the methodology used to record existing ambient noise levels in the Proposed Project Area is provided in **Appendix J**.

Existing ambient noise levels at the residential development in Westchester north of the Airport are estimated to be between 51 dBA CNEL to 79 dBA CNEL based on the noise monitoring data gathered at LAWA Noise Monitoring Stations WCH1 through WCH6.[61] This estimate is based on the locations of those areas relative to nearby dominant noise sources such as aircraft and roadway operations.

#### 4.10.2.2 Road Traffic

Existing road traffic noise levels were calculated for road segments with average daily traffic (ADT) counts from the traffic impact analysis. The Traffic Study Area included roadway segments west of I-405 and east of the Airport between Westchester Parkway/W. Arbor Vitae Street and Imperial Highway. The Traffic Study Area is discussed in detail in Section 4.11.2.3.

Results of the traffic impact analysis road traffic noise modeling used to estimate existing noise levels are presented in **Table 4-10**. The modeled peak hour road traffic values in the Traffic Study Area ranged from a high of 78.0 dBA on Sepulveda Boulevard, north of the I-105 Westbound Ramps (Study Intersection 66) to a low of 45.1 dBA on 111th Street, west of La Cienega Boulevard (Study Intersection 123).

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59 City of Los Angeles, Los Angeles World Airports, *California State Airport Noise Standards Quarterly Report, Second Quarter 2016, Los Angeles International Airport,* August 10, 2016, Available: http://www.lawa.org/uploadedFiles/LAX/pdf/2q16%20Quarterly%20Report.pdf, accessed August 30, 2016.

60 City of Los Angeles, Los Angeles World Airports, *California State Airport Noise Standards Quarterly Report, Second Quarter 2016, Los Angeles International Airport,* August 10, 2016, Available: http://www.lawa.org/uploadedFiles/LAX/pdf/2q16%20Quarterly%20Report.pdf, accessed August 30, 2016.

61 City of Los Angeles, Los Angeles World Airports, *California State Airport Noise Standards Quarterly Report, Second Quarter 2016, Los Angeles International Airport,* August 10, 2016, Available: http://www.lawa.org/uploadedFiles/LAX/pdf/2q16%20Quarterly%20Report.pdf, accessed August 30, 2016.

**Table 4-10 (1 of 2): Existing (2015) Modeled Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | MAXIMUM AVERAGE DAILY TRIPS | 2015 PEAK HOUR (DBA) |
|---|---|---|---|
| | ***Sepulveda Boulevard*** | | |
| **2** | South of La Tijera Boulevard | 32,448 | 64.7 |
| **3** | North of Westchester Parkway | 35,767 | 65.1 |
| **3** | South of Westchester Parkway | 36,942 | 68.7 |
| **4** | North of Lincoln Boulevard | 31,478 | 66.3 |
| **4** | South of Lincoln Boulevard | 31,179 | 69.6 |
| **5** | North of Century Boulevard | 63,049 | 76.9 |
| **5** | South of Century Boulevard | 64,904 | 77.0 |
| **6** | North of I-105 Westbound Ramps | 81,604 | 78.0 |
| **6** | South of I-105 Westbound Ramps | 55,282 | 76.3 |
| **7** | North of Imperial Highway | 54,555 | 76.3 |
| | ***Westchester Parkway*** | | |
| **3** | East of Sepulveda Boulevard | 12,158 | 60.4 |
| **11** | West of Sepulveda Eastway | 13,156 | 60.2 |
| **11** | East of Sepulveda Eastway | 16,289 | 61.7 |
| **13** | West of Jenny Avenue | 13,184 | 60.8 |
| **13** | East of Jenny Avenue | 15,021 | 61.4 |
| **17** | West of Airport Boulevard | 15,385 | 61.5 |
| | ***Arbor Vitae Street*** | | |
| **17** | East of Airport Boulevard | 16,233 | 61.7 |
| **29** | West of Aviation Boulevard | 17,165 | 61.5 |
| **29** | East of Aviation Boulevard | 14,797 | 64.7 |
| **37** | West of Isis Avenue | 14,676 | 64.7 |
| **37** | East of Isis Avenue | 14,434 | 64.6 |
| **42** | West of La Cienega Boulevard | 13,287 | 64.3 |
| | ***Airport Boulevard*** | | |
| **17** | South of Westchester Parkway | 20,196 | 62.6 |
| **18** | North of 96th Street | 18,648 | 65.8 |
| **18** | South of 96th Street | 17,110 | 65.4 |
| **19** | North of 98th Street | 18,033 | 65.6 |
| **19** | South of 98th Street | 16,420 | 63.5 |
| **20** | North of Century Boulevard | 16,485 | 63.5 |
| | ***Aviation Boulevard*** | | |
| **29** | South of Arbor Vitae Street | 15,524 | 70.8 |
| **30** | North of Century Boulevard | 13,371 | 70.2 |
| **30** | South of Century Boulevard | 18,909 | 67.5 |
| **31** | North of 104th Street | 19,524 | 67.5 |
| **31** | South of 104th Street | 21,296 | 67.9 |
| **32** | North of 111th Street | 21,482 | 68.0 |
| **32** | South of 111th Street | 20,793 | 67.8 |
| **33** | North of Imperial Highway | 20,718 | 67.8 |

**Table 4-10 (2 of 2): Existing (2015) Modeled Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | MAXIMUM AVERAGE DAILY TRIPS | 2015 PEAK HOUR (DBA) |
|---|---|---|---|
| | ***La Cienega Boulevard*** | | |
| **42** | South of Arbor Vitae Street | 16,615 | 61.8 |
| **43** | North of I-405 Southbound Ramps | 16,270 | 61.7 |
| **43** | South of I-405 Southbound Ramps | 19,133 | 67.5 |
| **44** | North of Century Boulevard | 21,082 | 61.1 |
| **44** | South of Century Boulevard | 21,082 | 61.1 |
| **45** | North of I-405 Southbound Ramps | 22,573 | 61.4 |
| **45** | South of I-405 Southbound Ramps | 16,317 | 60.0 |
| **46** | North of 104th Street | 16,186 | 60.0 |
| **46** | South of 104th Street | 17,296 | 60.3 |
| **47** | North of Lennox Boulevard | 16,960 | 60.2 |
| **47** | South of Lennox Boulevard | 21,296 | 60.2 |
| **48** | North of 111th Street | 21,482 | 60.2 |
| **48** | South of 111th Street | 18,070 | 60.4 |
| **49** | North of I-405 Southbound Ramps | 17,203 | 60.2 |
| **49** | South of I-405 Southbound Ramps | 18,070 | 60.4 |
| **50** | North of Imperial Highway | 14,620 | 66.3 |
| | ***Century Boulevard*** | | |
| **14** | East of Avion Drive | 24,988 | 67.0 |
| **20** | West of Airport Boulevard | 30,620 | 67.8 |
| **20** | East of Airport Boulevard | 32,448 | 68.2 |
| **27** | West of Bellanca Avenue | 31,506 | 62.9 |
| **27** | East of Bellanca Avenue | 35,897 | 68.6 |
| **30** | West of Aviation Boulevard | 38,406 | 68.9 |
| **30** | East of Aviation Boulevard | 32,401 | 66.4 |
| **38** | West of Concourse Way | 27,273 | 67.4 |
| **38** | East of Concourse Way | 27,273 | 67.6 |
| **44** | West of La Cienega Boulevard | 26,340 | 63.8 |
| | ***Lincoln Boulevard*** | | |
| **4** | North of Sepulveda Boulevard | 19,972 | 72.6 |
| | ***111th Street*** | | |
| **32** | East of Aviation Boulevard | 2,191 | 53.1 |
| **48** | West of La Cienega Boulevard | 522 | 45.1 |
| | ***104th Street*** | | |
| **31** | East of Aviation Boulevard | 1,911 | 50.6 |
| **46** | West of La Cienega Boulevard | 4,056 | 53.9 |

SOURCE: Meridian Consultants, February 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

Ten intersections within the Traffic Study Area were selected to assess noise conditions beyond the Proposed Project Area. Results of the existing ambient noise levels at these locations, monitored over a 20-minute period are presented in **Table 4-11**. The values ranged from a high of 76.2 dBA at the intersection of Prairie Avenue and Imperial Highway to a low of 69.7 dBA at the intersection of Hawthorne Boulevard and 120th Street. The primary source of existing noise levels at these locations is road traffic.

**Table 4-11: Traffic Study Area Existing Ambient Noise Levels**

| RECEPTOR ID | INTERSECTION | DURATION | $L_{EQ}$ (20-MINUTE)[1/] |
|---|---|---|---|
| RT1 | Centinela Avenue & Culver Boulevard | 20 minutes | 73.1 |
| RT2 | Sepulveda Boulevard & Slauson Avenue | 20 minutes | 72.9 |
| RT3 | Lincoln Boulevard & Jefferson Boulevard | 20 minutes | 72.5 |
| RT4 | Sepulveda Boulevard & Manchester Avenue | 20 minutes | 72.2 |
| RT5 | Inglewood Avenue & Manchester Avenue | 20 minutes | 73.2 |
| RT6 | La Brea Avenue & Century Boulevard | 20 minutes | 72.0 |
| RT7 | Sepulveda Boulevard & Imperial Highway | 20 minutes | 74.9 |
| RT8 | Prairie Avenue & Imperial Highway | 20 minutes | 76.2 |
| RT9 | Hawthorne Boulevard & 120th Street | 20 minutes | 69.7 |
| RT10 | Aviation Boulevard & El Segundo Boulevard | 20 minutes | 74.7 |

NOTES: $L_{eq}$ – equivalent continuous noise level

1/ $L_{eq}$ is the average sound level for a specified time period.

SOURCE: Appendix J of this EA.
PREPARED BY: Ricondo & Associates, Inc., November 2016.

# 4.11 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

## 4.11.1 REGULATORY SETTING

### *Socioeconomics and Environmental Justice*

Socioeconomics encompasses the activities and resources associated with the everyday human environment, particularly related to population centers, their demographics, and the economic activities generated. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, was signed in 1994 to ensure the fair treatment and meaningful involvement of all people, regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no groups of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the

negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, tribal, and local programs and policies. Environmental justice concerns must be considered for populations in the vicinity of proposed projects funded by the federal government. Executive Order 12898 requires that, to the greatest extent practicable, each federal agency must identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

DOT Order 5610.2(a) is a key component of the DOT's environmental justice strategy to comply with Executive Order 12898, and sets forth steps to prevent disproportionately high and adverse effects to minority or low income populations. Order 5610.2(a) sets forth policy to consider environmental justice principles in all DOT policies, programs, and activities.

Acquisition of property and relocation of residents and businesses by federally funded airports such as LAX is governed by the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (codified as amended in 42 USC 4601-4655), its implementing regulations (49 CFR Part 24), and FAA Advisory Circular 150/5100-17, *Land Acquisition and Relocation Assistance for Airport Improvement Program (AIP) Assisted Projects*.[62] The Uniform Act requires timely and orderly relocation of residents into comparable, decent, safe, and sanitary replacement housing within their financial means.

California Government Code §7260 establishes a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity. The primary purpose is to ensure that these persons shall not suffer disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole and to minimize the hardship of displacement on these persons.

### *Public Services*

The National Fire Protection Association (NFPA) Code establishes safety provisions for fire prevention and firefighting regulatory structures. Federal agencies having jurisdiction over activities at LAX relating to fire protection and emergency services such as the FAA have regulations that are consistent with the NFPA Code. Communities incorporate the NFPA Code into fire protection and emergency services operations on a voluntary basis. Both LAWA and the City of Los Angeles incorporate the NFPA Code into their fire protection and emergency regulations and enforcement procedures.

The California Public Utilities Commission (CPUC) prescribes safety and security requirements for the design, construction, operation, and maintenance over fixed guideway rail systems within the State.[63] The State of

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[62] U.S. Department of Transportation, Federal Aviation Administration, Advisory Circular 150/5100-17, Change 6, *Land Acquisition and Relocation Assistance for Airport Improvement Program (AIP) Assisted Projects*, November 7, 2005.

[63] California Public Utilities Commission, "Rail Transit Safety and Security," Available: http://www.cpuc.ca.gov/rtsb/, accessed March 2016.

California Uniform Fire Code sets the framework for fire protection and safety within California and contains several sections that provide authority and standards that pertain to operations at airport.

The City of Los Angeles establishes fire protection and emergency services regulations for both on- and off-Airport property. On-Airport areas are subject to provisions included in the *LAX Rules and Regulations* manual,[64] LAX Airport Emergency Plan (AEP), the City of Los Angeles General Plan Safety Element, and the Los Angeles Fire Code (LAFC). Accidents involving an air carrier which occur in the immediate vicinity of LAX over water are subject to the provisions of the LAX Air/Sea Disaster Preparedness Plan.

The FAA is the agency of the U.S. government with primary responsibility for the safety of civil aviation that issues and enforces regulations and minimum standards covering the manufacture, operation, and maintenance of aircraft. United States Code of Federal Regulations Title 14 (14 CFR), Part 139, and Title 49 (49 CFR) Transportation Security Regulation (TSR), Parts 1540 and 1542, require LAX to establish operational safety and security procedures to meet Department of Homeland Security Transportation Security Administration (TSA) and FAA certification requirements for LAX.

The Penal Code of California forms the basis for the application of criminal law in California. All law enforcement agencies within the State of California are organized and operated in accordance with the applicable provisions of the California Penal Code, which, among other things, sets forth the authority, rules of conduct, and training for peace officers. All sworn municipal and county police officers, such as Los Angeles Police Department (LAPD) officers, are state peace officers, under the authority of California Penal Code Section 830.1. LAWA Police Department (LAWAPD) officers are also sworn state peace officers, under the authority of 830.33 of the California Penal Code with special designation as airport police officers.[65]

The responsibilities of the LAWAPD and LAPD are set forth in a Memorandum of Agreement (MOA) executed in 2006.[66] The MOA serves to ensure that, in the event of an emergency, a formal means of requesting and providing additional aid to any signatory agency is in place. This means that the LAWAPD can request and is entitled to receive aid from the LAPD if supplementary law enforcement personnel are needed to control an emergency situation; the LAPD has the same entitlements. The MOA includes requirements for the LAPD to notify the LAWAPD about its operations on Airport property and sets employment and training standards for the LAWAPD. The agreement also calls for both agencies to go through joint training on certain airport issues.[67]

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64 City of Los Angeles, Los Angeles World Airports, *LAX Rules and Regulations,* September 2010.

65 City of Los Angeles, Los Angeles World Airports, "About LAWA Police Division," Available: http://www.lawa.org/AirportPolice/AboutUs.aspx?id=4617, accessed December 10, 2015.

66 City of Los Angeles, Los Angeles World Airports and Los Angeles Police Department, *Memorandum of Agreement*, June 2006.

67 McGreevy, Patrick, "LAPD and Airport Police Reach Accord," *Los Angeles Times*, June 28, 2006.

*Surface Transportation/Traffic and Parking*

The FHWA and Federal Transit Administration (FTA) support State and local governments for projects pertaining to the Nation's highway system and State/local transit systems, respectively. Traffic analyses in the state of California are guided by policies and standards set at the state level by Caltrans and by local jurisdictions. Since the Proposed Action is located in the City of Los Angeles, the traffic analyses conducted for the Proposed Action adhere to relevant adopted City of Los Angeles Department of Transportation (LADOT) policies. The jurisdictions adjacent to the Proposed Project Area include the City of Los Angeles, City of Inglewood, City of El Segundo, City of Hawthorne, and the County of Los Angeles.

In addition to LADOT policies and procedures, the Proposed Action is also subject to LAWA rules and regulations. With respect to operations, commercial vehicles at LAX are governed by the LAX Ground Transportation Permit Program, which frames Non-Exclusive License Agreements (NELA) and issuance of vehicle permits to operators of commercial vehicles transporting passengers to and from LAX. LAWA also oversees the public parking facilities within the CTA and in Parking Lot C.

## 4.11.2 AFFECTED ENVIRONMENT

### 4.11.2.1 Socioeconomics and Environmental Justice

The Proposed Project Area is comprised of six U.S. Census Tracts (2772, 2774, 6014.01, 6014.02, 6015.01, and 9800.28). As shown on **Figure 4-8**, LAX comprises the majority of Census Tract 9800.28. Census data is not collected for this tract because of the lack of residences. The portions of Census Tracts 6014.01, 3014.02, and 6015.01 within the Proposed Project Area are comprised mainly of roadways (i.e., La Cienega Boulevard, I-405, and W. Arbor Vitae Street), with minimal to no residential or commercial uses; therefore, these Census Tracts were not included in the determination of demographic and socioeconomic data within the Proposed Project Area. Tracts 2772 and 2774 are the only Census Tracts within the Proposed Project Area that contain a known population. The Belford area is in Census Tract 2772 and Manchester Square is in Census Tract 2774. As shown on Figure 4-8, approximately half of the Census Tract 2772 is outside of the Proposed Project Area.

As listed in **Table 4-12**, there are a total of 1,134 housing units in Census Tract 2772 and 728 housing units in Census Tract 2774. As of June 2016, LAWA records indicate that all but 38 residential parcels between the Belford and Manchester Square areas have been acquired as part of the *Los Angeles World Airports Relocation Plan: Manchester Square and the Belford Area*—also known as the existing ANMP Relocation Plan for the Belford and Manchester Square areas.[68] According to City of Los Angeles Zone Info and Map Access System (ZIMAS) records, these remaining 38 parcels have a total of 251 dwelling units.[69] The 38 remaining properties, as well as the schools, that would be acquired under the existing ANMP are shown on **Figure 4-9**.

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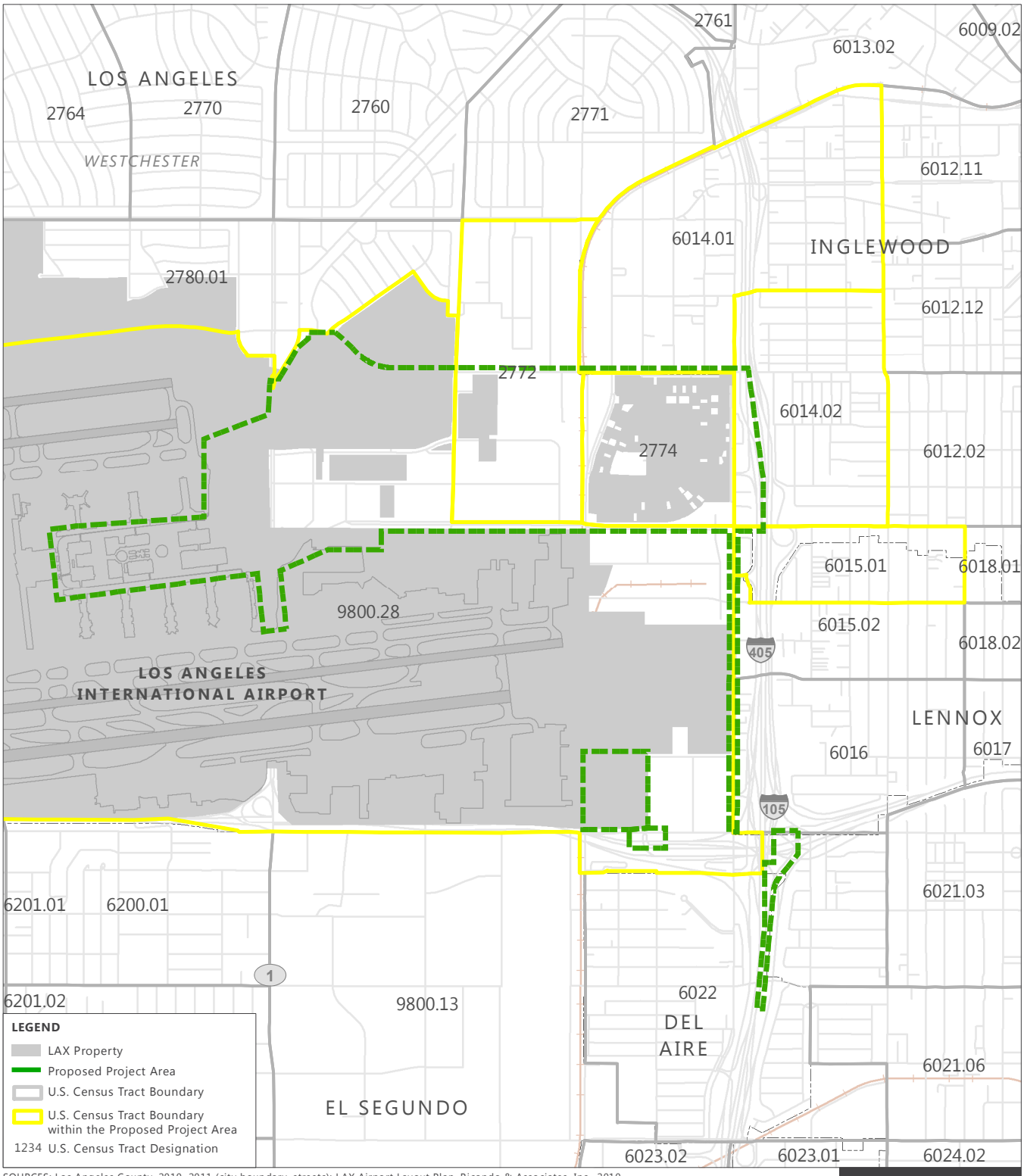
[68] The Belford and Manchester Square areas respectively contain 1 and 37 remaining residential parcels, for a total of 38 residential parcels that have not been acquired as part of the existing ANMP Relocation Plan for the Belford and Manchester Square areas.

[69] City of Los Angeles, *Zone Info and Map Access System*, Available: http://zimas.lacity.org/, accessed February 24, 2016.




SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, airport property boundary); U.S. Census, 2013 TIGER/Line Shapefiles, accessed online: http://www.census.gov/cgi-bin/geo/shapefiles2013/main, March 2014.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

**FIGURE 4-8**

Census Tracts within the Proposed Project Area

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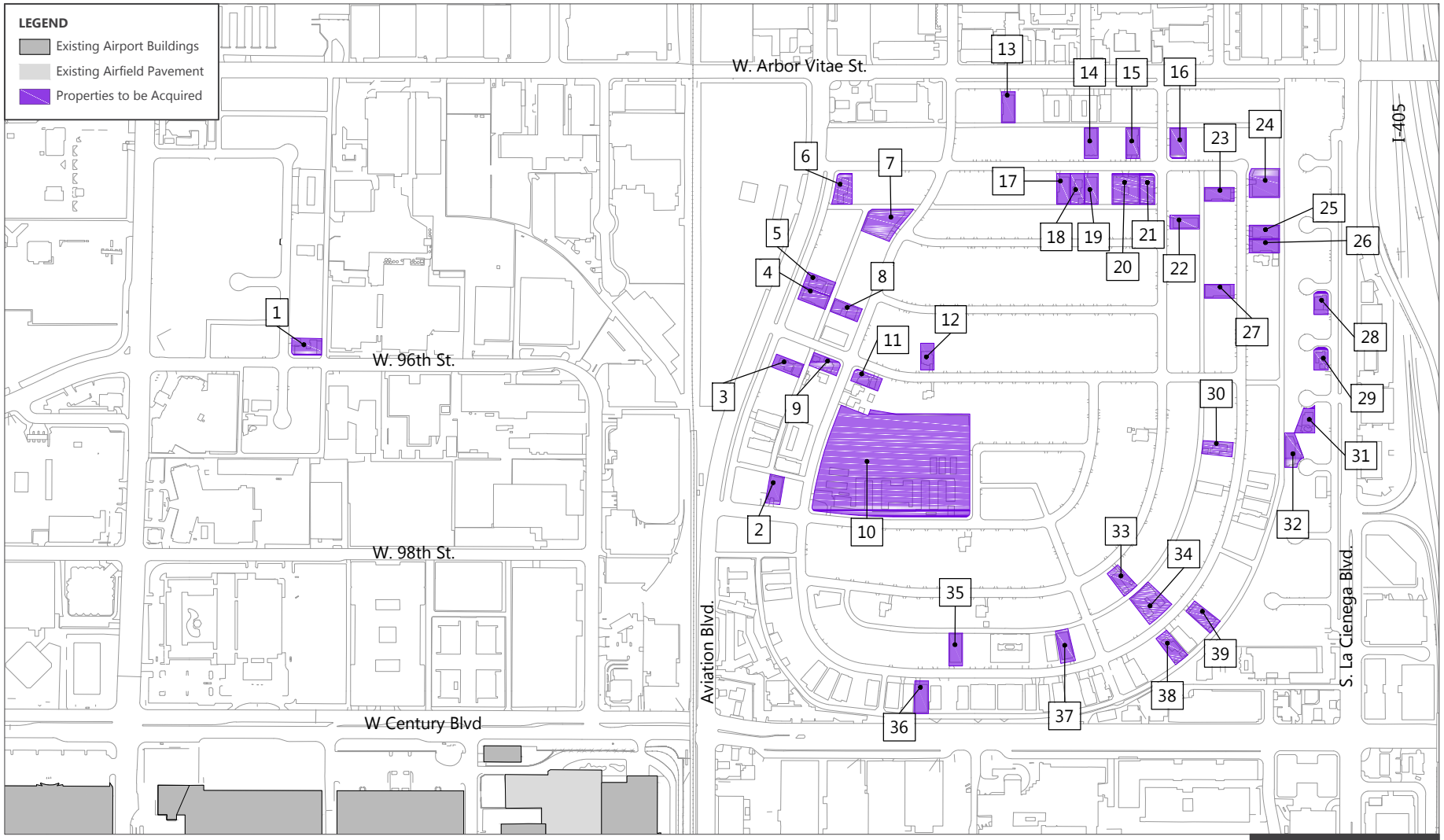
**[Preliminary Draft for Discussion Purposes Only]**




SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, July 2016; Los Angeles World Airports, June 2016; Parsons Brinckerhoff, June 2016; Ricondo & Associates, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 4-9**

NORTH 0 600 ft.

## Properties to be Acquired Under the Aircraft Noise Mitigation Program

**Table 4-12: Household Data by Census Tract**

| CENSUS TRACT | TOTAL HOUSING UNITS | PERSONS PER HOUSEHOLD |
|---|---|---|
| 2772 | 1,134 | 2.20 |
| 2774 | 728 | 2.11 |

SOURCE: U.S. Census Bureau, *2010 Census Summary File 1*, https://www.census.gov/prod/cen2010/doc/sf1.pdf (accessed December 21, 2016).
PREPARED BY: Ricondo & Associates, Inc., December 2016.

As listed in **Table 4-13**, Census Tracts 2772 and 2774 have populations of 2,525 people and 1,710 people, respectively. Census Tract 2772 is predominantly White and Black or African American (34.3 percent and 32.5 percent, respectively). The majority of residents in Census Tract 2774 are Black or African American (49.4 percent). The next highest ethnic group in Census Tract 2772 reported as Some Other Race (15.3 percent) and White (18.3 percent) in Census Tract 2774. Approximately 17.5 percent of the residents in Census Tract 2772 are minors (under 18 years of age) and approximately 5.2 percent are seniors (65 years of age and older). In Census Tract 2774, approximately 24.3 percent of the reported residents are minors and 2.4 percent are seniors. Median household income ranges from $37,708 in Tract 2774 to $58,789 in Tract 2772 (see **Table 4-14**). The percentage of people below the poverty line residing in the Proposed Project Area ranges from 19.9 percent in Tract 2774 to 21.3 percent in Tract 2772.

Employment within the Proposed Project Area is characterized by the airport operations within the CTA and other related airport-support sectors outside the CTA, including, but not limited to, cargo and freight, rental car, and parking facilities. Other employment sectors within the Proposed Project Area include various commercial, office, and light industrial uses, as well as employment associated with the Stella Middle Charter and Bright Star Secondary Charter Academies. As shown in **Table 4-15,** the total estimated employment located on LAWA-owned property ("LAX Footprint") in 2013 was approximately 33,200 employees.[70] As noted in Table 4-15, in 2013 there were an estimated 2,521 jobs associated with rental car facilities to be located in the Proposed Project Area.[71] LAWA records indicate that approximately 53 percent of LAX-badged employees live within a 10-mile radius from the airport, with approximately 16 percent originating from within the Census Tracts that makeup the Proposed Project Area.[72]

[70] The LAX Footprint encompasses all properties owned by LAWA within and outside the CTA.

[71] Flaming, Daniel, Ph.D., President, Economic Roundtable, Personal Communication, March 1, 2016.

[72] Point C Partners, Analysis of LAWA Badge Data, September 30, 2015.

**Table 4-13: Proposed Project Area Demographic Data**

| | LOS ANGELES COUNTY | | CITY OF LOS ANGELES | | CENSUS TRACT 2772 [1/] | | CENSUS TRACT 2774 [1/] | |
|---|---|---|---|---|---|---|---|---|
| **Total Residents** | 10,038,388 | | 3,900,794 | | 2,525 | | 1,710 | |
| Percent by Ethnicity Group [2/] | | | | | | | | |
| White | 5,346,316 | 53.3% | 2,054,187 | 52.7 % | 866 | 34.3% | 313 | 18.3% |
| Black or African American | 830,791 | 8.3% | 352,735 | 9.0% | 821 | 32.5% | 845 | 49.4% |
| Pacific Islander/Native Hawaiian | 27,076 | 0.3% | 6,891 | 0.2% | 0 | 0.0% | 19 | 1.1% |
| Asian | 1,418,362 | 14.1% | 451,271 | 11.6% | 222 | 8.8% | 179 | 10.5% |
| American Indian and Alaska Native | 59,340 | 0.6% | 25,479 | 0.7% | 0 | 0.0% | 0 | 0.0% |
| Some Other Race | 1,966,673 | 19.6% | 872,638 | 22.4% | 386 | 15.3% | 282 | 16.5% |
| Reporting Two or More Races | 389,830 | 3.9% | 137,593 | 3.5% | 230 | 9.1% | 72 | 4.2% |
| Hispanic or Latino [3/] | | | | | | | | |
| Hispanic or Latino (of any race) | 4,842,319 | 48.2% | 1,898,577 | 48.7% | 954 | 37.8% | 524 | 30.6% |
| Not Hispanic or Latino | 5,196,069 | 51.8% | 2,002,217 | 51.3% | 1,571 | 62.2% | 1,186 | 69.4% |
| **Age Demographics** | | | | | | | | |
| Minors (Residents Under 18 Years) | 2,322,174 | 23.1% | 850,592 | 21.8% | 455 | 17.5% | 392 | 24.3% |
| Seniors (Residents 65 Years and Over) | 1,189,759 | 11.6% | 437,224 | 11.2% | 134 | 5.2% | 38 | 2.4% |

NOTES:

1/ Census Tracts 2772 and 2774 contain portions of the Proposed Project Area.

2/ Values may not total 100% due to rounding

3/ According to the U.S. Census Bureau, ""…race and Hispanic origin (also known as ethnicity) are two separate and distinct concepts…Persons who report themselves as Hispanic can be of any race and are identified as such in our data tables." For more information, see www.census.gov/population/hispanic/about/faq.html#Q1 or www.census.gov/population/hispanic/.

SOURCES: U.S. Census Bureau American Fact Finder, *ACS Demographic and Housing* Estimates, 2011-2015 American Community Survey 5 Year Estimates, December 7, 2016.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

**Table 4-14: Socioeconomic Data**

| GEOGRAPHY | MEDIAN HOUSEHOLD INCOME ($) | PERCENT PEOPLE BELOW POVERTY LEVEL[1/] |
|---|---|---|
| Los Angeles County | $56,196 | 18.2% |
| City of Los Angeles | $50,205 | 22.1% |
| Census Tract 2772 | $56,789 | 21.3% |
| Census Tract 2774 | $37,708 | 19.9% |
| Census Tract 9800.28 [2/] | n/a | n/a |

NOTE:

n/a = Census data not available

1/ Poverty level is $11,880 for one person and an additional $4,160 for each additional family member in the lower 48 contiguous states and Washington, D.C. (U.S. Department of Health & Human Services, https://aspe.hhs.gov/poverty-guidelines, (accessed April 1, 2016).

2/ Census Tract 9800.28 is comprised mainly of LAX property.

SOURCE: U.S. Census Bureau American Fact Finder, *Selected Economic Characteristics*, 2011-2015 American Community Survey 5 Year Estimates, December 7, 2016.

PREPARED BY: Ricondo & Associates, Inc., December 2016.

## Table 4-15: Estimated 2013 Employment on LAX Footprint

| INDUSTRY SECTOR | EMPLOYMENT |
|---|---|
| Air transportation | 12,465 |
| All other food manufacturing | 1,653 |
| Architectural, engineering, and related services | 78 |
| Automotive equipment rental and leasing | 2,521 [1/] |
| Automotive repair and maintenance | 534 |
| Commercial and industrial machinery and equipment repair and maintenance | 23 |
| Construction of new commercial structures | 17 |
| Couriers and messengers | 2,749 |
| Custom computer programming services | 30 |
| Data-processing, hosting and related services | 83 |
| Education | 33 [2/, 3/] |
| Electric power generation and distribution | 54 |
| Employment and payroll of local government, non-education | 2,508 |
| Employment services | 14 |
| Fitness and recreational sports centers | 55 |
| Full-service restaurants | 43 |
| General and consumer goods rental | 36 |
| Grant-making, giving and social advocacy organizations | 1 |
| Individual and family services | 63 |
| Investigation and security services | 61 |
| Limited-service restaurants | 1,490 |
| Management-consulting services | 14 |
| Office administrative services | 108 |
| Other support services | 6 |
| Professional schools | 23 |
| Retail—Electronics and appliance stores | 84 |
| Retail—Food and beverage stores | 251 |
| Retail—General merchandise stores | 75 |
| Scientific research and development services | 19 |
| Search, detection, and navigation instruments manufacturing | 1 |
| Securities and commodity contracts intermediation and brokerage | 69 |
| Services to buildings | 13 |
| Support activities for transportation | 7,066 |
| Transit and ground passenger transportation | 206 |
| Travel arrangement and reservation services | 61 |
| Wholesale trade | 719 |
| **Total** | **33,226** |

NOTES:

1/ Includes 1,788 jobs associated with rental car facilities not located within the LAX Footprint.

2/ California Department of Education, "DataQuest," Available: http://dq.cde.ca.gov/dataquest/dataquest.asp, accessed March 2016.

3/ Includes estimated 2014-2015 employment associated with the Stella Middle Charter and Bright Star Secondary Charter Academies, both located in the Manchester Square area at 5431 W. 98th Street. These schools are currently not considered within the LAX Footprint.

SOURCE: Flaming, Daniel, Ph.D., President, Economic Roundtable, Personal Communication, March 1, 2016.
PREPARED BY: Ricondo & Associates, Inc., March 2016.

A 2013 employment estimate identified 22 and 11 full-time equivalent (FTE)[73] staff at Stella Middle Charter and Bright Star Secondary Charter Academies, respectively. Both schools are located in the Manchester Square area within the Proposed Project Area (see Figure 4-9).[74]

In addition to the estimated 508 residents living in single- and multi-family homes in Manchester Square, portions of the Proposed Project Area are also populated by homeless people. Estimated counts of homeless people within the Proposed Project Area were obtained from the Los Angeles Homeless Services Authority (LAHSA). LAHSA is an independent agency that coordinates the effective utilization of federal, state, and local funding for programs providing services to homeless people in the City and County of Los Angeles.[75] The most recent homeless people survey was conducted by LAHSA in 2016 by individual U.S. Census tract. For the portions of the Proposed Project Area known to contain homeless people (i.e., Belford and Manchester Square areas), LAHSA's most recent estimate based on U.S. Census Tracts 2772.00 and 2774.00 indicates that there are approximately 360 homeless people living within the Proposed Project Area.[76]

According to the Bureau of Economic Analysis, the Los Angeles-Long Beach-Anaheim metropolitan area ranked second in the U.S. in Gross Domestic Product (GDP) in 2015. The GDP for this metropolitan area increased approximately 22 percent from 2010 to 2015.[77]

As shown on Figure 4-6 and discussed in Section 4.8.2 the existing land use within the Proposed Project Area is primarily made up of LAX property and airport-related uses. Non-airport land uses within the Proposed Project Area consist of residential, commercial and light industrial uses. A significant amount of businesses within the Proposed Project Area are airport-related, such as hotels, parking lots, rental car, and cargo companies. Other commercial land use within the Proposed Project Area consists of office space and restaurants.

#### 4.11.2.2 Public Services

The LAFD provides fire protection services throughout LAX and the Proposed Project Area. As of January 2015, the LAFD Emergency Services Bureau is divided into four geographic bureaus.[78] These bureaus divide the City into the Central, West, Valley, and South Bureaus. Each of these bureaus is commanded by a Deputy Chief who reports directly to the Chief Deputy of Emergency Operations. The Deputy Chief and associated

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73 The full-time equivalent (FTE) is the number of hours worked by one employee on a full-time basis (40 hours per week).

74 California Department of Education, "DataQuest," Available: http://dq.cde.ca.gov/dataquest/dataquest.asp, accessed March 2016.

75 Los Angeles Homeless Services Authority, "About LAHSA," Available: http://www.lahsa.org/about, accessed March 2016.

76 Los Angeles Homeless Services Authority, Homeless Count 2016 Result by Census Tract.

77 U.S. Department of Commerce, Bureau of Economic Analysis, *News Release: Gross Domestic Product by Metropolitan Area, 2015*, September 20, 2016, https://www.bea.gov/newsreleases/regional/gdp_metro/2016/pdf/gdp_metro0916.pdf, accessed: July 17, 2017.

78 Los Angeles Fire Department, "LAFD Implements New Bureau Command Structure," January 12, 2015, Available: http://www.lafd.org/news/lafd-implements-new-bureau-command-structure.

staff are responsible for all LAFD activities within their respective bureaus.[79] The Proposed Project Area falls within the boundaries of the LAFD's West Bureau, Battalion 4, which serves the City of Los Angeles communities of Mar Vista and Westchester, and LAX.[80] Fire Station 82, located in Hollywood at 1800 N. Bronson Avenue, serves as the main office for the West Bureau.

Five fire stations serve the Proposed Project Area and surrounding vicinity: Fire Stations 5, 51, 67, 80, and 95. The equipment, existing facilities, and personnel for the stations that serve the Proposed Project Area are summarized in **Table 4-16**. The LAFD is currently required to respond to structural fires and emergency medical services (EMS) incidents within a maximum time of 5 minutes and 20 seconds and 5 minutes, respectively.[81] Traffic congestion and construction delays within the CTA and along S. Sepulveda Boulevard pose constraints on the LAFD to meet these response time standards.[82]

LAFD considers fire protection staffing and equipment to be adequate throughout the Proposed Project Area and the service areas covered by Fire Stations 5, 51, 67, 80, and 95.[83] All five fire stations maintain adequate equipment and personnel to meet the response times required to support LAX airside operations and landside uses under existing conditions.

In addition to the five fire stations that provide service to LAX, an Airport Response Coordination Center (ARCC) was completed by LAWA in 2010, which increased and streamlined LAX's operational efficiency and crisis management capabilities. The ARCC provides 24-hour centralized coordination support to manage the Airport's many operations, and integrates tenant and governmental agency activities. During a critical incident, the ARCC continues to manage airport activities that are slightly affected or unaffected by the incident. During a major incident or airport emergency, the Incident Management Center (IMC) at the ARCC is activated, calling in additional personnel to specifically respond to the event, secure the incident, and provide for the recovery of impacted operations until the Airport resumes normal operations.[84]

Emergency access for the LAFD to the Proposed Project Area is provided by the existing street systems. LAFD primarily utilizes S. Sepulveda Boulevard, W. Century Boulevard, Airport Boulevard, Aviation Boulevard, S. La Cienega Boulevard, W. Manchester Avenue, and Westchester Parkway/W. Arbor Vitae Street as the emergency access routes within the Project area.[85] Additionally, Fire Station 5 utilizes the W. 96th Street/Sky Way Bridge as a travel route to and from the CTA. Traffic congestion and construction delays are currently the primary factors affecting LAFD's ability to efficiently respond to incidents within the CTA.

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79 Los Angeles Fire Department, "LAFD Implements New Bureau Command Structure," January 12, 2015, Available: http://www.lafd.org/news/lafd-implements-new-bureau-command-structure.

80 Los Angeles Fire Department, Departmental Organization Bureau, "Map 105," January 12, 2015.

81 Ulrich, Dean, Assistant Chief, LAWA Fire Operations Officer, Los Angeles Fire Department, Personal Communication, December 1, 2015.

82 Ulrich, Dean, Assistant Chief, LAWA Fire Operations Officer, Los Angeles Fire Department, Personal Communication, December 1, 2015.

83 Ulrich, Dean, Assistant Chief, LAWA Fire Operations Officer, Los Angeles Fire Department, Personal Communication, December 1, 2015.

84 Ulrich, Dean, Assistant Chief, LAWA Fire Operations Officer, Los Angeles Fire Department, Personal Communication, December 1, 2015.

85 Ulrich, Dean, Assistant Chief, LAWA Fire Operations Officer, Los Angeles Fire Department, Personal Communication, November 30, 2015.

**Table 4-16: City of Los Angeles Fire Department Stations Serving Proposed Project Area**

| STATION # | ADDRESS | FLOOR AREA (SF) | SERVICE AREA (SQUARE MILES) | STAFF [1/] | EQUIPMENT |
|---|---|---|---|---|---|
| 5 | 8900 Emerson Avenue | 24,700 | 4.33 | 15/43 | 1 USAR vehicle<br>2 fire engines<br>1 fire truck<br>1 paramedic rescue ambulance<br>1 battalion chief vehicle |
| 51 | 10435 S. Sepulveda Boulevard | 8,600 | 4.55 | 6/18 | 1 fire engine<br>1 paramedic rescue ambulance<br>1 rescue apparatus |
| 67 | 5451 Playa Vista Drive | 15,000 | 4.20 | 6/18 | 1 paramedic assessment fire engine<br>1 basic life support rescue ambulance |
| 80 | 7250 World Way West | 27,500 | LAX Air Operations Area | 16/48 | 4 specialized fire trucks<br>1 reserve truck<br>1 stair truck<br>1 pickup |
| 95 | 10010 International Road | 9,500 | 2.46 | 12/36 | 1 truck with 100-foot ladder<br>1 fire engine pumper<br>1 paramedic rescue ambulance<br>1 rescue air cushion<br>HazMat unit |
| **Totals** | | **85,300** | | **55/163** | |

NOTE:

1/ Per shift/total

SOURCES: Ulrich, Dean, Assistant Chief, LAWA Fire Operations Officer, Los Angeles Fire Department, Personal Communication, December 22, 2015.
PREPARED BY: Ricondo & Associates, Inc., January 2016.

LAWAPD is supplemented by LAPD resources at LAX. As discussed earlier, an MOA between LAWA and the LAPD was signed in 2006. This agreement identifies the responsible operator of LAX as LAWA, under the FAA, and identifies the responsibilities and reporting procedures to support a coordinated effort between LAWAPD and LAPD staff at LAX airport facilities. As designated under the MOA, LAWAPD provides law enforcement services, preliminary crime investigations, aircraft safety and traffic enforcement, security services, and emergency response, while the LAPD retains primary duties of criminal investigation of penal provisions of city, state, and federal codes. All LAWAPD and LAPD officers, with the exception of LAWAPD security officers, are sworn peace officers and have the power to arrest. LAWAPD security officers do not have peace officer

status, but they can make citizen's arrests.[86] The MOA ensures that, in an emergency, a formal means of requesting and providing additional aid to each signatory agency is in place. The staffing and facility space for police departments serving the Project site are shown in **Table 4-17**.

**Table 4-17: LAPD and LAWAPD Staffing and Facility Space at LAX**

| DEPARTMENT | STAFF | FACILITY SPACE (SQUARE FEET) |
|---|---|---|
| LAWAPD | 1,100 1/ | 47,840 |
| LAPD | 20 | 2,808 |
| **Total On-Airport** | **1,120** | **50,648** |

NOTE:

1/ Includes both sworn and civilian employees.

SOURCES: Sergeant Keith Arnold, Airport Police, Los Angeles World Airports, Personal Communication, December 1, 2015; City of Los Angeles, Los Angeles World Airports, "About LAWA Police Division," Available: http://www.lawa.org/AirportPolice/AboutUs.aspx?id=4617, accessed December 10, 2015.

PREPARED BY: Ricondo & Associates, Inc., July 2015.

### 4.11.2.3 Surface Transportation/Traffic and Parking

The traffic setting is generally categorized by on- and off-Airport traffic, which is primarily a mix of private vehicles, buses, shuttles, taxis, limousines, LAWA vehicles, airline and airport employees, tenants, deliveries, and support services that operate within the CTA and on the local Airport-area roadway network. Traffic levels and operating conditions on- and off-Airport vary throughout the day, week and time of year, ranging from Level of Service (LOS) A (good) to LOS F (poor). See Section 2.3.2.1 for definition and discussion of LOS.

#### *Central Terminal Area*

The on-Airport landside facilities are composed of the CTA curbsides, roadways, and public parking facilities. The two-level on-Airport curbside and roadway network is primarily accessed from the following three off-Airport roadways: (1) Century Boulevard, (2) Sepulveda Boulevard, and (3) Sky Way/W. 96th Street bridge. Each of these roadways provides vehicular access to both the departures level and the arrivals level curbsides and roadways.

Regardless of the off-Airport roadway used to access the CTA, all traffic entering the CTA must travel through the intersection of World Way North and Sky Way, near Terminal 1. Traffic exiting the CTA from World Way exits to northbound Sepulveda Boulevard, southbound Sepulveda Boulevard, or eastbound Century Boulevard. Traffic exiting from Center Way also has the option to exit via the Sky Way/W. 96th Street bridge. On-Airport access from the departures level to the arrivals level is provided via a recirculation ramp located at the eastern end of the CTA and a ramp at the western end of Center Way connecting to West Way on the

[86] City of Los Angeles, Los Angeles World Airports and Los Angeles Police Department, *Memorandum of Agreement*, June 2006.

departures level. Access from the arrivals level to the departures level is provided via this same ramp at the western end of Center Way connecting to West Way on the departures level.

An on-Airport traffic analysis was conducted for key intersections in the CTA (see **Appendix K**). The analysis utilized the Circular 212 (C212) method[87], which analyzed intersections based on the critical movements that conflict with one another to determine the maximum amount of traffic throughput that can be attained in a given traffic signal cycle. Existing LOS conditions and volume to capacity (V/C) ratios for key CTA intersections are provided in **Table 4-18** for the Airport peak departures and arrivals hours. With the exception of World Way South and Center Way (Exit) on the lower level, which operates at an LOS of B, all other intersections operate at LOS A.

**Table 4-18: Peak Hour CTA Signalized Intersection Turning Movement Volumes and Level of Service Analysis - Existing (2014) Conditions**

| | | EXISTING (2014) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | | |
| INTERSECTION | PEAK HOUR[1/] | L | T | R | L | T | R | L | T | R | L | T | R | V/C[2/] | LOS[3/] |
| World Way North and Sky Way (Upper Level) | Departure | | | | | | 916 | | | | | 1,954 | | 0.428 | A |
| World Way South and West Way (Upper Level) | Departure | | | | 528 | | | | 1,502 | | | | | 0.394 | A |
| World Way South and East Way (Upper Level) | Departure | | | | 523 | | | 88 | 1,924 | | | | | 0.448 | A |
| World Way North and Sky Way (Lower Level) | Arrival | 270 | 140 | | | | 932 | | | | | 1,851 | | 0.561 | A |
| World Way South and Center Way (Exit) (Lower Level)[4] | Arrival | 270 | 1,114 | 888 | | | | | 834 | 636 | | | | 0.68 | B |
| East Way and World Way South (Lower Level) | Arrival | | | | 475 | | | 157 | 1,588 | | | | | 0.439 | A |

NOTES:

L = left-turn movements T = through movements R= right-turn movements

1/ The departures peak hour occurred from 6:16 a.m. to 7:16 a.m. The arrivals peak hour occurred from 8:18 p.m. to 9:18 p.m.

2/ Volume to capacity ratio.

3/ Level of Service range: A (excellent) to F (failure).

4/ For the World Way South and Center Way intersection, World Way South volumes are noted in the Northbound column and Center Way volumes are noted in the Eastbound column of the table.

SOURCE: Ricondo & Associates, Inc. May 2016.
PREPARED BY: Ricondo & Associates, Inc. May 2016.

Because the C212 method is a static intersection analysis method which calculates the LOS based on the intersection being isolated from other traffic conditions in the vicinity, roadway links were also analyzed. Compared to off-Airport roadways, the on-Airport environment is unique and has a different set of

87 Transportation Research Board, *Transportation Research Circular 212, Interim Materials on Highway Capacity*, January 1980.

constraints, such as downstream stoppages of traffic as a result of curbside operations, a higher proportion of traffic that is unfamiliar with the roadways leading to slower speeds, constant need of decision-making as a result of signage, and a complex mix of vehicle modes. The roadway link analysis methodology takes into account the adjacent curbside utilization by reducing the link throughput capacity by a factor directly proportional to the adjacent curbside utilization. The roadway link analysis provides a more realistic picture of the traffic conditions in the CTA.

Existing LOS conditions for key CTA roadway links are provided in **Table 4-19** for the Airport peak departures and arrivals hours. As shown in Table 4-19, and illustrated on **Figure 4-10**, over half of the CTA roadway links (13 out of 24) operated at LOS E or F at certain times of the day. As a result of the poor LOS on the various roadway segments, Airport traffic backs up into the surrounding streets. All traffic entering the CTA on the lower level and upper level roadways must travel through the intersection of World Way North and Sky Way, near Terminal 1. During peak times, the volume of traffic exceeds the roadway's ability to accommodate this traffic, creating queues on Sky Way, World Way North and, most notably, northbound Sepulveda Boulevard. On peak travel days, the queue on northbound Sepulveda Boulevard can extend through the Sepulveda Boulevard Tunnel to the I-105 Freeway.

Also during peak travel times, traffic levels on southbound Sepulveda Boulevard prevent traffic exiting the Airport from merging onto southbound Sepulveda Boulevard, due to the constriction of lanes entering the Sepulveda Tunnel. This in turn causes traffic to back-up through the intersection of Center Way and World Way causing traffic to backup all along World Way throughout the CTA. World Way at TBIT on both the upper and lower level roadways is another area of congestion, with high volumes of traffic transitioning to and from the limited curb space along the terminal frontage during peak travel times.

### *Traffic Study Area*

The off-Airport traffic analysis study area was delineated through coordination with the local jurisdictions, including the City of Los Angeles, City of Inglewood, City of El Segundo, City of Hawthorne, County of Los Angeles and Caltrans. The traffic study area, as shown on **Figure 4-11**, encompasses approximately 8 square miles; it is generally bounded on the north by Manchester Boulevard; on the south by Mariposa Avenue; on the west by Main Street/Loyola Boulevard; and on the east by Inglewood Avenue. The existing street system within the traffic study area consists of a regional highway system including major arterials and a local street system including secondary arterials, collectors and local streets. Regional access to the Proposed Project Area is provided by the San Diego (I-405) Freeway, the Glenn Anderson (I-105) Freeway and the Marina (SR-90) Freeway. Brief descriptions of these roadway facilities, including number of lanes, speed limits, parking availability, and functional classes per the City of Los Angeles Mobility Plan 2035, are discussed in **Appendix L**.

A total of 70 intersections were selected for analysis. The level of service for each of the analyzed intersections is presented in **Appendix L**.

**Table 4-19: Peak Hour CTA Roadway Volumes and Level of Service Analysis - Existing (2014) Conditions**

| | 2014 | | |
|---|---|---|---|
| **ROADWAY LINK** | **VOLUMES** | **ROADWAY V/C** | **LOS** |
| **DEPARTURES** | | | |
| Upper Level Roadway Link Adjacent to Terminal 1 | 2,870 | 0.92 | E |
| Upper Level Roadway Link Adjacent to Terminal 2 | 2,327 | 0.96 | E |
| Upper Level Roadway Link Adjacent to Terminal 3 | 1,577 | 0.85 | D |
| Upper Level Roadway Link Adjacent to TBIT | 1,483 | 0.71 | C |
| Upper Level Roadway Link Adjacent to Terminal 4 | 1,400 | 0.75 | C |
| Upper Level Roadway Link Adjacent to Terminal 5 | 2,050 | 1.17 | F |
| Upper Level Roadway Link Adjacent to Terminal 6 | 2,050 | 0.98 | E |
| Upper Level Roadway Link Adjacent to Terminal 7 | 2,460 | 1.12 | F |
| **ARRIVALS** | | | |
| Roadway Link Adjacent to Terminal 1 Lower Level Inner Curbside | 601 | 0.32 | A |
| Roadway Link Adjacent to Terminal 2 Lower Level Inner Curbside | 530 | 0.40 | A |
| Roadway Link Adjacent to Terminal 3 Lower Level Inner Curbside | 473 | 0.20 | A |
| Roadway Link Adjacent to TBIT Lower Level Inner Curbside | 489 | 0.21 | A |
| Roadway Link Adjacent to Terminal 4 Lower Level Inner Curbside | 666 | 0.36 | A |
| Roadway Link Adjacent to Terminal 5 Lower Level Inner Curbside | 744 | 0.57 | A |
| Roadway Link Adjacent to Terminal 6 Lower Level Inner Curbside | 220 | 0.09 | A |
| Roadway Link Adjacent to Terminal 7 Lower Level Inner Curbside | 536 | 0.14 | A |
| Roadway Link Adjacent to Terminal 1 Lower Level Outer Curbside | 2,394 | 1.04 | F |
| Roadway Link Adjacent to Terminal 2 Lower Level Outer Curbside | 2,085 | 0.94 | E |
| Roadway Link Adjacent to Terminal 3 Lower Level Outer Curbside | 1,782 | 0.96 | E |
| Roadway Link Adjacent to TBIT Lower Level Outer Curbside | 1,578 | 1.00 | E |
| Roadway Link Adjacent to Terminal 4 Lower Level Outer Curbside | 1,300 | 1.34 | F |
| Roadway Link Adjacent to Terminal 5 Lower Level Outer Curbside | 1,740 | 0.91 | E |
| Roadway Link Adjacent to Terminal 6 Lower Level Outer Curbside | 1,903 | 1.40 | F |
| Roadway Link Adjacent to Terminal 7 Lower Level Outer Curbside | 1,863 | 2.37 | F |

NOTE: The departures peak hour occurred from 6:16 a.m. to 7:16 a.m. The arrivals peak hour occurred from 8:18 p.m. to 9:18 p.m.

SOURCE: Ricondo & Associates, Inc. May 2016.
PREPARED BY: Ricondo & Associates, Inc. May 2016.

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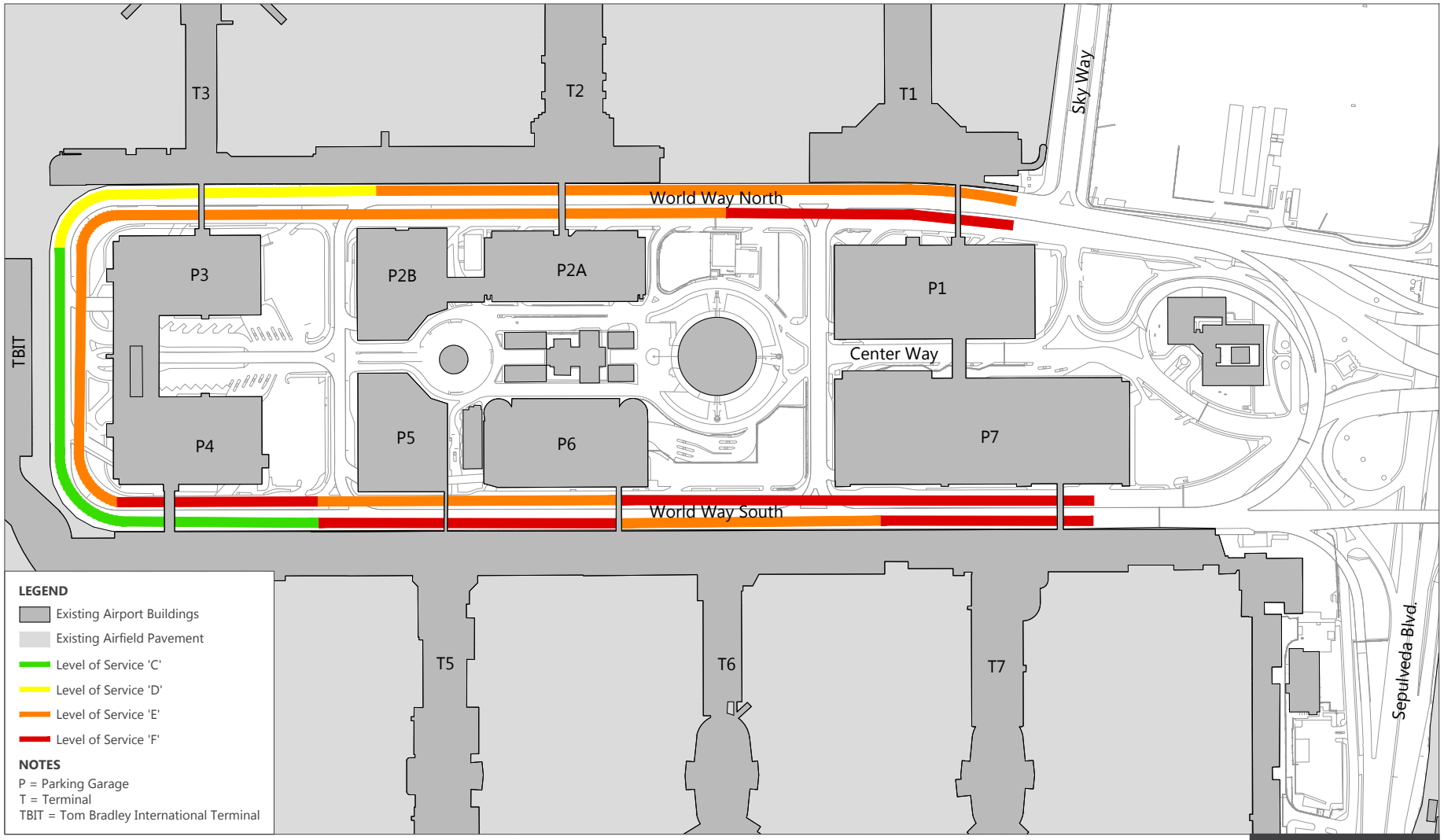
**[Preliminary Draft for Discussion Purposes Only]**




SOURCE: Ricondo & Associates, Inc., November 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 4-10**

## On-Airport Roadway Links Existing LOS Conditions

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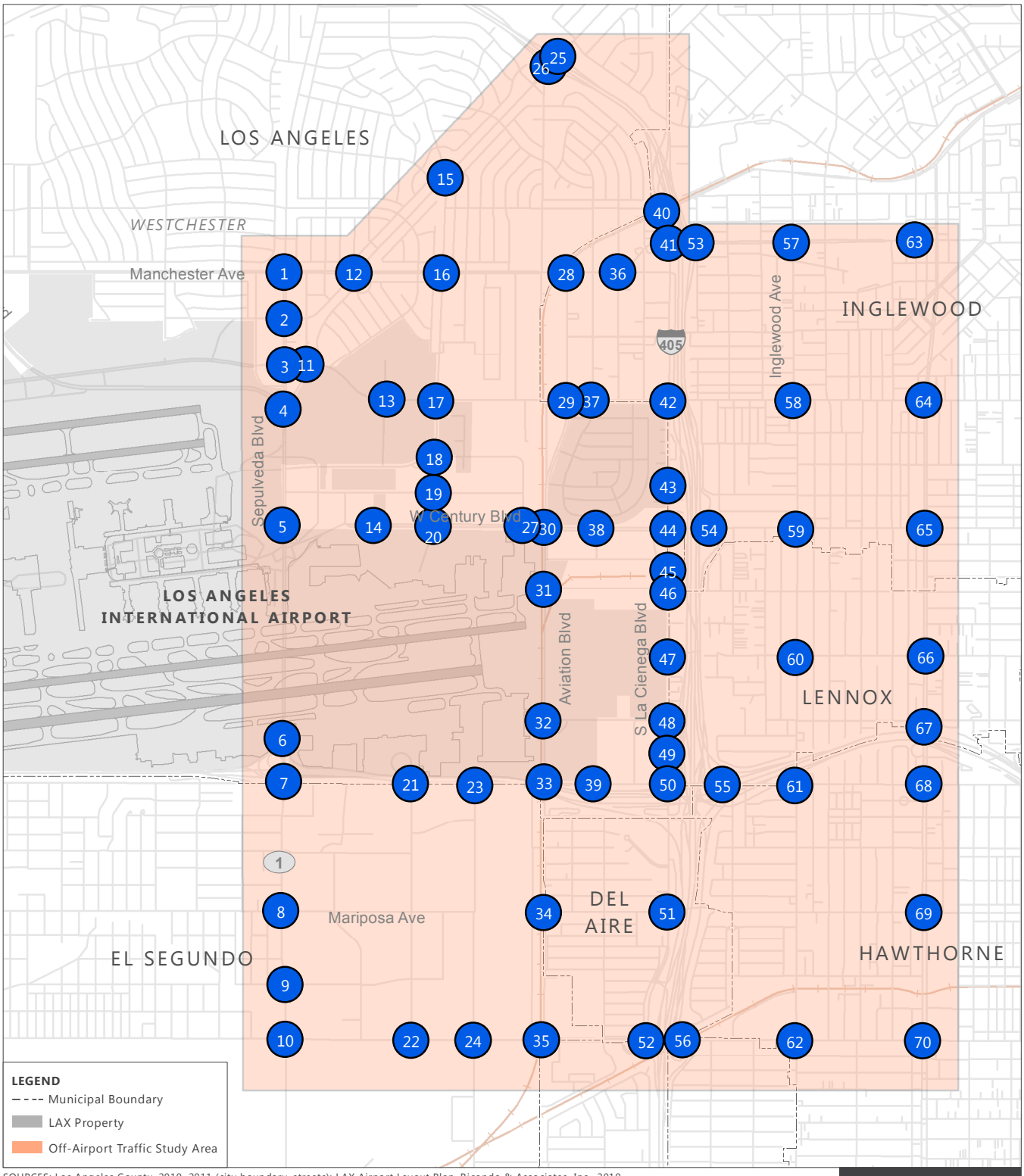
[Preliminary Draft for Discussion Purposes Only]




SOURCES: Los Angeles County, 2010, 2011 (city boundary, streets); LAX Airport Layout Plan, Ricondo & Associates, Inc., 2010 (runways, taxiways, terminal area, airport property boundary); National Geographic World Map, ESRI Database, 2011.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

**FIGURE 4-11**

NORTH 0 3,000 ft.

## Off-Airport Traffic Study Area and Intersections

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### *Parking Capacity*

Parking at LAX is provided by LAWA-owned facilities and non-LAWA owned facilities. In 2016, LAWA conducted an inventory of LAWA-owned parking spaces, including the parking garages in the CTA and at Parking Lot C, as presented in **Table 4-20**.

**Table 4-20: LAWA-Owned Public Parking Facilities**

| PARKING FACILITY | PARKING SPACES |
|---|---|
| Parking Garage P1 | 1.345 |
| Parking Garage P2A | 766 |
| Parking Garage P2B | 526 |
| Parking Garage P3 | 1,191 |
| Parking Garage P4 | 1,156 |
| Parking Garage P5 | 684 |
| Parking Garage P6 | 926 |
| Parking Garage 7 | 1,732 |
| Parking Lot C | 5,583 |
| Total: | 13,909 |

NOTE: The total parking space numbers for each facility include standard, ADA-compliant, LAWA vehicles, and transit, police, and tenant spaces.

SOURCE: Los Angeles World Airports, April 2016.
PREPARED BY: Ricondo & Associates, Inc., December 2016.

In 2015, a parking needs assessment was prepared assessing the existing and long-term demand for parking from the general public as well as employees.[88] A summary of the parking demand analysis is included as **Appendix C** and is also discussed in Section 2.3.3.2. Results of the parking analysis showed that during peak periods there is an inadequate amount of parking both on- and off-Airport. In 2014, parking structures in the CTA, particularly P-3 and P-4, filled to capacity during peak travel periods. Drivers seeking parking were instructed to go to adjacent garages, sometimes resulting in those lots also reaching capacity.

[88] Walker Parking Consultants, *Public and Employee Parking Demand Analysis Draft Memorandum*, August 4, 2015.

# 4.12 Visual Effects

## 4.12.1 REGULATORY SETTING

Although there are no federal laws or regulations specific to visual character and light emissions, there are special purpose laws that apply to historic sites, parks, and other protected resources, such as Section 106 of the NHPA and Section 4(f) of the DOT Act, which must be considered along with applicable state and local regulations, policies, and zoning ordinances.

## 4.12.2 AFFECTED ENVIRONMENT

The visual setting of the Proposed Project Area is considered in terms of light emissions and visual character.

### 4.12.2.1 Light Emissions

The Proposed Project Area is located in a highly urbanized area within the City of Los Angeles, surrounded by other cities, including Inglewood to the east, El Segundo to the south, and Hawthorne to the southeast. These areas have numerous light sources that generate varying degrees of light emissions. Light-sensitive receptors near the Proposed Project Area are primarily residential uses located north of Westchester Parkway/W. Arbor Vitae Street between S. Sepulveda Boulevard and Bellanca Avenue. The hotel buildings along W. Century Boulevard and Airport Boulevard are also considered light-sensitive uses within the vicinity of the Proposed Project Area.

Existing light sources throughout the Proposed Project Area are typical of a highly developed area containing various commercial, light industrial, and Airport uses. Existing daytime sources of glare on the Proposed Project Area are associated with the reflective glass or mirror-like materials comprising the facades of facilities and structures within the CTA and of the mid- to high-rise buildings east of the CTA. Existing nighttime sources of glare are primarily associated with vehicle headlights traveling throughout the Proposed Project Area.

Exterior lighting is used throughout the Proposed Project Area to illuminate terminal and Airport facilities, buildings, parking lots and structures, pedestrian walkways, roadways, and signage, resulting in a range of low to high ambient nighttime levels. Sources of illumination throughout the Proposed Project Area include light from billboards; hotels; commercial, office, and residential buildings; street lights; and other security lighting. Illumination sources within the CTA include street lights, security lights, roof perimeter lights, parapet lights, terminal entrance lights, and the recently installed ribbon night-lighting around the terminal frontages. Under current conditions, the nighttime illumination within the CTA provides for the safe and secure movement of pedestrians and vehicles.

Nighttime lighting associated with Parking Lots C and D are visible from the residential uses north of the Proposed Project Area along Westchester Parkway/W. Arbor Vitae Street between S. Sepulveda Boulevard and Bellanca Avenue. Parking Lots C and D currently have 6-foot-tall fences and walls that are set within 15-foot

landscaped buffers along the street frontages. The parking lot lights are similar in intensity to the adjacent streetlights.

#### 4.12.2.2 Visual Resources and Visual Character

The Proposed Project Area is located two miles east of the Pacific Ocean; however due to the surrounding topography, the ocean is not visible from the Proposed Project Area. Views of the Airport, arriving and departing aircraft, and certain Airport structures are visible from off-site approaches to the Airport, particularly along I-105 to the south, Lincoln Boulevard to the north, Sepulveda Boulevard traveling north from I-105, and the entrance into the Airport along W. Century Boulevard to the west. The Proposed Project Area is primarily developed and heavily urbanized, comprised of various Airport, regional commercial, general commercial, and medium-density residential land uses.

Views when traveling within the CTA are mainly characterized by the frontages of passenger terminals; surface and structured parking lots; passenger walkways connecting the parking structures with the terminals; and Airport support facilities. Other contributing visual elements within the CTA include heavy vehicle volumes—such as private automobiles, transit buses, courtesy shuttles, shared ride vans, taxis, charter buses, and other commercial vehicles—as well as construction vehicles for ongoing projects. The streetscape of the CTA is generally characterized as pedestrian-oriented, with numerous sidewalks and passenger walkways accessible on both roadway levels via stairway, elevator, and escalator. Airport wayfinding signs and street-lighting elements are placed throughout the CTA to create a visible and accessible area for both motorists and pedestrians.

Traveling westbound along W. Century Boulevard toward the CTA, views are dominated by high-rise hotel and office developments and associated multi-level parking structures, as well as other billboard and signage elements. The visual character of the area traveling northbound along Aviation Boulevard from Imperial Highway toward W. Century Boulevard consists of commercial, industrial, and Airport-related uses. LAWA maintains a construction staging area, known as Continental City, located along Aviation Boulevard between I-105 and W. 111th Street. Development between Westchester Parkway/W. Arbor Vitae Street on the north and W. 98th Street on the south consists primarily of surface parking lots, multi-level parking structures, rental car facilities, and low-rise manufacturing and light industrial facilities.

The existing visual character of the Belford and Manchester Square areas primarily consist of remaining single- and multi-family residences among the fenced and vacant lots, along with hotel, commercial, and office uses. The predominantly undeveloped and vacant character of the area is visible at higher surrounding elevations or directly adjacent to its boundaries.

# 4.13 Water Resources

The regulatory setting and affected environment for water resources are organized by water resource type:

- Surface waters
- Groundwater

## 4.13.1 SURFACE WATER

### 4.13.1.1 Regulatory Setting

*Total Maximum Daily Load (TMDL) Program*

Pursuant to the CWA, states are required to identify the water bodies that do not meet water quality standards despite control of point source discharges under NPDES permits. For these water bodies, states are required to develop appropriate TMDLs for the pollutants or flows causing the impairment. A TMDL represents an amount of pollution that can be released into a specific water body without causing a decline in water quality and impairment of beneficial uses. The TMDLs are established based on a quantitative assessment of water quality problems, the contributing sources, and load reductions or control actions needed to restore and protect an individual water body. As opposed to the NPDES program, which focuses on reducing or eliminating non-stormwater discharges and reducing the discharge of pollutants to the MEP, TMDLs provide an analytical basis for planning and implementing pollution controls, land management practices, and restoration projects needed to protect water quality. Once established, the TMDL allocates the loads among current and future pollutant sources to the water body. TMDLs have now been adopted for the Santa Monica Bay, Dominguez Channel above the estuary, and the Los Angeles Harbor, to which Dominquez Channel is tributary. Both completed TMDLs and those in progress of being developed by the Los Angeles RWQCB for the Santa Monica Bay and Dominguez Channel are shown in **Table 4-21**.

*Los Angeles County Flood Control District*

The Los Angeles County Flood Control Act, adopted by the State Legislature in 1915, established the LACFCD and empowered it to provide flood protection, water conservation, recreation, and aesthetic enhancement within its boundaries. LACDPW has established a three-tiered policy on flood protection: capital flood protection, urban flood protection, and probable maximum flood protection.[89] Maximum flood protection deals with dams and debris basins, which are not located within the Proposed Project Area. Capital flood protection applies to natural watercourses, including a portion of the LACFCD-owned Dominguez Channel. The capital flood protection level requires that drainage systems have the capacity to convey runoff from a 50-year storm frequency. Urban flood protection applies to all developed areas not covered under the capital flood protection level. However, since the Proposed Project Area is within the City of Los Angeles, the City's design standards are controlling.

[89] Los Angeles County Department of Public Works, *Hydrology Manual,* January 2006.

**Table 4-21 (1 of 2): List of TMDLs Applicable to the Proposed Project Area**

| LOCATION | POLLUTANT | STATUS |
|---|---|---|
| **Santa Monica Offshore/Nearshore** | Dichloro-diphenyl-trichloroethane (DDT) (tissue and sediment) | Expected TMDL completion in 2019 |
| | Debris | Expected TMDL completion in 2019 |
| | Fish Consumption Advisory. The Fish Consumption Advisory is due to DDT and polychlorinated biphenyls (PCBs). | Expected TMDL completion in 2019 |
| | PCBs (tissue and sediment) | Expected TMDL completion in 2019 |
| | Sediment Toxicity | Expected TMDL completion in 2019 |
| **Los Angeles Harbor—Consolidated Slip** | 2-Methlynaphthalene | In effect |
| | Benthic community effects | Expected TMDL completion in 2019 |
| | Benzo(a)pyrene | In effect |
| | Benzo[a]anthracene | Expected TMDL completion in 2019 |
| | Cadmium (sediment) | Expected TMDL completion in 2019 |
| | Chlordane (tissue and sediment) | Expected TMDL completion in 2019 |
| | Chromium (sediment) | Expected TMDL completion in 2019 |
| | Chrysene | In effect |
| | Copper (sediment) | Expected TMDL completion in 2019 |
| | DDT (tissue and sediment) | Expected TMDL completion in 2019 |
| | Dieldrin | In effect |
| | Lead (sediment) | Expected TMDL completion in 2019 |
| | Mercury (sediment) | Expected TMDL completion in 2019 |
| | PCBs (tissue and sediment) | Expected TMDL completion in 2019 |
| | Phenanthrene | In effect |
| | Pyrene | In effect |
| | Sediment toxicity | Expected TMDL completion in 2019 |
| | Toxaphene (tissue) | Expected TMDL completion in 2019 |
| | Zinc (sediment) | Expected TMDL completion in 2019 |

**Table 4-21 (2 of 2): List of TMDLs Applicable to the Proposed Project Area**

| LOCATION | POLLUTANT | STATUS |
|---|---|---|
| **Los Angeles/Long Beach Inner Harbor** | Benthic community effects | Expected TMDL completion in 2019 |
| | Benzo(a)pyrene | Expected TMDL completion in 2021 |
| | Chrysene | Expected TMDL completion in 2021 |
| | Copper | Expected TMDL completion in 2019 |
| | DDT (tissue and sediment) | Expected TMDL completion in 2019 |
| | PCBs | Expected TMDL completion in 2019 |
| | Sediment toxicity | In effect |
| | Zinc (sediment) | In effect |
| **Dominguez Channel (lined portion above Vermont Avenue)** | Ammonia | Expected TMDL completion in 2019 |
| | Copper | Expected TMDL completion in 2019 |
| | Diazinon | Expected TMDL completion in 2021 |
| | Indicator bacteria | In effect |
| | Lead | Expected TMDL completion in 2019 |
| | Toxicity | Expected TMDL completion in 2021 |
| | Zinc (sediment) | Expected TMDL completion in 2019 |
| **Dominguez Channel (Estuary to Vermont Avenue)** | Ammonia | Expected TMDL completion in 2019 |
| | Benthic community effects | Expected TMDL completion in 2019 |
| | Benzo[a]pyrene (3,4-Benzopyrene -7-d) | Expected TMDL completion in 2019 |
| | Benzo[a]anthracene | Expected TMDL completion in 2019 |
| | Chlordane (tissue) | Expected TMDL completion in 2019 |
| | Chrysene (C1-C4) | Expected TMDL completion in 2019 |
| | Coliform bacteria | In effect |
| | Copper | Expected TMDL completion in 2019 |
| | DDT (tissue and sediment) | Expected TMDL completion in 2019 |
| | Diazinon | Expected TMDL completion in 2021 |
| | Dieldrin (tissue) | Expected TMDL completion in 2019 |
| | Indicator bacteria | In effect |
| | Lead (tissue) | Expected TMDL completion in 2019 |
| | PCBs | Expected TMDL completion in 2019 |
| | Phenanthrene | Expected TMDL completion in 2019 |
| | Pyrene | Expected TMDL completion in 2019 |
| | Sediment toxicity | Expected TMDL completion in 2021 |
| | Zinc (sediment) | Expected TMDL completion in 2019 |

SOURCE: California Environmental Protection Agency, State Water Resources Control Board, "2010 California 303(D) List of Water Quality Limited Segments," USEPA Final Approval October 11, 2011, Available: http://www.waterboards.ca.gov/water_issues/programs/tmdl/2010state_ir_reports/category5_report.shtml, accessed March 3, 2016.
PREPARED BY: Ricondo & Associates, Inc., March 2016.

### *City of Los Angeles*

In 2011, the City of Los Angeles Board of Public Works approved the Stormwater Low Impact Development (LID) Ordinance[90] to impose LID strategies on projects requiring building permits. LID comprises a set of site design approaches and BMPs that are designed to address runoff and pollution at the source. Unlike traditional stormwater management, which collects and conveys stormwater runoff through storm drains, pipes, or other conveyances to a centralized stormwater facility, LID uses site design and stormwater management to maintain the site's pre-development runoff rates and volumes. The Stormwater LID Ordinance requires 100 percent of rainwater from a three-quarter inch rainstorm to be completely captured, infiltrated, and/or used on-site. If site constraints do not allow for LID strategies to be implemented, off-site mitigation or fee payment for off-site mitigation is allowed.

The City's *Development Best Management Practices Handbook*[91] ("Handbook") and the County's *Low Impact Development Standards Manual*[92] were developed to assist developers (as well as City departments for public works projects such as those at LAX) in complying with the LID Ordinance. The Handbook provides the necessary steps required for the project review and permitting process for obtaining approval of a LID Plan in compliance with the LID Ordinance.

## 4.13.1.2 Affected Environment

Within the LAX area, there are no surface water streams and industrial and commercial waste discharges are prohibited on the Airport.[93] Sources for recharge at the Airport property itself include precipitation and its associated runoff, and applied irrigation.[94] The Santa Monica Bay and the Dominguez Channel Watersheds are the primary receiving water bodies for runoff from LAX. At LAX, the watershed boundary for these two receiving water bodies is located generally along Sepulveda Boulevard, with areas west of Sepulveda Boulevard draining to the Santa Monica Bay and areas east draining to Dominguez Channel.

The Proposed Project Area as noted above is located both within the Santa Monica Bay and Dominguez Channel Watersheds. These watersheds are further broken down into sub-basins with the Proposed Project Area being primarily located within the North Dominguez Channel Sub-Basin (approximately 724 acres). A small portion of the Proposed Project Area extends west into the Argo and Imperial sub-basins, part of the

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90 City of Los Angeles, Ordinance No. 181,899, Chapter VI, Article 4.4, October 7, 2011, Available: http://www.lastormwater.org/wp-content/files_mf/finallidordinance181899.pdf.

91 City of Los Angeles, *Development Best Management Practices Handbook, Low Impact Development Manual*, Part B, Planning Activities, 4th edition, June 2011.

92 County of Los Angeles, Department of Public Works, *Low Impact Development Standards Manual,* February 2014.

93 City of Los Angeles, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements,* Section 4.7, p. 4-759, (SCH No. 1997061047), April 2004.

94 City of Los Angeles, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements,* Section 4.7, p. 4-759, (SCH No. 1997061047), April 2004.

larger Santa Monica Bay Watershed. These areas of the Argo and Imperial watersheds are located within the CTA, which consists of mostly existing impervious surfaces.

The Imperial Sub-Basin drains west of Sepulveda Boulevard and discharges directly into Santa Monica Bay. Approximately 83.5 acres of the Proposed Project Area are located within the Imperial Sub-Basin. With the exception of limited areas of ornamental landscaping, the improvement areas associated with the Proposed Action within the Imperial Sub-Basin are 100 percent impervious surfaces, with stormwater draining into the existing storm drain system in and near the CTA. **Figure 4-12** shows the existing pervious and impervious areas within the Proposed Project Area.

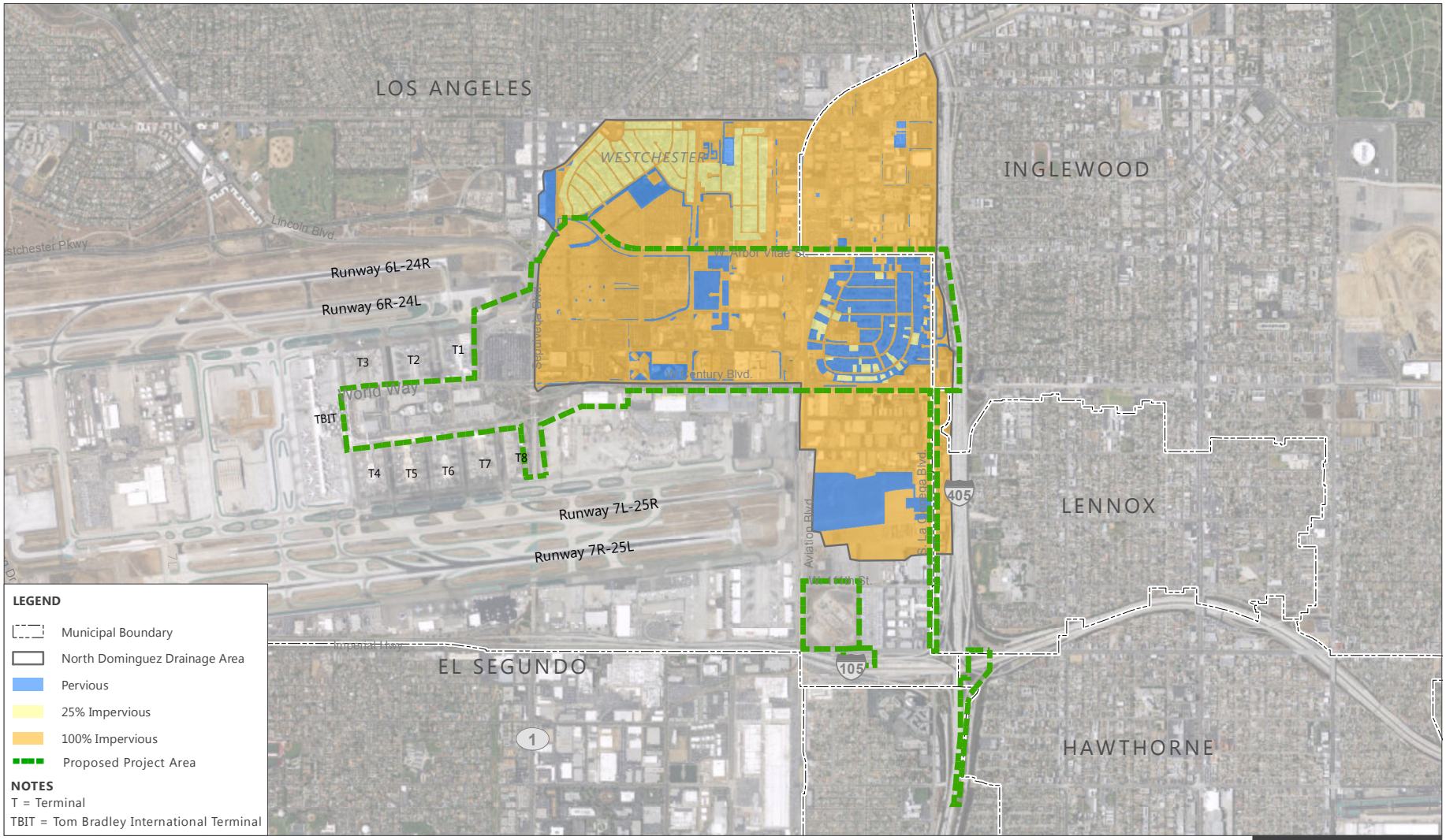
The Argo Sub-Basin drains west of Sepulveda Boulevard and discharges directly into Santa Monica Bay. Approximately 52.6 acres of the Proposed Project Area are located within the Argo Sub-Basin. With the exception of limited areas of ornamental landscaping, the improvement areas associated with the Proposed Action within the Argo Sub-Basin are 100 percent impervious surfaces, with stormwater draining into the existing storm drain system in and near the CTA.

Surface runoff within the Dominguez Channel Watershed is collected via a series of paved ditches and closed pipe systems before being discharged to the Dominguez Channel. The Dominguez Channel itself begins approximately 2 miles east of LAX and extends south to, and through, the Dominguez Estuary. The uppermost 6.7 miles of the Channel is concrete-lined and travels from W. 116th street near I-105 to Vermont Avenue near I-110.

All of the stormwater from the Dominguez Channel Watershed ultimately discharges to an outfall off San Pedro Harbor, located approximately 17 miles southeast of LAX, which is under the jurisdiction of LACFCD. The Dominguez Channel, which is off-site and downstream from LAX, and includes runoff from both non-LAWA and LAWA properties, is currently over capacity. The current capacity of the storm drainage infrastructure in the Dominguez Channel Watershed was investigated in a 2002 hydrologic analysis.[95] The study indicated that the current drainage system within the Dominguez Channel Watershed is not sufficient to convey peak runoff rates associated with the LACDPW 50-year design storm.

[95] Parsons, Brinckerhoff, Quade & Douglas, Inc., *City of Los Angeles, Los Angeles World Airports, Final On-Site Hydrology Report for Los Angeles International Airport,* October 18, 2002.

**[Preliminary Draft for Discussion Purposes Only]**




SOURCES: Los Angeles County, 2010 (city boundary); Ricondo & Assoicates, Inc., 2010 (airport property boundary); National Geographic World Map, ESRI Database, 2011; CDM Smith, April 2016.
PREPARED BY: Ricondo & Associates, Inc., May 2017.

**FIGURE 4-12**

NORTH 0 3,000 ft.

## Existing Project Site Pervious and Impervious Areas

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## 4.13.2 GROUNDWATER

### 4.13.2.1 Regulatory Setting

The Safe Drinking Water Act (SDWA) authorizes the USEPA to set standards for drinking water quality, and the USEPA can delegate authority to states to implement the Act within their jurisdictions, if they meet or exceed USEPA standards.

In 1955, the State of California passed the Water Replenishment District Act that provides for the formation of water replenishment districts and grants authority to the district for the replenishment, protection, and preservation of groundwater supplies within that district. In 1959, the Water Replenishment District (WRD) of Southern California was created with authority for the West Coast Groundwater Basin, which underlies approximately 160 square miles of coastal Los Angeles County including the Proposed Project Area.

The California Sustainable Groundwater Management Act, passed in 2014 provides local agencies with the authority to adopt groundwater management plans. The Act requires the formation of local groundwater sustainability agencies that would develop and implement plans to achieve long term groundwater sustainability. The legislation provides a framework for sustainable management of groundwater supplies by local authorities, with a limited role for state intervention when necessary to protect the resource. The Act requires the formation of local groundwater sustainability agencies (GSAs) that must assess conditions in their local water basins and adopt locally-based management plans. It protects existing surface water and groundwater rights and does not impact current drought response measures. The California Water Commission approved the Department of Water Resources Emergency Regulations for Groundwater Sustainability Plans and Alternatives on May 18, 2016; the regulations went into effect in June 2016.

### 4.13.2.2 Affected Environment

Groundwater occurs beneath LAX, at approximately 100 feet below the ground surface, within what is known as the West Coast Groundwater Basin. Water levels are highest along the West Coast Basin seawater intrusion barrier, and decrease to the east where they are at their lowest elevation in the City of Gardena between the Charnock fault and Newport-Inglewood Uplift, both of which are geologic structural features that partially restrict groundwater flow.[96] The central and western portions of the Proposed Project Area have a groundwater depth of approximately 88 to 100 feet deep; the eastern portion of the Proposed Project Area, adjacent to the I-405, has a groundwater depth of approximately 55 to 88 feet below the ground surface.[97] Overall, the groundwater in the West Coast Groundwater Basin is considered to be of high quality, suitable for

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[96] Water Replenishment District of Southern California, *Regional Groundwater Monitoring Report Water Year 2013-2014,* February 2015.

[97] Ninyo & Moore, *Preliminary Geotechnical Evaluation Pile Foundations, Landside Access Modernization Program, Los Angeles International Airport, Los Angeles, California*, January 29, 2016.

potable and nonpotable uses.[98] However, there are localized areas of marginal to poor water quality that can be attributed to natural or human causes.[99]

Surface recharge of groundwater normally occurs when precipitation or surface water runoff contacts pervious surfaces and infiltrates through the subsurface to replenish groundwater in aquifers below. However, groundwater replenishment in the West Coast Basin is predominantly through injection wells that are part of seawater intrusion barrier systems. Within the LAX area, there are no surface water streams and industrial and commercial waste discharges are prohibited on the Airport.[100] Sources for recharge at the Airport property itself include precipitation and its associated runoff, and applied irrigation.[101]

Various soil and groundwater remediation techniques that are typically required by the RWQCB are currently in operation at LAX and within properties to be acquired (see Table 4-6). The techniques include *ex situ* remediation (soil is excavated and either treated or disposed of at a licensed landfill) and *in situ* remediation (soil is treated in place by bioremediation, vapor extraction, or other types of methods). Specific sites at LAX also have product recovery systems in groundwater wells to remove petroleum hydrocarbon free product from the groundwater.

98 Water Replenishment District of Southern California, *Regional Groundwater Monitoring Report Water Year 2013-2014,* February 2015.

99 Water Replenishment District of Southern California, *Regional Groundwater Monitoring Report Water Year 2013-2014,* February 2015.

100 City of Los Angeles, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements,* Section 4.7, p. 4-759, (SCH No. 1997061047), April 2004.

101 City of Los Angeles, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Proposed Master Plan Improvements,* Section 4.7, p. 4-759, (SCH No. 1997061047), April 2004.

# 5. Environmental Consequences

The potential environmental consequences associated with the Proposed Action and the No Action Alternatives are discussed in this section. Of the environmental categories specified in FAA Orders 1050.1F and 5050.4B, the following were evaluated as part of this EA and are documented in the following sections:

- Air Quality—Section 5.1
- Climate—Section 5.2
- Department of Transportation Act, Section 4(f) and Land and Water Conservation Fund Act, Section 6(f) Resources—Section 5.3
- Hazardous Materials, Solid Waste, and Pollution Prevention—Section 5.4
- Historic, Architectural, Archaeological, and Cultural Resources—Section 5.5
- Land Use—Section 5.6
- Natural Resources and Energy Supply—Section 5.7
- Noise and Noise-Compatible Land Use—Section 5.8
- Socioeconomics (including Surface Transportation/Traffic and Parking), Environmental Justice, and Children's Environmental Health and Safety Risks—Section 5.9
- Visual Effects—Section 5.10
- Water Resources—Section 5.11
- Cumulative Impacts —Section 5.12

The remaining environmental impact categories specified in FAA Orders 1050.1F and 5050.4B would not be affected by the Proposed Action Alternative. These categories, identified in Section 4.2, include: biological resources, coastal resources, farmlands, floodplains, wetlands, and wild and scenic rivers.

As noted in Section 4.1.2, the temporary effects and ground disturbance effects associated with construction of the Proposed Action would occur in two phases. Phase 1 would be constructed between 2018 and 2024, and Phase 2 would begin in 2025 and be completed by 2030. Thus, this section analyzes interim years for construction (Phase 1: 2018-2024 and Phase 2: 2025-2030), and operational years 2024, 2030, and 2035. Additionally, based on the rental car and parking demand assumed for the project, as summarized in Sections

2.3.3 and 2.3.5, it was assumed that private companies would develop land for private, remote public parking facilities and that rental car sites would expand in order to accommodate growth.

On a local level, traffic conditions at LAX are expected to worsen over time partly because of expected increases in the amount of local traffic not associated with the CTA and partly because of the growth in passenger activity levels that are projected to occur irrespective of the Proposed Action. The projected increase in passenger activity at LAX in future horizon years is consistent with current FAA growth forecasts contained in FAA's Terminal Area Forecast (TAF).[1] The TAF projects 86 MAP (i.e., 43 million enplanements) in 2024 and 96 MAP (i.e., 48 million enplanements) by 2030. For planning purposes related to the proposed LAX Landside Access Modernization Program, LAWA is planning for a future condition (2035) of 95 MAP[2] under both the No Action and Proposed Action Alternatives, largely consistent with SCAGs RTP's forecast of 96.6 MAP for LAX (see **Appendix D**).

## 5.1 Air Quality

The preparation of air quality analyses in FAA NEPA documents is based upon the following sources: FAA's NEPA implementation orders, FAA Orders 1050.1F, *Environmental Impacts: Policies and Procedures*, and 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, the federal Clean Air Act (CAA), as amended by the Clean Air Act Amendments (CAAA) of 1990 and the associated regulations; and the FAA's *Aviation Emissions and Air Quality Handbook*, referred to as the FAA's Air Quality Handbook.[3]

The analytical recommendations and requirements described in these documents were followed in preparing the air quality assessment for the Proposed Action Alternative. FAA Order 1050.1F states that an air quality assessment prepared under NEPA should include an analysis of and conclusions regarding a proposed action's impacts on air quality and further directs that, when a NEPA analysis is needed, the proposed action should be assessed by evaluating the effects on the National Ambient Air Quality Standards (NAAQS). FAA Order 5050.4B further provides that, for NEPA purposes, environmental analyses must determine if the air quality impacts of any reasonable alternative would exceed the NAAQS for the time periods analyzed. LAX is located within the South Coast Air Basin; current air quality in the South Coast Air Basin and NAAQS attainment status is discussed in Section 4.3.

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1 U.S. Department of Transportation, Federal Aviation Administration, *Terminal Area Forecast Summary, Fiscal Years 2014 – 2040*, January 2015.

2 When LAWA started analyzing traffic levels for the proposed LAX Landside Access Modernization Program, an activity level of 95 million annual passengers was used for future conditions. Because this reflected a future 2035 condition (i.e., a 20-year time horizon) this activity level was coordinated and agreed upon as being reasonable for planning purposes with the surface modal agencies.

3 U.S. Department of Transportation, Federal Aviation Administration, *Aviation Emissions and Air Quality Handbook*, Version 3, Update 1, January 2015.

The CAAA require federal agencies to ensure that their actions conform to the appropriate State Implementation Plan (SIP). Conformity is defined as demonstrating that a project or action conforms to the SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. Federally funded and approved actions at airports are subject to the U.S. Environmental Protection Agency (USEPA) General Conformity regulations. A conformity determination of the proposed action is required if the total direct and indirect pollutant emissions resulting from a project are above *de minimis* emissions threshold levels specified in the conformity regulations.

### 5.1.1 METHODOLOGY

An Air Quality Protocol document (Protocol) was developed to identify the technical assumptions, methodologies, databases, and models that would be used to conduct the air quality impact analysis and develop the greenhouse gas (GHG) emission inventories for the EA, including a draft conformity analysis under the CAA. The purpose of the Protocol was to document in advance of any data collection or data analysis, the approach to the analysis, and obtain input from South Coast Air Quality Management District (SCAQMD), California Air Resources Board (CARB), California Department of Transportation (Caltrans), Federal Highway Administration (FHWA), Southern California Association of Governments (SCAG), and USEPA. A copy of the Protocol is included in **Appendix F**.

The air quality analysis for this EA includes direct and indirect emission inventories, as well as air dispersion modeling. This data was evaluated to determine if the emissions caused by the Proposed Action Alternative would qualify as significant under the FAA's NEPA threshold; the data was also evaluated to determine whether the Proposed Action Alternative would conform with the SIP under the CAA conformity requirements (see Section 5.1.2).

Mass emissions inventories were prepared for both construction and operations of the Proposed Action Alternative and No Action Alternative. The criteria pollutant emission inventories developed as part of this EA utilized standard industry software/models and federal, state, and locally approved methodologies. Results of the emission inventories were then evaluated to determine if they conform with the SIP. It is important to note that while FAA requires the use of the Aviation Environmental Design Tool (AEDT) for airport air quality evaluation, that tool is not usable for the type of development in the Proposed Action. The AEDT focuses on emissions of aircraft and ground support equipment and not emissions from on-road and construction equipment emissions sources. Since the Proposed Action Alternative would not affect aircraft and ground support equipment sources, this EA relies on other tools that are available to evaluate ground access/on-road vehicle emissions. See **Appendix F** for additional information regarding models and methodology utilized to conduct the air quality analysis.

In addition to mass emission inventories, air dispersion modeling was also conducted to predict pollutant concentrations for operational sources for the Proposed Action and No Action Alternatives. Dispersion modeling of on-airport construction, mobile and stationary sources, and off-airport mobile emissions, was conducted using the most current EPA-approved American Meteorological Society (AMS)/EPA Regulatory Model (AERMOD) air dispersion model. Predicted concentrations were then compared against the NAAQS to determine significance. See **Appendix F** for additional information regarding dispersion modeling.

#### 5.1.1.1 Construction Sources

Air pollutant emissions occurring as the result of construction activity vary based on a 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, as well as road dust emissions. Evaporative emissions also result from asphalt paving operations, roadway markings, and architectural coatings. Construction emissions were quantified using the models listed in **Table 5-1**.

**Table 5-1: Construction Sources Pollutant and Emission Model Summary**

| CONSTRUCTION SOURCE | POLLUTANT | MODEL/REFERENCE |
|---|---|---|
| Off-Road Equipment | CO, $SO_2$ | OFFROAD2007, OFFROAD2011 [1/] |
| | VOC, $NO_X$, $PM_{10}$ | 2011 Inventory Model (OFFROAD2011) [2/] |
| | $PM_{2.5}$ | CARB Speciation Profiles (& Size Distributions) [3/] |
| On-Road On-Site Equipment | CO, VOC, $NO_X$, $PM_{10}$ | EMFAC2014 [4/] |
| On-Road Off-Site Equipment | CO, VOC, $NO_X$, $PM_{10}$ | EMFAC2014 [4/] |
| Fugitive Dust | $PM_{10}$, $PM_{2.5}$ | USEPA AP42 [5/] |
| Fugitive VOCs | VOC | CalEEMod [6/] |

NOTES:

1/ California Air Resources Board, OFFROAD2007 Model, available: http://www.arb.ca.gov/msei/documentation.htm (accessed May 24, 2016).

2/ 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 May 24, 2016).

3/ South Coast Air Quality Management District, "Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds," October 2006, available: http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/pm-2-5-significance-thresholds-and-calculation-methodology (accessed May 24, 2016); California Environmental Protection Agency, Air Resources Board, "Speciation Profiles Used in ARB Modeling," April 15, 2016, available: http://www.arb.ca.gov/ei/speciate/speciate.htm#assnfrac (accessed May 31, 2016).

4/ California Air Resources Board, EMFAC2014 Model, available: http://www.arb.ca.gov/msei/categories.htm#emfac2014 (accessed May 24, 2016).

5/ U.S. Environmental Protection Agency, "Emissions Factors & AP 42, Compilation of Air Pollutant Emission Factors," available: http://www.epa.gov/ttn/chief/ap42/index.html (accessed May 24, 2016).

6/ California Air Pollution Control Officers Association, California Emissions Estimator Model (CalEEMod) Version 2013.2.2, prepared by ENVIRON International Corporation and the California Air Districts, available: http://www.caleemod.com/ (accessed on May 24, 2016)

SOURCE: Ricondo & Associates, Inc., May 2016.
PREPARED BY: Ricondo & Associates, Inc., May 2016.

To estimate construction emissions, construction resource requirements and activity schedules were developed by LAWA. The construction activity data included types and specifications for both on-road and off-road construction equipment, and total operating hours by equipment type by month for each applicable construction activity/project. Equipment specifications include equipment type, manufacturer, model, capacity, horsepower, fuel consumption, and fuel type, as appropriate. Using this data, annual construction emissions estimates were developed. Emissions inventories for CO, VOC, $NO_x$, $SO_2$, $PM_{10}$, and $PM_{2.5}$ were prepared for the following construction activities:

- **Off-Road On-Site Equipment** includes dozers, loaders, sweepers, and other heavy-duty construction equipment that is not licensed for travel on public roadways.
- **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).
- **On-Road Off-Site Equipment** includes trip types identified in the construction schedule such as personal vehicles used by construction employees to access the construction employee parking areas, and may also include equipment and material delivery/haul vehicles. An assumption of workers per crew and vehicle miles traveled (VMT) per day is based on the Proposed Action construction schedule. Construction-worker vehicle 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.
- **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, if applicable.
- **Fugitive VOC** emissions include hot-mix asphalt paving, parking lot striping, and architectural coating. VOC emissions from asphalt paving operations result from the evaporation of the petroleum distillate solvent, or diluent, used to liquefy asphalt cement.

#### 5.1.1.2 Operational Sources

Operational emissions inventories show the changes in emissions that completing and operating the Proposed Action Alternative would have when comparing operational emissions of the No Action Alternative. As discussed in **Appendix D**, implementation of the Proposed Action Alternative would not increase the number of flights or type of aircraft using the airfield, because it only affects landside development and efficiency of the landside/roadway system. The Proposed Action Alternative would also not result in changes to air traffic flight patterns or aircraft taxi patterns, nor would it change the number of passengers at LAX; it would only change how passengers access the Airport and terminal facilities. Therefore, changes in surface vehicle traffic patterns and trips that would occur because of the Proposed Action Alternative, as well as emissions from new stationary facilities and energy demand for the Proposed Action Alternative facilities are the only operational sources that will be analyzed for impacts.

- **Mobile Sources** comprise on-road vehicles, including the automobiles, trucks, buses, and other motor vehicles that operate on the public roadways and in the parking areas at and near LAX.[4] All surface vehicles traveling to or from LAX are considered in the Air Quality analysis, including:

[4] No direct criteria pollutant emissions would occur from operation of the APM; rather, emissions would occur from off-airport utility plant operations necessary to support the additional electricity demand. The method for estimating these emissions is discussed under Stationary Sources.

privately-owned vehicles, government-owned vehicles, and commercially-owned vehicles, such as rental cars, shuttles, buses, taxicabs, and trucks. Temporal data that identifies the vehicle volumes by hour for traffic and on-airport parking was determined from the traffic analysis.

- **Stationary Sources** include fixed combustion equipment (e.g., natural gas space heaters and water heaters) and incremental electricity demand, both of which are analyzed as part of this EA. It is anticipated that the electrical demand for the Proposed Action Alternative, as well as heating and cooling demands, would be provided by grid based power (such as from the Los Angeles Department of Water and Power [LADWP]). For cumulative impacts, CalEEMod[5] was used to develop an emissions inventory, including emissions for small package plants, and for new buildings that may be constructed on property used for construction laydown and staging areas during Phase I of the Proposed Action Alternative (see Section 4.3 and **Appendix A** for more information). While power would most likely be supplied by LADWP for all facilities associated with the Proposed Action Alternative, small package plants were also included in the analysis to be conservative.

### 5.1.2 SIGNIFICANCE THRESHOLDS

As provided on Exhibit 4-1 of FAA Order 1050.1F, an action would cause significant air quality impacts if pollutant concentrations were to exceed one or more of the NAAQS, as established by the USEPA under the CAA, for any of the time periods analyzed, or to increase the frequency or severity of any such existing violations.

#### 5.1.2.1 General Conformity

Additionally, while not a significance threshold for NEPA, the USEPA has promulgated the General Conformity Rule in 1993 to implement the conformity provision of Title I, § 176(c)(1) of the *CAA Amendments of 1990*. Section 176(c)(1) requires that the federal government not engage in, support, or provide financial assistance for licensing, permitting, or approving any activity not conforming to an approved CAA implementation plan. The approved implementation plan could be a Federal, State, or Tribal Implementation Plan. Revisions to the General Conformity Rule are codified in 40 CFR Parts 51 and 93, Subpart W, *Revisions to the General Conformity Regulations, Final Rule* (April 2010). The General Conformity Rule applies to all federal actions except for certain highway and transit programs. The latter must comply with the conformity requirements for Transportation Plans in 40 CFR Part 93, Subpart A.

The General Conformity Rule is designed to ensure that air pollutant emissions associated with federal actions do not prevent achievement of state and federal air quality goals. General Conformity refers to the process of evaluating federal plans, programs, and projects to determine and demonstrate that they meet the requirements of the CAA and applicable SIP. The need for a detailed conformity determination under the General Conformity Rule is required where a comparison of the changes in project-related air pollutant

[5] California Air Pollution Control Officers Association, California Emissions Estimator Model (CalEEMod) Version 2013.2.2, prepared by ENVIRON International Corporation and the California Air Districts, available: http://www.caleemod.com/ (accessed on May 24, 2016).

emissions (Proposed Action Alternative minus the No Action Alternative) exceed *de minimis* thresholds established in the Rule.

The South Coast Air Basin is currently designated non-attainment of NAAQS for the following pollutants: ozone ($O_3$), Pb, and $PM_{2.5}$. Additionally, the Basin is designated as a maintenance area for $PM_{10}$, CO, and $NO_2$. Applicable *de minimis* thresholds for criteria pollutants and their precursors are presented in **Table 5-2**.

**Table 5-2: General Conformity *De Minimis* Thresholds**

| NAAQS | ATTAINMENT STATUS (SEVERITY) [1/] | POLLUTANT(S) | *de minimis* THRESHOLD (TONS PER YEAR) |
|---|---|---|---|
| Carbon Monoxide (CO) | Attainment - Maintenance | CO | 100 |
| Fine Particulate Matter ($PM_{2.5}$) | Nonattainment – Serious [2/] | $PM_{2.5}$ | 70 |
| Lead (Pb) | Nonattainment | Pb | 25 |
| Nitrogen Dioxide ($NO_2$) | Attainment - Maintenance | $NO_2$ | 100 |
| Ozone ($O_3$) | Non-attainment – Extreme [3/] | $NO_X$ | 10 |
| | | VOC | 10 |
| Respirable Particulate Matter ($PM_{10}$) | Attainment - Maintenance | $PM_{10}$ | 100 |

NOTES:

1/ Status as of June 17, 2016.

2/ Classified as moderate nonattainment for 2012 NAAQS and serious nonattainment for 2006 NAAQS. Thus, for conformity purposes the serious nonattainment *de minimis* threshold will be used.

3/ The South Coast Air Basin had not attained the 1-hour $O_3$ standard by the time it was replaced with the 1997 8-hour $O_3$ standard. Therefore, the State Implementation Plan for the South Coast must still contain demonstrations that the 1-hour $O_3$ standard will be attained.

SOURCES: General Conformity Rule (40 CFR Part 93, Subpart B); USEPA; U.S. Environmental Protection Agency, "Green Book Nonattainment Areas," April 22, 2016, available: https://www3.epa.gov/airquality/greenbook/index.html (accessed May 24, 2016).
PREPARED BY: Ricondo & Associates, Inc., September 2016.

### 5.1.2.2 Transportation Conformity

Transportation conformity ensures that certain ground transportation-related actions of the Federal government and recipients of Federal transportation assistance are consistent with surface transportation air quality goals as established in the State Implementation Plan (SIP). This is done through procedures for the consideration of metropolitan transportation plans (MTP/RTPs), shorter-term transportation improvement programs (TIPs), and Federal Highway Administration (FHWA)/Federal Transit Administration (FTA) projects as defined by 40 CFR § 93.101. The transportation conformity regulations require region-wide emissions analyses for all projects in RTPs and TIPs, as well as localized project-level "hot spot" pollution concentration analyses for certain projects that receive federal surface transportation funds or require approvals by FHWA or FTA. Transportation conformity only applies to the transportation-related pollutants: ozone, particulate matter, nitrogen dioxide, and carbon monoxide.

Transportation Conformity determinations are made by the Federal agency overseeing the improvements to the surface transportation network, either the FHWA or the FTA. Metropolitan Planning Organization (MPO) policy boards make initial conformity determinations for metropolitan transportation plans and TIPs in metropolitan areas on a region-wide basis, while State Departments of Transportation (DOTs) or local transit agencies usually conduct the more localized analyses associated with project level conformity. A formal interagency consultation process is required for developing SIPs, MTPs/RTPs, TIPs, and making conformity determinations. As a result, the consultation process typically includes the U.S. Environmental Protection Agency (USEPA), FHWA, FTA, State and local transportation agencies, and air quality agencies.

All FHWA or FTA-funded or approved highway and transit projects subject to transportation conformity are required to meet project-level conformity requirements; if no FHWA or FTA funds or approvals are required, then the project-level transportation conformity requirements are not applicable. To demonstrate project-level conformity, a project must:

a) come from a conforming metropolitan transportation plan and TIP;

b) its design concept and scope must not have changed significantly from that in the metropolitan transportation plan and TIP;

c) the analysis must have used the latest planning assumptions and latest emissions model; and

d) in particulate matter (PM) nonattainment and maintenance areas, there must be a demonstration of compliance with any control measures in the SIP.

In carbon monoxide and particulate matter nonattainment and maintenance areas, additional analysis may be necessary to determine if a project has localized air quality impacts. This localized air quality analysis is referred to as a "hot-spot" analysis.

To facilitate the review of transportation conformity for projects, the SCAG has formed a working group called the Transportation Conformity Working Group (TCWG).[6] Membership of the SCAG's TCWG includes Federal (USEPA, FHWA, FTA), State (CARB, Caltrans), regional (Air Quality Management Districts, SCAG), and sub-regional (County Transportation Commissions) agencies, and other stakeholders.

For regionally significant surface transportation projects that do not involve FHWA/FTA funding or approvals, project-level conformity is not required, but the projects must still come "from the currently conforming transportation plan and TIP…, and the project[s'] design concept and scope have not changed significantly from those that were included in the regional emissions analysis for that transportation plan and TIP."[7]

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[6] Southern California Association of Governments, "Transportation Conformity Working Group (TCWG)," available: http://www.scag.ca.gov/programs/Pages/TCWG.aspx (accessed May 24, 2016).

[7] 40 C.F.R. § 93.121.

## 5.1.3 CONSTRUCTION IMPACTS

### 5.1.3.1 No Action Alternative

Under the No Action Alternative, no construction activities connected with the LAX Landside Access Modernization Program would occur and existing airport operations would continue. It is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. However, although these activities would create some construction emissions, as these actions would be completed off-Airport and would not be under either FAA's or LAWA's jurisdiction, no estimate of air pollutant emissions associated with the construction of these facilities was made.

### 5.1.3.2 Proposed Action Alternative

Construction of the Proposed Action Alternative would be conducted in two phases. Phase 1 of the Proposed Action Alternative would include the vast majority of the proposed access/transportation-related improvements, such as the APM, the CONRAC, the ITF West, the ITF East, and most of the roadway improvements, planned to be operational by 2024. Phase 2 of the Proposed Action Alternative would mainly consist of roadway improvements at the W. Century Boulevard/Sepulveda Boulevard interchange; these elements would likely be constructed by 2030. Criteria pollutant emissions inventories were prepared for each construction year; a criteria pollutant dispersion analysis was performed for the peak year of construction.

#### 5.1.3.2.1 Emissions Inventory

The emissions inventory for construction activities associated with the Proposed Action Alternative is presented in **Table 5-3**. The construction-related pollutant emissions were compared against the General Conformity *de minimis* thresholds established for the South Coast Air Basin to gauge conformance to the SIP. General Conformity *de minimis* thresholds are evaluated on a project by project basis and would not need to be evaluated cumulatively with other projects at LAX.

**Table 5-3: Proposed Action Alternative Construction Emissions Inventory**

| | ESTIMATED ANNUAL EMISSIONS OF CRITERIA POLLUTANTS (TONS/YEAR) | | | | |
|---|---|---|---|---|---|
| **CONSTRUCTION YEAR** | **CO** | **VOC** | **$NO_X$** | **$PM_{10}$** | **$PM_{2.5}$** |
| **Phase 1** | | | | | |
| 2018 | 21 | 5 | 18 | 2 | 1 |
| 2019 | 33 | 4 | 36 | 3 | 1 |
| 2020 | 29 | 4 | 35 | 3 | 1 |
| 2021 | 19 | 2 | 20 | 2 | 1 |
| 2022 | 10 | 1 | 11 | 1 | 1 |
| 2023 | 8 | <1 | 7 | 1 | <1 |
| 2024 | 3 | <1 | 2 | <1 | <1 |
| **Phase 2** | | | | | |
| 2025 | <1 | <1 | <1 | <1 | <1 |
| 2026 | <1 | <1 | <1 | <1 | <1 |
| 2027 | <1 | <1 | <1 | <1 | <1 |
| 2028 | <1 | <1 | <1 | <1 | <1 |
| 2029 | <1 | <1 | <1 | <1 | <1 |
| 2030 | <1 | <1 | <1 | <1 | <1 |
| Peak Annual Emissions | 33 | 5 | 36 | 3 | 1 |
| ***de minimis Threshold*** | *100* | *10* | *10* | *100* | *70* |
| **Exceeds *de minimis* Threshold** | No | No | **Yes** | No | No |

SOURCE: CDM Smith, 2017.
PREPARED BY: Ricondo & Associates, Inc., January 2017.

The need for a conformity determination under the General Conformity Rule is based on a comparison of the changes in project-related air emissions with the *de minimis* thresholds, in accordance with FAA Order 1050.1F. Because the construction emissions exceed the *de minimis* thresholds, the General Conformity Rule requires that a separate general conformity determination be made, which includes opportunity for public comment. See Section 5.1.3.3 for the General Conformity applicability analysis.

### 5.1.3.2.2 Dispersion Analysis

The dispersion analysis results for construction activities associated with the Proposed Action Alternative are presented in **Table 5-4**. The construction-related pollutant concentrations were compared against the NAAQS standards established by the USEPA under the CAA. Peak year emissions were used in the modeling of annual concentrations, whereas peak month emissions were used in the modeling of all other concentrations. As shown in Table 5-4, annual concentrations of $PM_{10}$ would exceed the CAAQS; however, existing conditions (background concentrations) and the No Action Alternative also exceed the CAAQS for $PM_{10}$. However, no pollutant concentrations would exceed any of the NAAQS (which are used as the

significance thresholds under FAA Order 1050.1F, see Section 5.1.2), including for $PM_{10}$. Therefore, impacts would not be significant when compared to the No Action Alternative.

**Table 5-4: Proposed Action Alternative Construction Concentrations**

| POLLUTANT | AVERAGING PERIOD [1/] | INCREMENTAL PEAK (µg/m³) [2/] | BACKGROUND (µg/m³) | TOTAL (µg/m³) | STANDARD (µg/m³) [1/] | EXCEEDS STANDARD? |
|---|---|---|---|---|---|---|
| CO | 1-hr CAAQS | 812 | 3,565 | 4,377 | 23,000 | No |
| CO | 1-hr NAAQS | 712 | 3,565 | 4,277 | 35,000 | No |
| CO | 8-hr CAAQS & NAAQS | 150 | 2,778 | 2,928 | 10,000 | No |
| $NO_2$ | 1-hr CAAQS | 121 | 164 | 285 | 339 | No |
| $NO_2$ | 1-hr NAAQS | 183 | --[3/] | 183 | 188 | No |
| $NO_2$ | Annual CAAQS | 12 | 23 | 35 | 57 | No |
| $NO_2$ | Annual NAAQS | 12 | 23 | 35 | 100 | No |
| $SO_2$ | 1-hr CAAQS | 1 | 39 | 40 | 655 | No |
| $SO_2$ | 1-hr NAAQS | 1 | 16 | 17 | 196 | No |
| $SO_2$ | 3-hr NAAQS | 1 | 39 [4/] | 40 | 1,300 | No |
| $SO_2$ | 24-hr CAAQS | <1 | 8 | 8 | 105 | No |
| $SO_2$ | Annual NAAQS | <1 | 3 | 3 | 80 | No |
| $PM_{10}$ | 24-hr CAAQS | 7.0 | 38.3 | 45.3 | 50 | No |
| $PM_{10}$ | 24-hr NAAQS | 6.6 | 35 | 41.6 | 150 | No |
| $PM_{10}$ | Annual CAAQS | 1.1 | 22 | 23.1 | 20 | **Yes** |
| $PM_{2.5}$ | 24-hr NAAQS | 1.9 | 30 | 31.9 | 35 | No |
| $PM_{2.5}$ | Annual CAAQS & NAAQS | 0.3 | 11.4 | 11.7 | 12 | No |

NOTES:

CAAQS = California Ambient Air Quality Standard.

NAAQS = National Ambient Air Quality Standard.

1/ NAAQS and CAAQS often have the same averaging period, but usually have different standard values and may have different methods of determining compliance with each standard.

2/ The Incremental Peak concentration was determined by calculating the differences between future Proposed Action Alternative and the future No Action Alternative scenarios at each receptor, then selecting the maximum value across all receptors.

3/ The background 1-hour $NO_2$ values for the NAAQS analysis included 98th percentile concentrations for each hour-of-day by season (Winter, Spring, Summer, and Fall), 96 hourly values total, and these background $NO_2$ concentrations were included in the AERMOD runs so that the modeled concentration already included addition of background $NO_2$.

4/ The 3-hour $SO_2$ background concentration was assumed to be the same as the highest 1-hour $SO_2$ background concentration.

SOURCE: CDM Smith, 2017.

PREPARED BY: Ricondo & Associates, Inc., February 2017.

#### 5.1.3.3 General Conformity Applicability Analysis

As shown in Table 5-3, it is anticipated that the construction emissions from the Proposed Action Alternative during peak construction periods would exceed the NOx *de minimis* threshold for the years 2018-2022. Based on coordination with the SCAQMD, who prepared the 2012 Air Quality Management Plan (AQMP) that is the current applicable SIP, SCAQMD has reviewed the construction emissions submitted for the Proposed Action Alternative and determined that the $NO_X$ emissions from the Proposed Action Alternative Phase 1 construction activities can be accommodated within the General Conformity Budget established in the Final 2012 AQMP (see **Appendix F**). Therefore, because construction emissions for the Proposed Action Alternative are included in the SIP budget, the action would conform to the SIP that allows for attainment of the NAAQS and impacts would not be significant when compared to the No Action Alternative. For further details regarding coordination with SCAQMD, see **Appendix F**. However, as noted above, because the construction emissions exceed the *de minimis* thresholds, the General Conformity Rule requires that a separate general conformity determination be made, which includes opportunity for public comment. The Draft General Conformity Determination for the Proposed Action can be found in **Appendix O**.

### 5.1.4 OPERATIONAL IMPACTS

The criteria pollutant emissions inventories are used to disclose and compare the Proposed Action Alternative to the future No Action Alternative, and determine the air quality impacts for purposes of NEPA. Emissions inventories are also used to compare the action-related emissions to the General Conformity thresholds. The following sections provide the results of the air quality impact assessment for the No Action and Proposed Action Alternatives for 2024, 2030, and 2035.

The criteria pollutant dispersion analysis is also used to determine the Proposed Action Alternative's air quality impacts for purposes of NEPA. Incremental Proposed Action Alternative pollutant concentrations are compared to the NAAQS ambient air quality standards. Proposed Action Alternative concentrations are developed using incremental emissions of the Proposed Action Alternative minus the No Action Alternative for 2024, 2030, and 2035; results of the dispersion analysis for each year are provided in this section.

#### 5.1.4.1 No Action Alternative

Criteria pollutant emissions under the No Action Alternative for 2024, 2030, and 2035 are presented in **Table 5-5**. Without improvements to the roadway network, local traffic conditions would deteriorate with increased passengers expected to occur with or without implementation of the LAX Landside Access Modernization Program. LAX would continue to have one vehicular entrance to the CTA, with no direct connection to the regional Metro system. Access to the proposed and existing Metro facilities would be through bus operations, similar to existing conditions. However, because the vehicle fleet is getting cleaner as a result of stricter tailpipe emissions standards and fleet turnover, emissions inventories are predicted to decline. The one exception is $PM_{10}$ emissions, which substantially consist of road dust that is generated by the numbers of vehicles on the roadways; road dust is unaffected by tailpipe emissions standards. In addition, if rental car operators and private parking operators construct new facilities, electricity usage may change, particularly in regards to new demand of energy systems as a result of new construction.

**Table 5-5: No Action Alternative Operational Emissions Inventories**

| | EMISSIONS (TONS/YEAR) | | |
|---|---|---|---|
| **POLLUTANT** | **2024** | **2030** | **2035** |
| CO | 879 | 710 | 579 |
| VOC | 25 | 20 | 15 |
| $NO_X$ | 120 | 114 | 97 |
| $SO_X$ | 3 | 3 | 3 |
| $PM_{10}$ | 144 | 154 | 154 |
| $PM_{2.5}$ | 46 | 49 | 48 |

SOURCE: CDM Smith, 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

### 5.1.4.2 Proposed Action Alternative

#### 5.1.4.2.1 Emissions Inventories

Criteria pollutant emissions associated with the Proposed Action Alternative for 2024, 2030, and 2035 are presented in **Table 5-6**. The emissions inventories presented below include vehicular emissions, as would be influenced by implementation of the Proposed Action Alternative, as well as facility space and water heating (natural gas combustion), and secondary emissions from electrical demand associated with the Proposed Action Alternative. Operational emissions for the Proposed Action Alternative would be either reduced or unchanged when compared to the No Action Alternative for all pollutants and all years.

**Table 5-6: Proposed Action Alternative Operational Emissions Inventories**

| | EMISSIONS (TONS/YEAR) | | |
|---|---|---|---|
| **POLLUTANT** | **2024** | **2030** | **2035** |
| CO | 834 | 621 | 507 |
| VOC | 25 | 19 | 15 |
| $NO_X$ | 118 | 111 | 96 |
| $SO_X$ | 3 | 3 | 3 |
| $PM_{10}$ | 138 | 137 | 137 |
| $PM_{2.5}$ | 45 | 44 | 44 |

SOURCE: CDM Smith, 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

#### 5.1.4.2.2 Dispersion Analysis

In addition to the emissions inventory analysis, the criteria pollutant dispersion analysis is used to determine the Proposed Action Alternative air quality impacts for purposes of NEPA. Proposed Action Alternative pollutant concentrations are compared to the NAAQS and CAAQS air quality standards; however, significance is only based on the NAAQS comparison. Proposed Action Alternative concentrations are developed using incremental emissions of the Proposed Action Alternative minus the No Action Alternative for 2024, 2030, and 2035, and the results of the dispersion analysis for each year are provided in **Tables 5-7**, **5-8**, and **5-9**, respectively. As shown, emissions associated with the Proposed Action Alternative would not exceed the NAAQS (which are used as the significance thresholds under FAA Order 1050.1F, see Section 5.1.2), including for $PM_{10}$. Therefore, no significant operational air quality impacts would occur under the Proposed Action Alternative when compared to the No Action Alternative.

Background concentrations for $PM_{10}$ emissions currently exceed the annual CAAQS standard; thus, although the Proposed Action Alternative would result in a small increase in annual $PM_{10}$ concentrations in 2024, and a small reduction in annual $PM_{10}$ concentrations in 2030 and 2035, an exceedance of the annual $PM_{10}$ CAAQS standard would occur due to pre-existing conditions, and would also occur under the No Action Alternative.[8]

[8] Under California law, including the California Environmental Quality Act (CEQA), a project is not barred from proceeding in the event of exceedances of state air quality standards. Pursuant to CEQA, the LAX Landside Access Modernization Program Final EIR has identified all feasible mitigation to reduce $PM_{10}$ emissions and these have been incorporated as project design features of the Proposed Action Alternative. Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Landside Access Modernization Program*, SCH No. 2015021014, February 2017.

**Table 5-7: 2024 Proposed Action Alternative Concentrations**

| POLLUTANT | AVERAGING PERIOD [1/] | INCREMENTAL PEAK (µg/m$^3$) [2/] | BACKGROUND (µg/m$^3$) | TOTAL (µg/m$^3$) | STANDARD (µg/m$^3$) [1/] | EXCEEDS STANDARD? |
|---|---|---|---|---|---|---|
| CO | 1-hr CAAQS | 82 | 3,565 | 3,647 | 23,000 | No |
| CO | 1-hr NAAQS | 78 | 3,565 | 3,643 | 40,000 | No |
| CO | 8-hr CAAQS & NAAQS | 37 | 2,778 | 2,815 | 10,000 | No |
| $NO_2$ | 1-hr CAAQS | 8 | 164 | 172 | 339 | No |
| $NO_2$ | 1-hr NAAQS | 6 | 116 | 122 | 188 | No |
| $NO_2$ | Annual CAAQS | 1 | 23 | 24 | 57 | No |
| $NO_2$ | Annual NAAQS | 1 | 23 | 24 | 100 | No |
| $SO_2$ | 1-hr CAAQS | <1 | 39 | 39 | 655 | No |
| $SO_2$ | 1-hr NAAQS | <1 | 16 | 16 | 196 | No |
| $SO_2$ | 3-hr NAAQS | <1 | 39 [3/] | 39 | 1,300 | No |
| $SO_2$ | 24-hr CAAQS | <1 | 8 | 8 | 105 | No |
| $SO_2$ | Annual NAAQS | <1 | 3 | 3 | 80 | No |
| $PM_{10}$ | 24-hr CAAQS | 3.1 | 38.3 | 41.4 | 50 | No |
| $PM_{10}$ | 24-hr NAAQS | 2.8 | 35 | 37.8 | 150 | No |
| $PM_{10}$ | Annual CAAQS | 1.5 | 22 | 23.5 | 20 | **Yes** |
| $PM_{2.5}$ | 24-hr NAAQS | 1.0 | 30 | 31.0 | 35 | No |
| $PM_{2.5}$ | Annual CAAQS & NAAQS | 0.5 | 11.4 | 11.9 | 12 | No |

NOTES:

CAAQS = California Ambient Air Quality Standard.

NAAQS = National Ambient Air Quality Standard.

1/ NAAQS and CAAQS often have the same averaging period, but usually have different standard values and may have different methods of determining compliance with each standard.

2/ The Incremental Peak concentration was determined by calculating the differences between the future Proposed Action Alternative and the future No Action Alternative scenarios at each receptor, then selecting the maximum value across all receptors.

3/ The 3-hour $SO_2$ background concentration was assumed to be the same as the highest 1-hour $SO_2$ background concentration.

SOURCE: CDM Smith, 2017.

PREPARED BY: Ricondo & Associates, Inc., February 2017.

**Table 5-8: 2030 Proposed Action Alternative Concentrations**

| POLLUTANT | AVERAGING PERIOD [1/] | INCREMENTAL PEAK (µg/m$^3$) [2/] | BACKGROUND (µg/m$^3$) | TOTAL (µg/m$^3$) | STANDARD (µg/m$^3$) [1/] | EXCEEDS STANDARD? |
|---|---|---|---|---|---|---|
| CO | 1-hr CAAQS | 68 | 3,565 | 3,633 | 23,000 | No |
| CO | 1-hr NAAQS | 61 | 3,565 | 3,626 | 40,000 | No |
| CO | 8-hr CAAQS & NAAQS | 31 | 2,778 | 2,809 | 10,000 | No |
| $NO_2$ | 1-hr CAAQS | 22 | 164 | 186 | 339 | No |
| $NO_2$ | 1-hr NAAQS | 19 | 116 | 135 | 188 | No |
| $NO_2$ | Annual CAAQS | 7 | 23 | 30 | 57 | No |
| $NO_2$ | Annual NAAQS | 7 | 23 | 30 | 100 | No |
| $SO_2$ | 1-hr CAAQS | <1 | 39 | 39 | 655 | No |
| $SO_2$ | 1-hr NAAQS | <1 | 16 | 16 | 196 | No |
| $SO_2$ | 3-hr NAAQS | <1 | 39 [3/] | 39 | 1,300 | No |
| $SO_2$ | 24-hr CAAQS | <1 | 8 | 8 | 105 | No |
| $SO_2$ | Annual NAAQS | <1 | 3 | 3 | 80 | No |
| $PM_{10}$ | 24-hr CAAQS | 3.4 | 38.3 | 41.7 | 50 | No |
| $PM_{10}$ | 24-hr NAAQS | 3.1 | 35 | 38.1 | 150 | No |
| $PM_{10}$ | Annual CAAQS | 1.5 | 22 | 23.5 | 20 | **Yes** |
| $PM_{2.5}$ | 24-hr NAAQS | 1.0 | 30 | 31.0 | 35 | No |
| $PM_{2.5}$ | Annual CAAQS & NAAQS | 0.5 | 11.4 | 11.9 | 12 | No |

NOTES:

CAAQS = California Ambient Air Quality Standard.

NAAQS = National Ambient Air Quality Standard.

1/ NAAQS and CAAQS often have the same averaging period, but usually have different standard values and may have different methods of determining compliance with each standard.

2/ The Incremental Peak concentration was determined by calculating the differences between the future Proposed Action Alternative and the future No Action Alternative scenarios at each receptor, then selecting the maximum value across all receptors.

3/ The 3-hour $SO_2$ background concentration was assumed to be the same as the highest 1-hour $SO_2$ background concentration.

SOURCE: CDM Smith, 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

**Table 5-9: 2035 Proposed Action Alternative Concentrations**

| POLLUTANT | AVERAGING PERIOD [1/] | INCREMENTAL PEAK (µg/m$^3$) [2/] | BACKGROUND (µg/m$^3$) | TOTAL (µg/m$^3$) | STANDARD (µg/m$^3$) [1/] | EXCEEDS STANDARD? |
|---|---|---|---|---|---|---|
| CO | 1-hr CAAQS | 55 | 3,565 | 3,620 | 23,000 | No |
| CO | 1-hr NAAQS | 49 | 3,565 | 3,614 | 40,000 | No |
| CO | 8-hr CAAQS & NAAQS | 25 | 2,778 | 2,803 | 10,000 | No |
| $NO_2$ | 1-hr CAAQS | 22 | 164 | 186 | 339 | No |
| $NO_2$ | 1-hr NAAQS | 21 | 116 | 137 | 188 | No |
| $NO_2$ | Annual CAAQS | 7 | 23 | 30 | 57 | No |
| $NO_2$ | Annual NAAQS | 7 | 23 | 30 | 100 | No |
| $SO_2$ | 1-hr CAAQS | <1 | 39 | 39 | 655 | No |
| $SO_2$ | 1-hr NAAQS | <1 | 16 | 16 | 196 | No |
| $SO_2$ | 3-hr NAAQS | <1 | 39 [3/] | 39 | 1,300 | No |
| $SO_2$ | 24-hr CAAQS | <1 | 8 | 8 | 105 | No |
| $SO_2$ | Annual NAAQS | <1 | 3 | 3 | 80 | No |
| $PM_{10}$ | 24-hr CAAQS | 3.4 | 38.3 | 41.7 | 50 | No |
| $PM_{10}$ | 24-hr NAAQS | 3.1 | 35 | 38.1 | 150 | No |
| $PM_{10}$ | Annual CAAQS | 1.5 | 22 | 23.5 | 20 | **Yes** |
| $PM_{2.5}$ | 24-hr NAAQS | 1.0 | 30 | 31 | 35 | No |
| $PM_{2.5}$ | Annual CAAQS & NAAQS | 0.5 | 11.4 | 11.9 | 12 | No |

NOTES:

CAAQS = California Ambient Air Quality Standard.

NAAQS = National Ambient Air Quality Standard.

1/ NAAQS and CAAQS often have the same averaging period, but usually have different standard values and may have different methods of determining compliance with each standard.

2/ The Incremental Peak concentration was determined by calculating the differences between the future Proposed Action Alternative and the future No Action Alternative scenarios at each receptor, then selecting the maximum value across all receptors.

3/ The 3-hour $SO_2$ background concentration was assumed to be the same as the highest 1-hour $SO_2$ background concentration.

SOURCE: CDM Smith, 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

### 5.1.4.3 General Conformity Applicability Analysis

As shown in **Table 5-10**, implementation of the Proposed Action Alternative would decrease operational missions for all criteria pollutants in 2024, 2030, and 2035 when compared to the No Action Alternative. The reduction in operational emissions is due to the reduction in VMT associated with the Proposed Action Alternative improvements. The Proposed Action Alternative would result in more passengers and on- or near-Airport employees using transit to travel to and from the Airport vicinity, plus it would result in the elimination of most rental car shuttles. As shown in Table 5-10, operational emissions for each of the criteria pollutants would be below General Conformity *de minimis* thresholds; thus, the Proposed Action Alternative would conform to the SIP for future operational years and therefore no conformity determination for operational emissions is required.

**Table 5-10: Comparison of Alternatives with *De Minimis* Thresholds**

| | EMISSIONS (TONS/YEAR) | | | | |
|---|---|---|---|---|---|
| **POLLUTANT** | ***de minimis* THRESHOLD** | **NO ACTION ALTERNATIVE** | **PROPOSED ACTION ALTERNATIVE** | **DIFFERENCE** | **EXCEEDS THRESHOLD?** |
| **2024** | | | | | |
| CO | 100 | 879 | 834 | -46 | No |
| VOC | 10 | 25 | 25 | 0 | No |
| $NO_x$ | 10 | 120 | 118 | -2 | No |
| $SO_x$ | 100 | 3 | 3 | 0 | No |
| $PM_{10}$ | 100 | 144 | 138 | -6 | No |
| $PM_{2.5}$ | 70 | 46 | 45 | -1 | No |
| **2030** | | | | | |
| CO | 100 | 710 | 621 | -89 | No |
| VOC | 10 | 20 | 19 | -1 | No |
| $NO_x$ | 10 | 114 | 111 | -3 | No |
| $SO_x$ | 100 | 3 | 3 | 0 | No |
| $PM_{10}$ | 100 | 154 | 137 | -17 | No |
| $PM_{2.5}$ | 70 | 49 | 44 | -5 | No |
| **2035** | | | | | |
| CO | 100 | 579 | 507 | -72 | No |
| VOC | 10 | 15 | 15 | 0 | No |
| $NO_x$ | 10 | 97 | 96 | -1 | No |
| $SO_x$ | 100 | 3 | 3 | 0 | No |
| $PM_{10}$ | 100 | 154 | 137 | -17 | No |
| $PM_{2.5}$ | 70 | 48 | 44 | -4 | No |

SOURCE: CDM Smith, 2017; General Conformity Rule (40 CFR Part 93, Subpart B), January 31, 1994.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

#### 5.1.4.4 Transportation Conformity

All of the LAX Landside Access Modernization Program roadway and transit elements are included in the conforming SCAG RTP and the regional conformity analysis of it. Additionally, the design concept and scope for these roadway and transit elements have not changed significantly from what was included in the RTP; thus, they are in a conforming plan and meet the requirements of 40 C.F.R. § 93.121.[9] As discussed in the Air Quality Protocol in **Appendix F**, only two components of the Proposed Action Alternative were potentially required to conform with the project-level transportation conformity regulations. These elements are the improvements to the I-405 ramps at La Cienega Boulevard and the improvements to the I-105 ramps at Imperial Highway/Aviation Boulevard. A PM Conformity Hot Spot analysis form was completed and submitted to Caltrans and the TCWG for review (see **Appendix F**). The TCWG examined these improvements during their July 25, 2017 meeting and determined that because no FHWA or FTA funds or approvals were required for these improvements, the project-level transportation conformity regulations did not apply to these improvements.. Correspondence related to this determination and confirmation from members of the TCWG that project-level transportation conformity is not applicable is included in **Appendix F**.

Although the proposed I-405 ramp improvements and I-105 ramp improvements do not fall under the project-level transportation conformity requirements, LAWA conducted an analysis of both $PM_{10}$ and $PM_{2.5}$ emissions for both intersections (see **Appendix F.5**, TCWG Coordination, emissions calculations). The incremental $PM_{10}$ emissions associated with these improvements would be 0.027 tons/year at the I-405/La Cienega Boulevard intersection and 0.103 tons/year at the I-105/Imperial Highway/New 'C' Street intersection. For $PM_{2.5}$, incremental emissions associated with these improvements would be 0.009 tons/year at the I-405/La Cienega Boulevard intersection and 0.0343 tons/year at the I-105/Imperial Highway/New 'C' Street intersection. These emissions are well below significance thresholds for these pollutants.

Additionally, because the Proposed Project Area is located in a CO maintenance area, the screening procedures in Caltrans' CO Protocol[10] are applicable. Under that Protocol, because the Proposed Action Alternative would result in a reduction in CO emissions (see Table 5-10), no additional CO analysis is required.

### 5.1.5 HAZARDOUS AIR POLLUTANTS

Hazardous air pollutants (HAPs), including mobile source air toxics (MSATs), are pollutants that do not have established NAAQS, but present potential adverse human health risks from short-term (acute) or long-term (chronic) exposures. Although the analysis of HAPs is not required by FAA Orders 1050.1F or 5050.4B, an

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[9] Table 3-2 in **Appendix F.1** on pages 47-50, identifies the various project elements and if they are included in the Regional Transportation Plan (RTP), and if they are in the RTP, the RTP ID number of each project.

[10] California Department of Transportation, *Transportation Project-Level Carbon Monoxide Protocol, Revised December 1997*, UCD-ITS-RR-97-21, December 1997.

inventory of HAPs for the Proposed Action Alternative were prepared as part of the state environmental review process.[11] This is consistent with FHWA updated Interim Guidance on MSATs.[12] As the Proposed Action Alternative would reduce traffic and VMTs, the Proposed Action Alternative would reduce HAP emissions when compared to the No Action Alternative for the same timeframe. HAPs of concern that were included in the analysis were included based on emissions estimates and human toxicity information, and the CAA list of hazardous air pollutants.[13] As described above in Section 5.1.1, *Methodology*, emissions sources that are relevant to the Proposed Action Alternative include construction equipment and mobile and stationary sources. **Appendix F** presents the HAP emissions associated with construction of the Proposed Action Alternative and the operational HAP emissions for the Proposed Action Alternative compared to the No Action Alternative for the same timeframe.

### 5.1.6 MITIGATION MEASURES

As indicated in Sections 5.1.3 and 5.1.4, impacts to air quality with the implementation of the Proposed Action Alternative would not be significant when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.2 Climate

### 5.2.1 METHODOLOGY

As discussed in **Appendix F**, a GHG emissions inventory was prepared. This analysis addresses both direct and indirect GHG emissions, which are defined as follows:

- Direct Emissions: Direct sources of GHG emissions include on-Airport stationary sources, including heating/cooling; operational changes to surface traffic activity and surface traffic flows within the Airport area; construction and operation equipment; construction haul trips; and construction worker commute trips.
- Indirect Emissions: Indirect sources of GHG emissions include the consumption of purchased electricity, solid waste disposal, water usage, and wastewater treatment.

GHGs of concern from construction and operational sources are primarily carbon dioxide ($CO_2$), methane ($CH_4$), and nitrous oxide ($N_2O$). The analysis of GHG emissions generally mirrors the air quality criteria pollutant emissions analysis, as discussed in Section 5.1.1. This analysis focuses on $CO_2$ emissions, and where

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11 Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Landside Access Modernization Program*, SCH No. 2015021014, February 2017.

12 U.S. Department of Transportation, Federal Highway Administration, Memorandum: Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, October 18, 2016, https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/2016msat.pdf.

13 US Environmental Protection Agency, "The Clean Air Act Amendments of 1990 List of Hazardous Air Pollutants," available: https://www3.epa.gov/airtoxics/orig189.html (accessed May 10, 2017).

data is available concerning other GHGs, inventories those pollutants to create a carbon dioxide equivalent ($CO_2e$). Emissions have been calculated for construction and operations of both the No Action and Proposed Action Alternatives.

Detailed information regarding methodologies and assumptions are provided in **Appendix F**.

### 5.2.2 SIGNIFICANCE THRESHOLDS

Some courts have indicated that GHG emissions and climate change should be considered in NEPA analyses. Projected GHG emissions associated with proposed actions can be used to assess a proposed action's climate change effects. Climate change results from the addition of GHG emissions from millions of individual sources. Thus, the FAA has not established a significance threshold for climate and GHG emissions.

### 5.2.3 CONSTRUCTION IMPACTS

#### 5.2.3.1 No Action Alternative

Under the No Action Alternative, no construction activities connected with the LAX Landside Access Modernization Program would occur and existing airport operations would continue. It is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. However, although these activities would create some construction emissions. as these actions would be completed off-Airport and would not be under either FAA's or LAWA's jurisdiction, no estimate of GHG emissions associated with the construction of these facilities was made.

#### 5.2.3.2 Proposed Action Alternative

Phase 1 of the Proposed Action Alternative would include the vast majority of the proposed access/transportation-related improvements, such as the APM, the CONRAC, the ITF West, the ITF East, and most of the roadway improvements, planned to be operational by 2024. Phase 2 of the Proposed Action Alternative would mainly consist of roadway improvements at the W. Century Boulevard/Sepulveda Boulevard interchange; these elements would likely be constructed by 2030. As indicated in **Table 5-11**, GHG emissions for the construction of Phase 1 components would total approximately 41,881 $MTCO_2e$; construction of Phase 2 components would total approximately 327 $MTCO_2e$. The total GHG construction emissions of both phases of the Proposed Action Alternative would be approximately 42,208 $MTCO_2e$.

**Table 5-11: Proposed Action Alternative - Construction Greenhouse Gas Emissions**

| CONSTRUCTION YEAR | ANNUAL EMISSIONS ($MTCO_2e$) |
|---|---|
| **Phase 1** | |
| 2018 | 6,335 |
| 2019 | 10,717 |
| 2020 | 10,262 |
| 2021 | 6,868 |
| 2022 | 3,757 |
| 2023 | 2,894 |
| 2024 | 1,048 |
| *Subtotal* | 41,881 |
| **Phase 2** | |
| 2025 | 108 |
| 2026 | 30 |
| 2027 | 189 |
| 2028 | 0 |
| 2029 | 0 |
| 2030 | 0 |
| *Subtotal* | 327 |
| Total: | 42,208 |

NOTE:

$MTCO_2E$ = Metric tons of carbon dioxide equivalent

SOURCE: CDM Smith, February 2017.

PREPARED BY: Ricondo & Associates, Inc., February 2017.

Direct emissions associated with construction of the Proposed Action Alternative would be short-term and temporary in nature. Additionally, LAWA has implemented a wide range of actions designed to reduce temporary, construction-related air pollutant emissions from its ongoing construction program to the maximum extent feasible and has established some of the most aggressive construction emissions reduction measures in southern California, particularly with regard to requiring construction equipment and heavy duty trucks to be newer models that have low-emission engines or be equipped with emissions control devices.[14]

[14] City of Los Angeles, Los Angeles World Airports, *Los Angeles World Airports Sustainability Report 2015,* Available: http://www.laxsustainability.org/documents/Sustainability_Report_2015.pdf, accessed August 25, 2016.

To achieve this commitment, LAWA has developed standard control measures which have been incorporated into the Proposed Action Alternative to reduce or avoid GHG emissions. These measures aim to reduce fugitive dust emissions and exhaust emissions related to construction, as well as transportation- and operations-related emissions through trip reduction, clean vehicle fleets, and energy conservation.

Construction of the Proposed Action Alternative would only slightly contribute to global climate change, accounting for less than one-hundredth of a percent of U.S. GHG emissions. To ensure that GHG emissions associated with construction are minimized to the extent possible, LAWA will continue to implement emission reduction measures (see Section 5.2.5).

### 5.2.4 OPERATIONAL IMPACTS

Operational GHG emissions in $MTCO_2e$ for 2024, 2030, and 2035 for the Proposed Action Alternative are shown in **Table 5-12**. As shown in Table 5-12, GHG emissions associated with the Proposed Action Alternative are expected to decrease in 2024, 2030 and 2035 when compared to the No Action Alternative. While there is an increase in GHG emissions related to energy demand, the overall decrease in GHG emissions under the Proposed Action Alternative is mainly attributable to the large decrease in automobile VMT. Therefore, GHG emissions resulting from the implementation of the Proposed Action Alternative would not result in a significant impact on climate change.

**Table 5-12: Operational Greenhouse Gas Emissions**

| | ANNUAL EMISSIONS ($MTCO_2e$) | | |
|---|---|---|---|
| | **2024** | **2030** | **2035** |
| **No Action Alternative** | | | |
| Autos | 364,405 | 341,253 | 316,229 |
| Trucks | 37,086 | 46,781 | 46,060 |
| Parking | 23,167 | 22,800 | 21,111 |
| Energy Demand [1/] | 18,487 [2/] | 15,091 [2/] | 12,254 [2/] |
| Total: | **443,145** | **425,925** | **395,654** |
| **Proposed Action Alternative** | | | |
| Autos | 335,624 | 287,790 | 266,687 |
| Trucks | 37,234 | 49,979 | 49,209 |
| Parking | 22,477 | 32,320 | 20,667 |
| Energy Demand [1/] | 29,621 | 23,040 | 20,500 |
| Total: | **424,956** | **393,129** | **357,063** |
| **Difference** | **18,189** | **32,796** | **38,591** |

NOTES:

1/ $CO_2$ emission rates are estimated based on LADWP 2015 Final Power Integrated Resource Plan for reduction of $CO_2$ emissions between 2015 and 2030.

2/ Assumes that multiple existing rental car facilities and parking garages have roughly equivalent power demands as the Proposed Action Alternative CONRAC facilities and ITF parking garages.

SOURCE: CDM SMITH, 2017.

PREPARED BY: Ricondo & Associates, Inc., January 2017.

### 5.2.5 MITIGATION MEASURES

As indicated in Sections 5.2.3 and 5.2.4, impacts to climate change with the implementation of the Proposed Action Alternative would not be significant when compared to the No Action Alternative. As a result, construction emission control mitigation measures are not required beyond the numerous emission control measures LAWA applies to all projects, which include, but are not limited to, stationary point source controls, diesel emissions reduction plan, vehicle idling and siting limitations, use of alternative fuels, vehicle trip reduction measures, and administrative controls.[15]

## 5.3 Department of Transportation Act, Section 4(f) and Land and Water Conservation Fund Act, Section 6(f) Resources

### 5.3.1 METHODOLOGY

The assessment of potential impacts to Section 4(f) and Section 6(f) resources was conducted by determining whether the Proposed Action Alternative would result in the physical use of any Section 4(f) or Section 6(f) resources within the Proposed Project Area or would constitute a constructive use of a Section 4(f) resource. Public lands near LAX were documented through a review of applicable plans and maps. The information gathered during the inventory of resources, was used to identify potential impacts to any Section 4(f) or Section 6(f) lands. An initial assessment was made to determine whether the Proposed Action Alternative would result in the use of any property to which Section 4(f) or Section 6(f) applies.

The impacts to historic resources, which are also considered Section 4(f) resources, are discussed in Section 5.5, "Historic, Architectural, Archaeological, and Cultural Resources."

### 5.3.2 SIGNIFICANCE THRESHOLDS

An adverse effect to a Section 4(f) or Section 6(f) resource could occur through either a physical or constructive use of the resource. A physical use of a resource involves the physical taking through purchase or easement of the property, the physical occupation of a portion or all of the property, or the alteration of structures or facilities on the property. A constructive use of a resource may occur when a proposed action affects the resource by means of noise, visual intrusions, air pollution, water pollution, or other impacts; dissipates its aesthetic value; harms its wildlife; or restricts its access, thereby taking the resource in a practical sense.

According to FAA Order 1050.1F, a significant impact would occur to Section 4(f) lands when:

- The action involves more than a minimal physical use of a resource; or

[15] U.S. Department of Transportation, Federal Aviation Administration and Los Angeles World Airports, *LAX Master Plan Final EIS/EIR*, 2005.

- The action constitutes a "constructive use" based on an FAA determination that the project would substantially impair the resource.

The National Park Service (NPS) database (Land & Water Conservation Fund Detailed Listing of Grants) was reviewed to determine if there were any Section 6(f) resources present. While there are three parks and facilities within the vicinity of the Proposed Project Area; none of these Section 6(f) resources are actually located within the Proposed Project Area (see Section 4.5.2).

Based on the assessment of potential impacts, the FAA will make a *de minimis* impact determination if a physical use of a Section 4(f) resource would not adversely affect the activities, features, or attributes that qualify the resource for protection under Section 4(f); or a Section 106 finding of no adverse effect. If the FAA cannot make a *de minimis* finding, the FAA must prepare a Section 4(f) evaluation to determine effects on the Section 4(f) resource.

## 5.3.3 CONSTRUCTION IMPACTS

### 5.3.3.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur and existing land use and operations would continue.

It is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. However, as these actions would be accomplished off-Airport and would not be under either FAA's or LAWA's jurisdiction, it is assumed that they would not impact Section 4(f) or Section 6(f) resources.

### 5.3.3.2 Proposed Action Alternative

As noted in Section 4.5.1, the Proposed Project Area does not contain any land that is considered a park or is used for recreational purposes, although six municipal parks and parklands exist adjacent to or in the vicinity of the Proposed Project Area that could qualify as Section 4(f) properties. However, no direct or constructive use of any of these properties would occur. The only potential impacts to Section 4(f) properties that would occur from construction of the Proposed Action Alternative would be to historic resources, discussed below. No other impacts from noise, air quality, traffic, etc. that could cause a substantial impairment to Section 4(f) resources are anticipated from construction of the Proposed Action Alternative.

As described in Section 4.7.2.1, there are 5 properties in the vicinity of the Proposed Project Area eligible for listing on the National Register of Historic Places, which also makes them Section 4(f) resources. As discussed in Section 5.5, one of these sites – the Theme Building – would be adversely affected by the Proposed Action Alternative. The Proposed Action Alternative does not include the demolition, destruction, damage or relocation of the Theme Building. Construction of the Proposed Action Alternative in the vicinity of the Theme Building would avoid any physical disturbance to this structure, and therefore would not cause a physical use of this property. The following paragraphs discuss the adverse effect determination under Section 106 of the

National Historic Preservation Act (see Section 5.5 for additional detail) and whether a constructive use of the Theme Building, as defined by Section 4(f) of the DOT Act, would occur.

Construction of the APM guideway and pedestrian walkways in close proximity to the Theme Building would introduce new visual elements to the area. The Proposed Action Alternative would construct the APM guideway to traverse east-west through the center of the CTA. The Proposed Action Alternative would also construct three APM stations, and three enclosed elevated pedestrian walkways traversing the CTA north-south. The proposed elevated APM guideway would approach the Theme Building from the east along Center Way, the central axis between the Theme Building and the former Airport Traffic Control Tower (ATCT), and would curve around the north side of the Theme Building before continuing west toward the Tom Bradley International Terminal (TBIT). The APM guideway would be approximately 70 feet above ground around the Theme Building, supported on concrete columns. The proposed APM train cars would be approximately 42 feet long, 9 feet wide, and 12 feet in height. The proposed APM trains would include up to 5 cars and would operate 24 hours a day, 7 days per week. During peak periods of operation, operating headway intervals (time between trains at a given station) would be approximately 2 minutes. A proposed new elevated passenger walkway, connecting the APM to Terminals 2 and 6, would angle around the west side of the Theme Building just below the level of the guideway.

Because the Proposed Action Alternative would build new structures immediately adjacent to the Theme Building, its immediate surroundings and context would be altered. In its Section 106 evaluation detailed in Section 5.5, the FAA determined that the APM guideway and pedestrian walkways proposed to be constructed in close proximity to the Theme Building would alter the physical setting and would partially obscure unique features of the Theme Building's architectural design as well as its original function from certain perspectives, which would adversely affect the Theme Building (see letter from FAA to SHPO date March 20, 2017 in **Appendix H**). As stated above in Section 5.3.2, a constructive use of a resource may occur when a proposed action affects the resource by means of noise, air pollution, water pollution, or other impacts; dissipates its aesthetic value; harms its wildlife; or restricts its access, thereby taking the resource in a practical sense. However, as discussed in Section 5.5.3.2, the Theme Building would remain physically intact in its original location and its unique architectural design would remain discernible from a number of vantage points. The Theme Building is eligible for listing on the National Register due to its architectural significance, which would not be affected by the Proposed Action Alternative; the Theme Building would not experience a significant adverse effect to its architectural significance. Therefore, the Proposed Action Alternative would not result in a constructive use to this resource. Because there would not be a physical or constructive use of the Theme Building from the Proposed Action Alternative, a Section 4(f) evaluation is not required.

Based on the location of the other Section 4(f) resources in comparison to the Proposed Action Alternative, there would be no physical or constructive use of any Section 4(f) properties during construction of the Proposed Action Alternative.

## 5.3.4 OPERATIONAL IMPACTS

### 5.3.4.1 No Action Alternative

As noted above, landside improvements under the No Action Alternative would be located within or adjacent to the existing property boundaries of LAX. Within this area, there are no existing or proposed parks, recreational areas, or publicly owned wildlife or waterfowl refuges. Additionally, the No Action Alternative would not adversely affect any of the historic properties identified in Section 4.7.2.1.

### 5.3.4.2 Proposed Action Alternative

The only potential impacts to Section 4(f) properties that would occur from operation of the Proposed Action Alternative would be to historic resources, discussed below. No other impacts from noise, air quality, traffic, etc. that could cause a substantial impairment to Section 4(f) resources are anticipated from operation of the Proposed Action Alternative.

Operations of the Proposed Action Alternative, specifically the APM and pedestrian walkway components of the Proposed Action Alternative, would not result in an adverse effect to the physical setting of the Theme Building. As discussed in Section 5.5.3.2, the Theme Building would remain physically intact in its original location and its unique architectural design would remain discernible. As stated above in Section 5.3.2, a constructive use of a resource may occur when a proposed action affects the resource by means of noise, air pollution, water pollution, or other impacts; dissipates its aesthetic value; harms its wildlife; or restricts its access, thereby taking the resource in a practical sense. The Theme Building is located within the center of the CTA surrounded by parking garages and airport roadways. Because of its location in the center of the Airport, it experiences high levels of ambient noise from vehicles and aircraft takeoffs and landings. The estimated ambient noise at the Theme Building is 76.3 dB(A). The APM would generate noise levels of approximately 64.3 dB(A) in the proximity of the Theme Building (see Section 5.8), which would cause a slight increase in noise of 0.3 dB(A). As quiet is not an element of the original setting as a Jet Age structure and none of the Theme Building's uses has quiet as a critical attribute (the Theme Building is located in the middle of the CTA and is affected by both vehicle traffic and aircraft noise), audible changes related to the operation of the APM trains would not affect the setting (see Section 5.5.4.2). Additionally, although new visual elements would be introduced in proximity to the Theme Building, as discussed in Section 5.5.4.2, these new visual elements would not result in a constructive use of the resource. Thus, the Theme Building would not experience a significant adverse effect to its architectural significance and therefore, the Proposed Action Alternative would not result in a physical or constructive use of this resource.

There are no existing or proposed parks, recreational areas, or publicly owned wildlife or waterfowl refuges located within the Proposed Project Area. Based on the distance from the Proposed Project Area to any Section 4(f) resource, it is not expected that operations of the Proposed Action Alternative would result in significant adverse air quality, noise, hazardous materials and waste, or water resource impacts to Section 4(f) properties when compared to the No Action Alternative. Therefore, no significant impacts to Section 4(f) properties would occur under the Proposed Action Alternative when compared to the No Action Alternative.

### 5.3.5 MITIGATION MEASURES

As indicated in Sections 5.3.3 and 5.3.4, impacts on Section 4(f) resources with the implementation of the Proposed Action Alternative would not be significant when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.4 Hazardous Materials, Solid Waste, and Pollution Prevention

### 5.4.1 METHODOLOGY

The Proposed Action Alternative and the No Action Alternative were evaluated for the potential to result in impacts associated with the generation, use and/or disposal of hazardous materials and municipal solid waste. Measures to prevent pollution were also identified. To analyze the potential impact of hazardous materials, the Proposed Project Area was assessed and existing and proposed future uses were evaluated. To identify the potential for impacts, the Proposed Action Alternative and No Action Alternative were reviewed to determine whether either would:

- Violate hazardous waste or solid waste management laws and regulations;
- Affect a contaminated site;
- Produce an appreciably different quantity or type of hazardous waste;
- Produce an appreciably different quantity or type of solid waste that would exceed local capacity; or
- Adversely affect human health and the environment.

A Hazardous Materials Assessment (HMA) for the Proposed Project Area was conducted by Ninyo & Moore in October 2015 to identify contaminated or potentially contaminated areas and other potential hazardous materials issues, as included as **Appendix G**.[16]

The findings of these evaluations were compared to the appropriate regulatory guidelines, factors considered in evaluating the context and intensity of potential environmental impacts, and other appropriate criteria. These include the federal, state, and local regulations discussed in Section 4.6. Relevant safeguards and precautions, and pollution prevention, that would be undertaken to avoid or minimize potential environmental impacts associated with hazardous materials and/or environmental contamination during the construction and operational phases of the Proposed Action Alternative were also evaluated.

The No Action Alternative and the Proposed Action Alternative were also evaluated for the potential to result in impacts associated with the generation and/or disposal of municipal solid waste. Specifically, the evaluation included municipal solid waste impacts from construction and demolition activities. The potential

[16] An addendum to the HMA was prepared in June 2016 to provide updated information regarding two of the areas identified as contaminated. This addendum is also included in Appendix G.

for the temporary generation of solid wastes from construction and demolition activities was analyzed based on the type of construction activities that would occur during implementation of the Proposed Action Alternative.

## 5.4.2 SIGNIFICANCE THRESHOLDS

The FAA has not established a significance threshold for hazardous materials, solid waste, or pollution prevention.

## 5.4.3 CONSTRUCTION IMPACTS

### 5.4.3.1 No Action Alternative

#### 5.4.3.1.1 Hazardous Materials

It is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Any improvements undertaken by private parking operators or rental car agencies under the No Action Alternative would involve hazardous materials (i.e., fuel, waste oil, solvents, paint, and other hydrocarbon-based products) in quantities that are typical in the construction industry. Contractors would be required to store, label, and dispose of these materials in accordance with federal, state, and local regulations. The contractors would also be responsible for reporting any discharges of hazardous materials or other similar substances in amounts above reportable quantities. However, as these actions would be accomplished off-Airport and would not be under either FAA's or LAWA's jurisdiction, it is assumed that they would not impact hazardous materials, affect a contaminated site, provide an appreciably different quantity or type of hazardous waste, or adversely affect human health and the environment.

#### 5.4.3.1.2 Solid Waste

It is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Solid waste generated from construction and demolition would be would be disposed of in accordance with all applicable federal, state, and local laws and regulations, including Los Angeles City Ordinance No. 181519, which requires that construction and demolition waste generated within the City of Los Angeles be taken to a City-certified construction demolition waste processing facility. It is not anticipated that the No Action Alternative would produce an appreciably different quantity or type of solid waste that would exceed local capacity.

#### 5.4.3.1.3 Pollution Prevention

The use of hazardous materials during construction would be in quantities that are typical of the construction industry. The No Action Alternative would include expansion of private parking operators and rental car facilities that are expected to expand based on the projected passenger growth with or without the Proposed Action Alternative. The demolition of buildings that have potential to contain asbestos-containing materials

(ACMs) or lead-based paint (LBP) may occur. As the No Action Alternative avoids construction of any of the proposed Project components, demolition or excavation activities would be limited to the removal of the remaining residential uses in Belford and Manchester Square under LAWA's Aircraft Noise Mitigation Program (ANMP) and for the construction of parking and rental car facilities (see Figure 4-9).

### 5.4.3.2 Proposed Action Alternative

#### 5.4.3.2.1 Hazardous Materials

Construction of the Proposed Action Alternative would involve hazardous materials typical to construction, including gasoline, motor oils, and other similar materials. Acutely hazardous materials[17] may be used in limited quantities during construction of the Proposed Action Alternative. All potentially hazardous construction materials would be used and stored in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. Any risk associated with transport, use, or disposal of these materials would be minimized through compliance with these standards and regulations. Emissions from such materials would be minimal and localized to the specific Proposed Action Alternative construction site and any potential impacts would not be significant when compared to the No Action Alternative.

Project components that pose the potential for construction workers to encounter contamination during construction include the ITF West, APM Maintenance and Storage Facility (MSF), ITF East, CONRAC, roadway removal, and new and redesigned roadways because they would entail excavation in areas of known or potential soil and/or groundwater contamination. In addition, it is possible that during construction activities, previously unidentified soil and/or perched groundwater contamination could be encountered. However, exposure of construction workers to contaminated materials would be minimized by implementing the measures required by OSHA 29 CFR Section 1926.65 and CalOSHA standards under Title 8, CCR Section 3203 and 29 CFR 1910.1200. Compliance with these regulations would establish exposure limits for workers, require protective equipment or other protective measures when warranted, and require employers to provide a written health and safety program, worker training, emergency response training, and medical surveillance. Compliance would ensure that construction workers are appropriately trained for the identification of contaminated soils and that contaminated materials encountered or generated during construction are properly stored, remediated, and disposed. Impacts associated with exposure of construction workers to hazardous materials in excess of OSHA and CalOSHA permissible exposure limits would not be significant when compared to the No Action Alternative.

Construction of the Proposed Action Alternative may interfere with ongoing remediation at the Allied-Signal/Park One/Honeywell site and the Budget Rent-A-Car site as shown on Figure 4-4, in the event that remediation is still in operation at that time. Additionally, construction of the ITF West may interfere with ongoing remediation at the National Car Rental site. Remediation activities will continue at these sites until the Regional Water Quality Control Board (RWQCB) determines remediation targets have been met and the

[17] 8 CCR Appendix A, 8 CA ADC Appendix A to Section 5189 - List of Acutely Hazardous Chemicals, Toxics and Reactives (Mandatory).

sites can be closed. The timeframe for the completion of remediation is unknown. Several other sites of concern have the regulatory status of "open—site assessment" and may require remediation in the future. Construction of the APM MSF may interfere with remediation at the National Car Sales site, if remediation is required and remediation is still in operation at the time the facility is constructed.

Prior to initiating construction, LAWA or its contractor would conduct a pre-construction evaluation to determine if the proposed construction would interfere with existing soil or groundwater remediation efforts. For sites currently on LAX property, LAWA or its contractor would work with tenants to ensure that, to the extent possible, remediation is completed prior to the construction. For properties to be acquired, LAWA or its contractor would evaluate the status of all existing soil and groundwater remediation efforts. As part of this evaluation, LAWA or its contractor would assess the projected time required to complete the remediation activities and would coordinate with the land owner and the agency with jurisdiction to ensure that remediation is completed prior to scheduled demolition and construction activities, if possible.

If remediation must be interrupted to allow for construction, LAWA or its contractor would notify and obtain approval from the regulatory agency with jurisdiction, as required, and would evaluate whether new or increased monitoring would be necessary. If it is determined that contamination has migrated during construction, temporary measures would be taken to stop the migration. As soon as practicable following completion of construction in the area, remediation would be reinstated, if required by the RWQCB or another agency with jurisdiction. In such cases, LAWA or its contractor would coordinate the design of project and the re-design of the remediation systems to ensure that they are compatible and to ensure that the proposed remediation system is comparable to the system originally in place. If it is determined during the pre-construction evaluation that construction would preclude reinstatement of the remediation program, LAWA or its contractor would obtain approval to initiate construction from the agency with jurisdiction.

While the Proposed Action Alternative has the potential to interfere with the cleanup of sites undergoing remediation, LAWA would take steps, as outlined above, to ensure that ongoing remediation efforts are minimally affected. Therefore, impacts would not be significant when compared to the No Action Alternative.

#### 5.4.3.2.2 Solid Waste

Construction of the Proposed Action Alternative would require grading, excavation and demolition of existing infrastructure (such as existing pavement and utility lines), parking garages, buildings, a hangar complex, and the LAX City Bus Center. Solid waste, including construction and demolition waste, would be recycled to the extent practical, in conjunction with LAWA's comprehensive, facility-wide recycling program. The remaining debris would be disposed of in accordance with all applicable federal, state, and local laws and regulations, including Los Angeles City Ordinance No. 181519. Construction of the Proposed Action Alternative would not produce an appreciably different quantity or type of solid waste that would exceed local capacity and as such no significant impacts to solid waste would occur when compared to the No Action Alternative.

### 5.4.3.2.3 Pollution Prevention

The use of hazardous materials during construction of the Proposed Action Alternative would be in quantities that are typical of the construction industry. In accordance with the National Pollutant Discharge Elimination System (NPDES) Permit and General Permit, a site-specific construction Stormwater Pollution Prevention Plan (SWPPP) would be prepared for construction activities associated with the Proposed Action Alternative, with the goal of identifying the sources of sediment and other pollutants that affect the quality of stormwater discharges and describe and ensure the implementation of Best Management Practices (BMPs) to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges. Overall, BMPs identified in the site-specific SWPPP would ensure that construction of the Proposed Action Alternative would not affect stormwater.

Based on the age of some on-site buildings (built prior to 1980), there is a potential for the exposure of ACMs and LBP on the Proposed Action Alternative construction sites. As shown in Table 4-6, there are six known hazardous materials sites in the Proposed Project Area that may result in the exposure of ACMs and LBP during the construction of the APM guideway, the ITF East, and various roadway improvements. In accordance with LAWA standard practices for development projects at LAX and with City requirements, prior to the issuance of any permit for the demolition or alteration of any existing structure(s), LAWA would provide a letter to the Los Angeles Department of Building and Safety from a qualified asbestos abatement consultant indicating that no ACMs are present in the building. If ACMs are found to be present, they would be abated in compliance with SCAQMD Rule 1403 as well as all other applicable state and federal rules and regulations regarding the handling and disposal of hazardous materials. In addition, prior to issuance of any permit for the demolition or alteration of any existing structure(s), a LBP survey would be performed following protocols of the Los Angeles Department of Building and Safety designed to detect LBP. Should LBP materials be identified, standard handling and disposal practices would be implemented pursuant to OSHA and CalOSHA regulations to limit worker and environmental risks.

With implementation of the Proposed Action Alternative, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance during construction would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As noted above, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and cleanup requirements. Additionally, LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction* would ensure specific procedures for handling hazardous materials, identifying risks and monitoring site conditions, and implementing BMPs and spill prevention and control measures to prevent spills, as well as emergency response procedures and notification requirements in the event of a spill, are adhered to. Compliance with applicable regulations would ensure that spills and releases would not create a hazard to the public or the environment, and would not result in the potential contamination of soil or groundwater. Therefore, impacts associated with contamination of soil or groundwater due to spill or release would not be significant when compared to the No Action Alternative.

Construction of the Proposed Action Alternative would adhere to all federal, state, and local regulations to reduce impacts associated with the unauthorized and uncontrolled release of a hazardous material, including pollutants in stormwater discharge. Therefore, the Proposed Action Alternative would not adversely affect human health or the environment as a result of pollution.

## 5.4.4 OPERATIONAL IMPACTS

### 5.4.4.1 No Action Alternative

#### 5.4.4.1.1 Hazardous Materials

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur and existing land use and operations would continue. It is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would operate as they do today, which would involve the same types of hazardous materials that exist at their sites today.

#### 5.4.4.1.2 Solid Waste

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur and existing land use and operations would continue. It is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. As discussed in Section 4.6.2.2, sufficient regional disposal capacity has been identified for municipal solid waste. The No Action Alternative would not produce an appreciably different quantity or type of solid waste that would exceed local capacity.

#### 5.4.4.1.3 Pollution Prevention

The No Action Alternative would include expansion of private parking operators and rental car facilities that are expected to expand based on the projected passenger growth with or without the LAX Landside Access Modernization Program. Stormwater management practices under the No Action Alternative are anticipated to be consistent with all applicable regulations and rules. Additionally, as previously discussed, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and cleanup requirements. Compliance with applicable regulations would ensure that spills and releases would not create a hazard to the public or the environment.

### 5.4.4.2 Proposed Action Alternative

#### 5.4.4.2.1 Hazardous Materials

Operation of the Proposed Action Alternative would include transportation and airport-related support uses typical of the surrounding area. The types and amounts of hazardous materials associated with routine, day-

to-day operation of transportation and airport-related uses would include typical cleaning chemicals, vehicle fuel, oils, lubricants, building maintenance materials and chemicals, and landscaping materials and chemicals.

Operation of the ITF East and ITF West would be consistent with a ground transportation system consisting of private vehicles, buses, and shuttles. Hazardous materials that would occur within the ITF sites would include fuels and other petroleum-based substances associated with vehicle operations. Components of the APM system include the APM MSF and three to four traction power substations. In order to support the operations and maintenance of the APM operating system, limited quantities of hazardous materials, such as oils, lubricants, paints, and other petroleum-based substances would be used within the APM MSF. The traction power substations would house equipment such as transformers, rectifiers, cabling, and switchgear. Operation of the CONRAC would involve the use and storage of hazardous materials, such as gasoline, oils, lubricants, paints, and other petroleum-based substances. The CONRAC would also consist of facilities for multi-level fueling, washing, and vehicle maintenance, which would include approximately 60 fuel nozzles per floor, for an estimated total of 180 fuel fueling positions and nozzles. The use and storage of these hazardous materials and equipment would be in accordance with manufacturers' instructions and handled in compliance with applicable standards and regulations. The Proposed Action Alternative would not significantly impact hazardous materials when compared to the No Action Alternative.

#### 5.4.4.2.2 Solid Waste

Operations of the Proposed Action Alternative is anticipated to result in solid waste generation that would be similar to that as presented under the No Action Alternative and that could increase over time proportionately to the increase in passenger numbers served at LAX, expected to occur with or without the LAX Landside Access Modernization Program. As discussed in Section 4.6.2.2, sufficient regional disposal capacity has been identified for municipal solid waste. Solid waste would be recycled to the extent practical, and the remaining waste would be disposed of in accordance with all applicable federal, state, and local laws and regulations. The operation of the Proposed Action Alternative would not produce an appreciably different quantity or type of solid waste that would exceed local capacity and impacts would not be significant when compared to the No Action Alternative.

#### 5.4.4.2.3 Pollution Prevention

Operations of the Proposed Action Alternative would utilize BMPs identified in the Airport's SWPPP for industrial activities to prevent pollutants in stormwater discharge. Stormwater management practices under the Proposed Action Alternative would be consistent with all applicable regulations and rules. With implementation of the Proposed Action Alternative, an increase in hazardous materials use and hazardous waste generation during routine fueling and maintenance of ground transportation vehicles, including private vehicles, buses, and shuttles, and the APM, would increase the chances of a spill or release of substances that could result in contamination of soil or groundwater. As previously discussed, the handling and storage of hazardous substances are stringently regulated, as are releases of hazardous materials, including emergency response and cleanup requirements. Compliance with applicable regulations would ensure that spills and

releases would not create a hazard to the public or the environment. The Proposed Action Alternative would not result in significant pollution impacts when compared to the No Action Alternative.

### 5.4.5 MITIGATION MEASURES

As indicated in Sections 5.4.3 and 5.4.4, impacts on hazardous materials, solid waste and pollution prevention from implementation of the Proposed Action Alternative would not be significant when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.5 Historic, Architectural, Archaeological, and Cultural Resources

### 5.5.1 METHODOLOGY

A historic resources assessment was performed between February 2015 and December 2015 by Historic Resources Group (HRG) personnel who meet the Secretary of the Interior's Professional Qualification Standards in the disciplines of architectural history and history (see **Appendix H**). Section 4.7.2 discusses the surveys, record searches, and correspondence undertaken to identify historic, architectural, archaeological, and cultural resources within the Proposed Project Area.

### 5.5.2 SIGNIFICANCE THRESHOLDS

The FAA has not established a positive significance threshold for historic, architectural, archaeological, and cultural resources. Consistent with Section 106 regulations, the FAA's Section 106 handbook indicates that FAA would determine that the effect of an undertaking is *adverse* if it alters any of the characteristics that qualify the historic property for inclusion in the National Register in a manner that diminishes the integrity of the property's location, design, setting, materials, workmanship, feeling, or association.[18] A finding of adverse effect on a historic property is appropriate when the undertaking would:

- physically destroy or damage the property;
- alter the property in a way that is inconsistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (see 36 CFR part 68);
- remove the property from its historic location;
- change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance;
- introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features (including its setting, provided the setting has been identified as a contributing factor to the property's historical significance); or

[18] Title 36 Code of Federal Regulations (CFR) Part 800, *Protection of Historic Properties*, incorporating amendments effective August 5, 2004.

- result in neglect of a property which would cause its deterioration or the transfer, sale, or lease of a property out of Federal ownership or control without adequate protection to ensure the long-term preservation of the property's historic significance.[19]

If the potential for an adverse effect on a cultural resource is identified, the effects of the action are evaluated and determined through the Section 106 consultation process with the State Historic Preservation Officer (SHPO) and Tribal Historic Preservation Officers (THPOs).

A finding of adverse effect is not a significance threshold under NEPA. To determine significance for NEPA, the level of impact, along with committed mitigation of adverse effects needs to be considered. Typically, the resource is evaluated to determine the features that contribute to its significance, the context and intensity of potential effects on those features, and what mitigation is proposed to minimize those effects. The FAA then makes the determination on the level of impact under NEPA.

## 5.5.3 CONSTRUCTION IMPACTS

### 5.5.3.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Development of these components would likely require the need for earthwork including excavation and grading.

#### 5.5.3.1.1 Historic and Architectural Resources

Construction of off-Airport parking and rental car facilities would likely be in the vicinity of existing parking and rental car facilities and not likely to result in an impact to any historic resources.

#### 5.5.3.1.2 Archaeological Resources

While discovery of archaeological resources in artificial fill deposits within the APE is unlikely, proposed excavations that would occur below the fill levels could impact intact archaeological resources that have not been disturbed or displaced by previous development. Since the No Action Alternative would include excavations of varying depths across portions of the APE, including excavations at depths where native soils may be encountered, the No Action Alternative could impact previously unknown buried archaeological resources that fall within the definition of historic resources or unique archeological resources. Construction of off-Airport parking and rental car facilities would be conducted by private companies. However, as these actions would be accomplished off-Airport and would not be under either FAA's or LAWA's jurisdiction, impacts to archaeological resources is unknown.

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[19] U.S. Department of Transportation, Federal Aviation Administration, *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act,* June 2015.

#### 5.5.3.1.3 Cultural Resources

Construction of the No Action Alternative would occur within a highly urbanized area that has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. While No Action Alternative construction activities would not likely occur to the depths below previously disturbed soils, the potential would still exist for excavation at depths where native soils would be encountered and unknown buried cultural resources exist. While discovery of human remains or cultural resources in artificial fill deposits within the APE is unlikely, potential excavations that would occur below the fill levels could impact intact human remains that have not been disturbed or displaced by previous development.

Private companies will be required to comply with guidance as to the treatment of any human remains that are encountered during construction excavations, including the procedures outlined in Section 7050.5(b) and (c) of the State Health and Safety Code, Section 5097.94(k) and (i) and Section 5097.98(a) and (b) of the Public Resources Code.

### 5.5.3.2 Proposed Action Alternative

#### 5.5.3.2.1 Historic and Architectural Resources

As a result of investigation, the following five properties were identified in Section 4.7.2.1 as properties eligible for federal listing:

- The Theme Building;
- Aircraft School Property;
- Tishman Airport Center Building;
- Airport Century Building; and
- Air Raid Siren No. 150.

Most of these properties would not be within areas impacted by construction or operation of components of the Proposed Action Alternative. However, the Theme Building is located in the vicinity of the proposed APM guideway and one of the pedestrian walkways of the Proposed Action Alternative.

Construction activities for the Proposed Action Alternative would involve excavation and grading in the vicinity of the Theme Building for construction of the APM Guideway structure. The proposed elevated APM guideway would approach the Theme Building from the east along Center Way, the central axis between the Theme Building and the former ATCT, and would curve around the north side of the Theme Building before continuing west toward TBIT. The APM guideway in this area would be approximately 70 feet above ground, supported on concrete columns. In accordance with the *LAX Design Guidelines*[20], the column support span for

[20] Los Angeles World Airports, *LAX Design Guidelines*, March 24, 2017.

the portion of the APM guideway within proximity to the Theme Building would have a distance of approximately 120 feet. A proposed new elevated passenger walkway, connecting the APM to Terminals 2 and 6, would angle around the west side of the Theme Building just below the level of the guideway.

Neither the APM guideway nor the passenger walkway would physically touch or physically alter the Theme Building. The APM guideway would be separated by approximately 43 feet at its closest point from the Theme Building. The passenger walkway would maintain approximately 20 feet of distance from the western leg of the Theme Building's parabolic arch oriented east-west (see **Figure 5-1**).

In accordance with 36 CFR § 800.5(a)(2) regulations, the Proposed Action Alternative would have an adverse effect on a historical resource if it would result in: a "change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance;" or "Introduction of visual, atmospheric or audible elements that diminish the integrity of the property's significant historic features;" or "change of the character of the property's use or of physical features within the property's setting that contribute to its historic significance."[21]

The Theme Building is historically significant for its unique architectural design distinguished by two intersecting parabolic arches supporting an observation deck with a cantilevered, circular restaurant space below. Positioned on axis with the ATCT at the geographic center of the CTA, the Theme Building was conceived as an alternative to the futuristic central building shown in early iterations of the 1957 master plan. Unlike the other buildings on the site, the Theme Building did not necessarily serve a critical airport function and therefore allowed for more freedom in its design. Designed in an Expressionistic style, featuring two intersecting parabolic arches rising 135 feet from the ground, the building served as a public restaurant, the employee commissary, and housed the central kitchen facilities servicing all satellite restaurants throughout the airport. The building also had an observation deck open to the public. Given its public use and futuristic design, the Theme Building eventually became the iconic symbol of the new Jet Age airport. The Theme Building was visible from any location within the CTA at the time of its construction and provided commanding views of the Airport from its observation deck and restaurant space.

In the intervening years, the construction of multi-level parking structures, elevated roadways and expanded terminal buildings within the CTA have obscured the central prominence of the Theme Building. Parking structures have long since replaced the majority of the flat expanse of surface parking that originally surrounded the Theme Building to the east and west. The upper deck of World Way has also obscured much of the direct visual connection between the Theme Building and the Terminal Buildings. Today, the Theme Building is only intermittently viewable from within the CTA. **Figures 5-2** through **5-5** provide a series of photographs of the Theme Building from different vantage points within the CTA. Figure 5-2 provides locational information for each photograph, while Figures 5-3, 5-4, and 5-5 show the Theme Building from north, west, and south vantage points. **Figures 5-6** and **5-7** provide views of the Airport from the restaurant level of the Theme Building (currently vacant) and from the observation deck.

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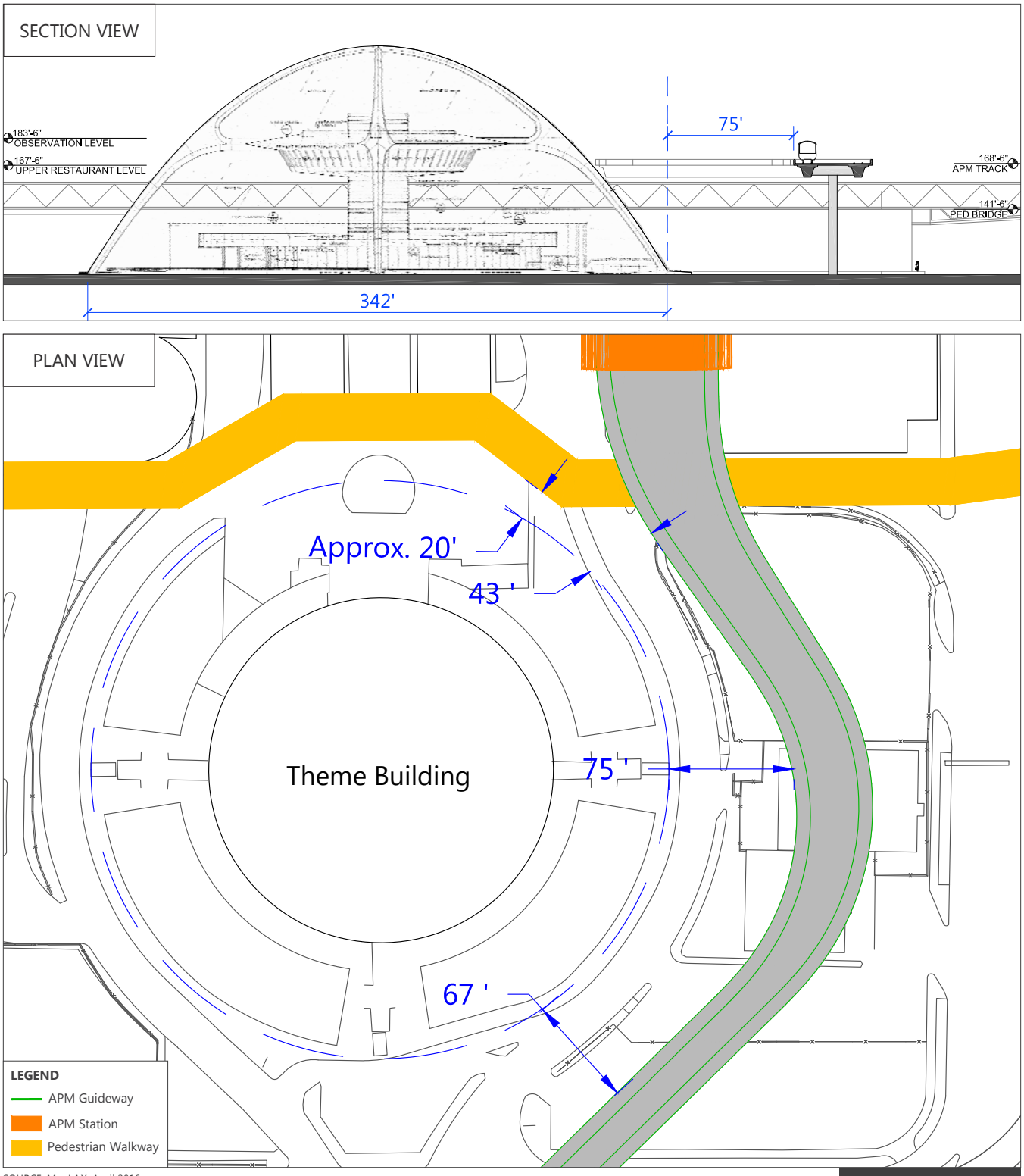
[21] Title 36 Code of Federal Regulations (CFR) Part 800, *Protection of Historic Properties*, incorporating amendments effective August 5, 2004.




SOURCE: MapLAX, April 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-1**

Proposed APM Guideway
Adjacent to Theme Building

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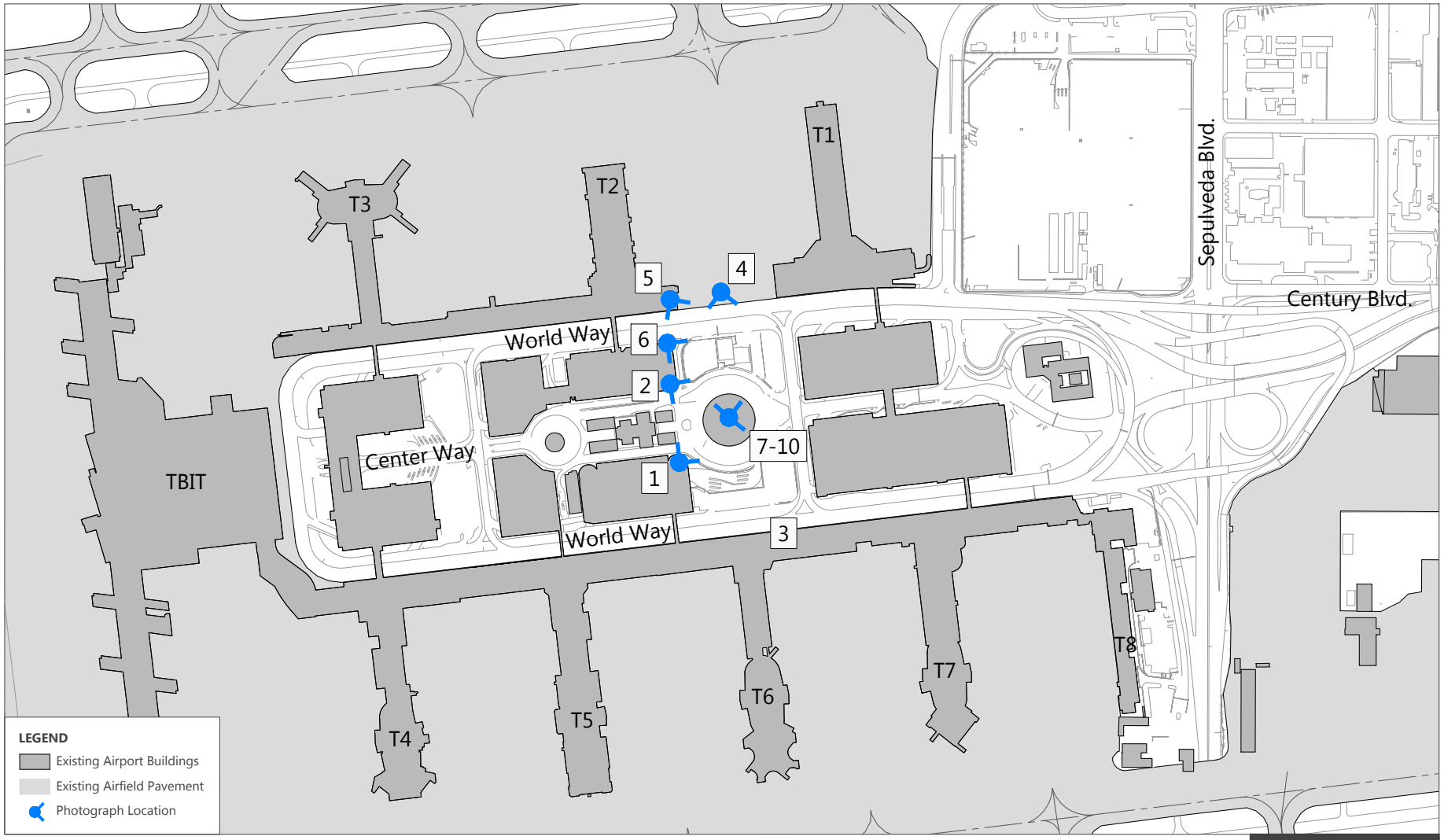
**[Preliminary Draft for Discussion Purposes Only]**




SOURCE: Ricondo & Associates, Inc., May 2017.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-2**

NORTH 0 600 ft.

## Photograph Locations

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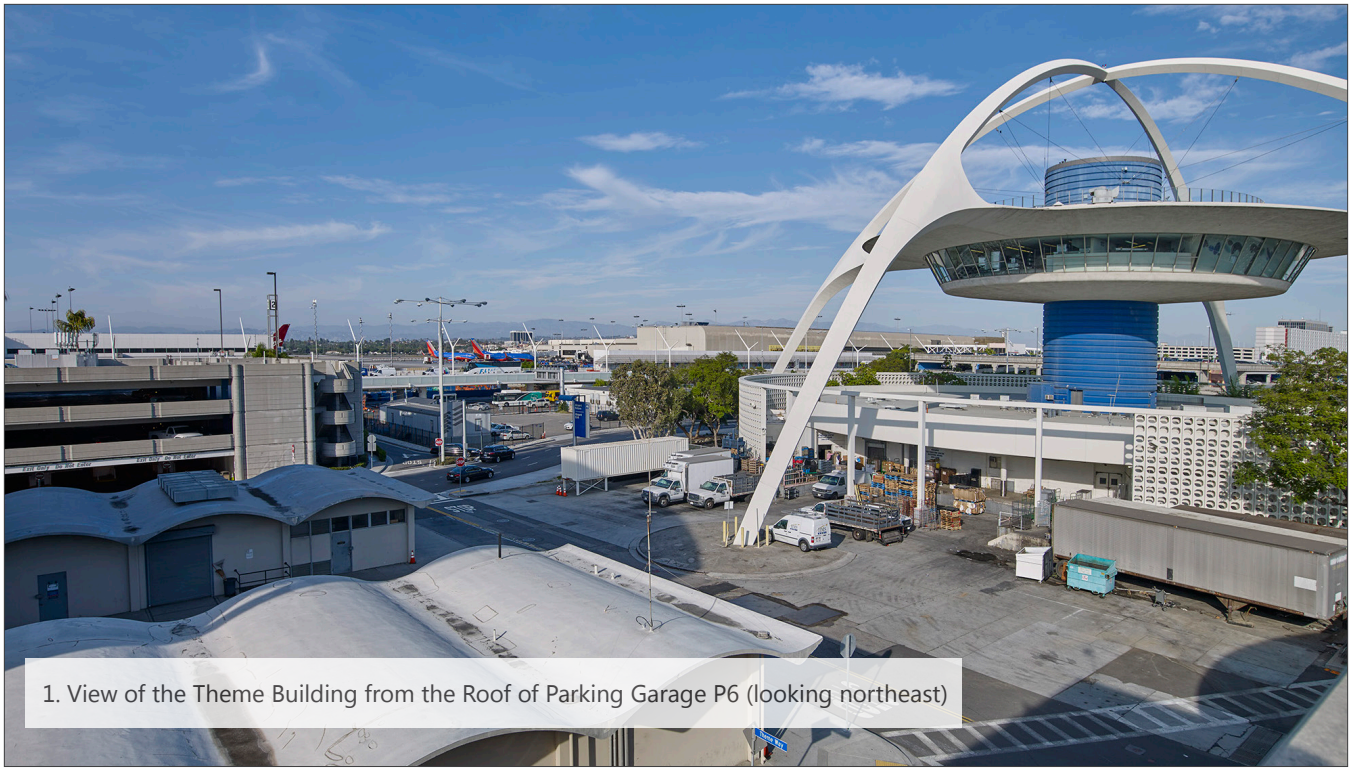

1. View of the Theme Building from the Roof of Parking Garage P6 (looking northeast)


2. View of the Theme Building from Roof of Parking Garage P2 (looking southeast)

SOURCE: Tavo Olmos, 2015.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-3**

Central Terminal Area Viewpoints
Photographs 1 and 2

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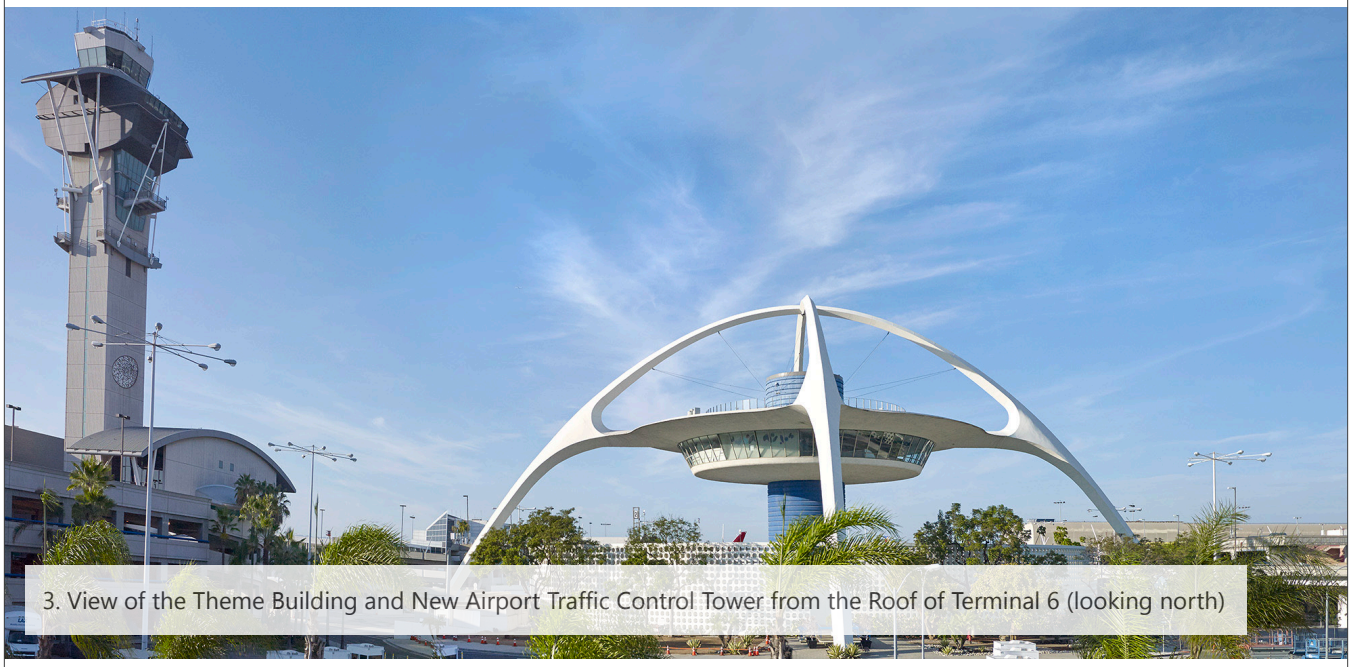

3. View of the Theme Building and New Airport Traffic Control Tower from the Roof of Terminal 6 (looking north)

4. View of the Theme Building and New Airport Traffic Control Tower from Upper Level World Way (looking south)

SOURCE: Tavo Olmos, 2015.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-4**

Central Terminal Area Viewpoints
Photographs 3 and 4

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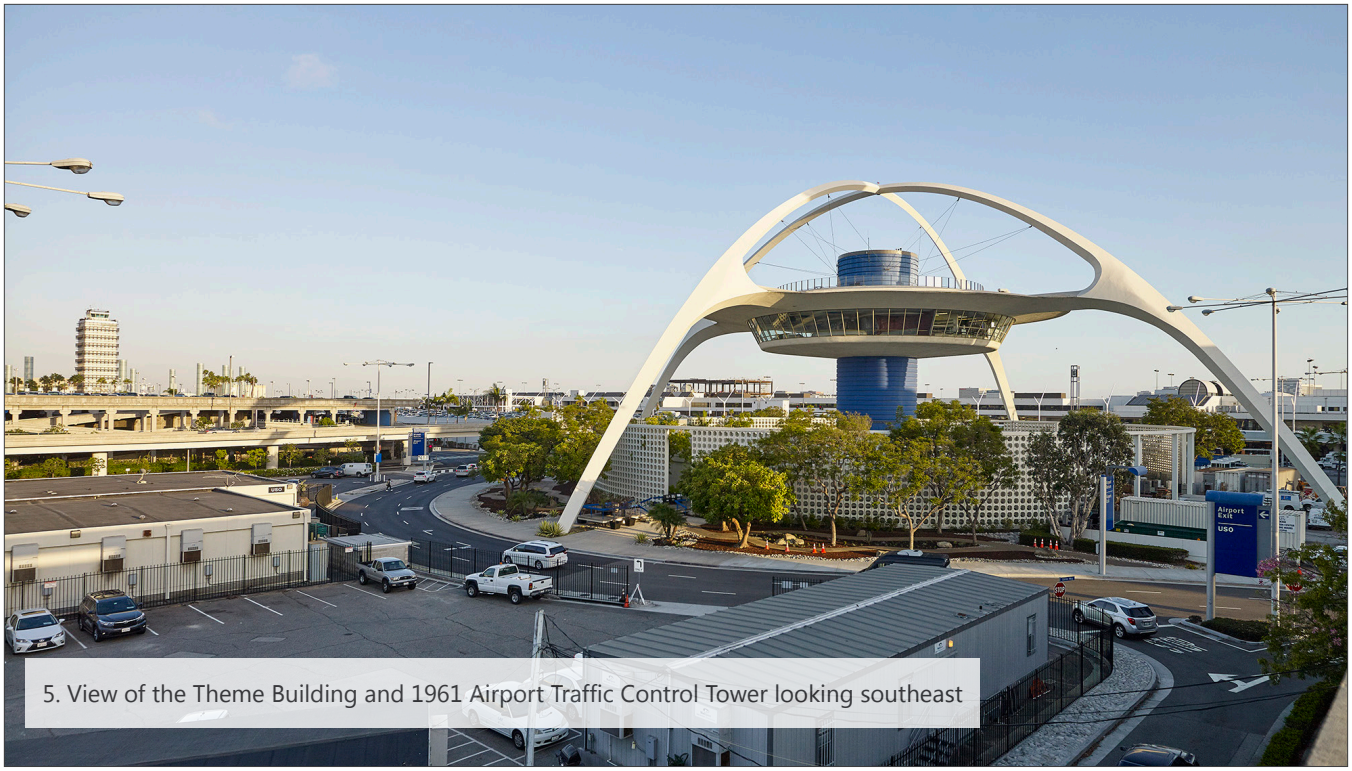
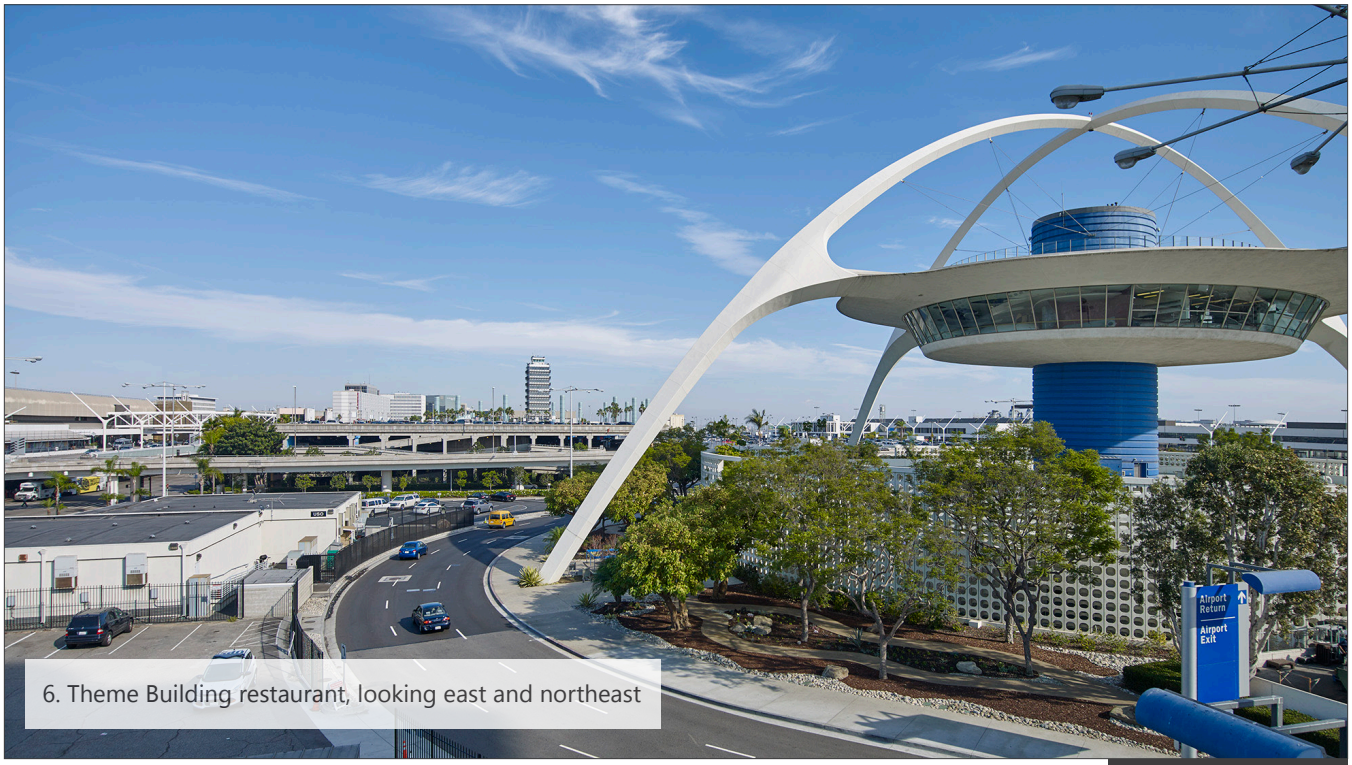



5. View of the Theme Building and 1961 Airport Traffic Control Tower looking southeast




6. Theme Building restaurant, looking east and northeast

SOURCE: Tavo Olmos, 2015.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-5**

Central Terminal Area Viewpoints
Photographs 5 and 6

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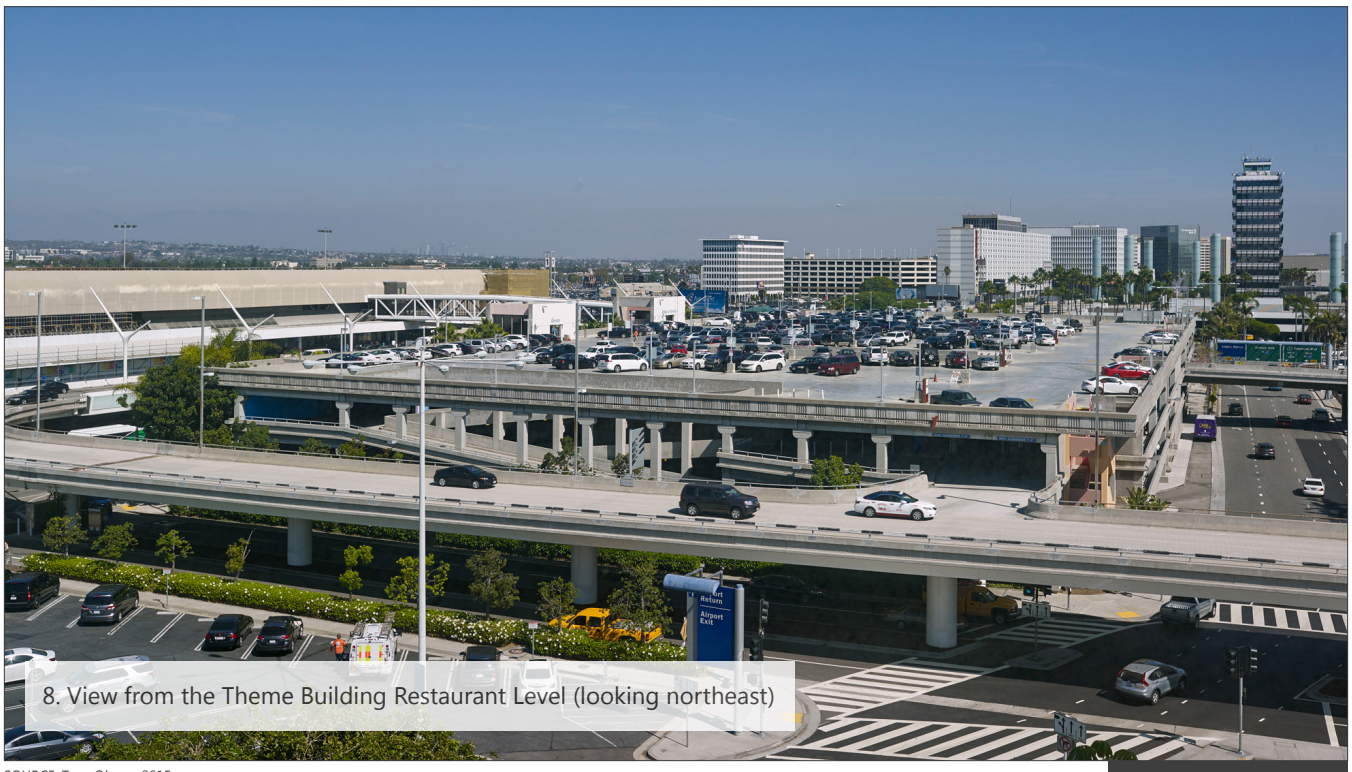


SOURCE: Tavo Olmos, 2015.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-6**

Central Terminal Area Viewpoints
Photographs 7 and 8

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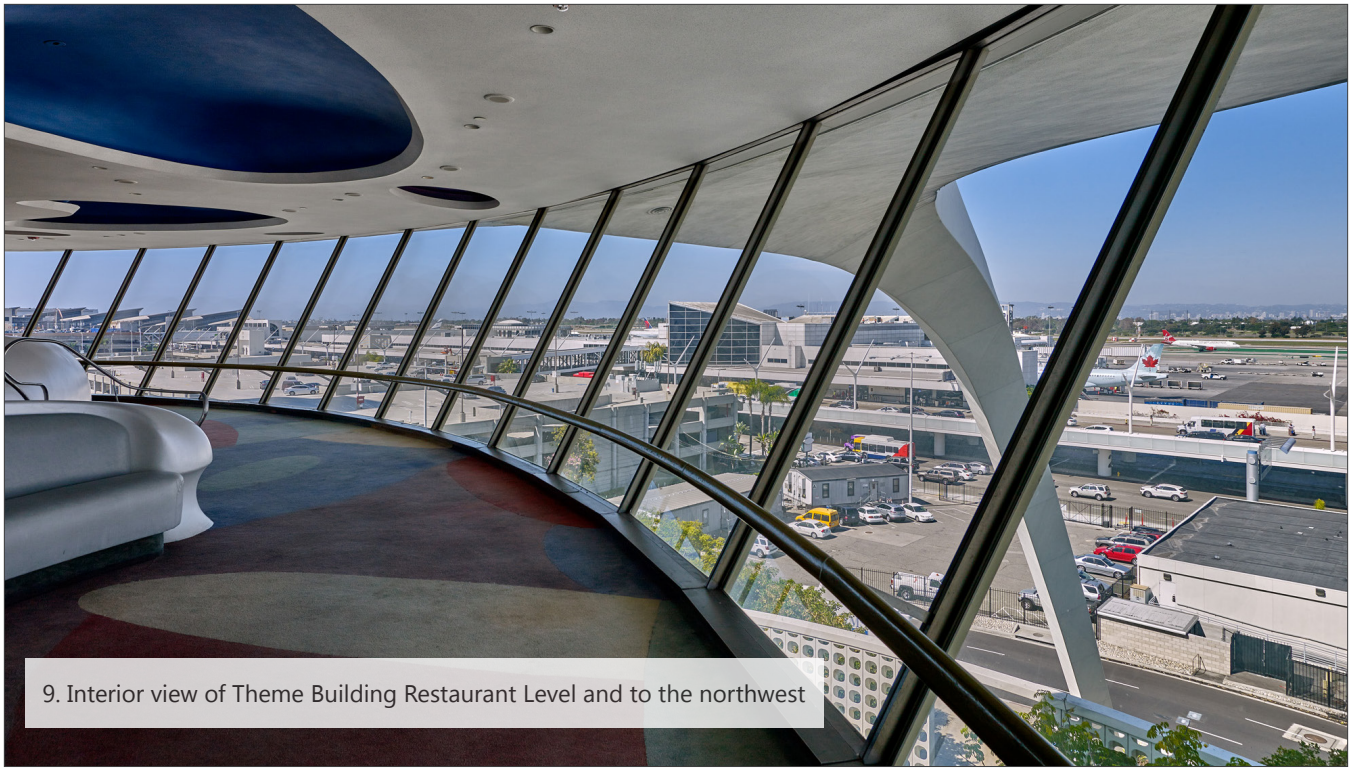


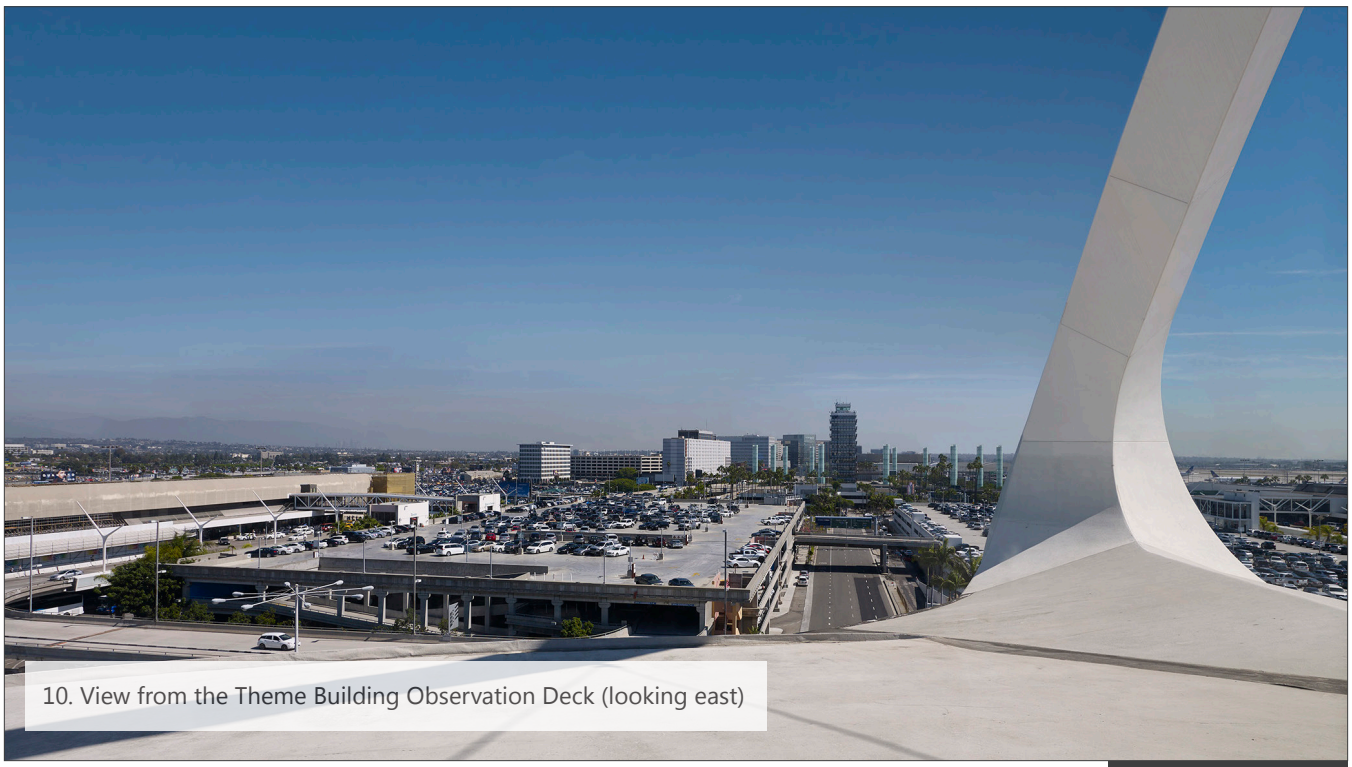


SOURCE: Tavo Olmos, 2015.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-7**

Central Terminal Area Viewpoints
Photographs 9 and 10

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Open surface parking remains to the immediate south of the Theme Building (see Photo 1 on Figure 5-3). With the exception of a single-story temporary building currently occupied by the United Service Organizations (USO), surface parking and open space also remains to the immediate north of the Theme Building (see Photo 5 on Figure 5-5). However, as shown on the photos, there are a number of competing features in close proximity to the Theme Building including parking garages, machine shops, the ATCT, the USO facility, and other pre-fabricated structures. These limited open areas are important features of the Theme Building setting that continue to convey some semblance of the flat, open surroundings of the Theme Building when it was originally constructed. Experiencing the Theme Building at ground level from the immediately adjacent open areas provides the closest approximation today of the Theme Building's original physical context. The remaining open space with access to pedestrians also allows for important views to the Theme Building from the northern portion of World Way looking south (see Photo 4 on Figure 5-4), and from the southern portion of World Way looking north (see Photo 3 on Figure 5-4).

The apex of the Theme Building's two arches, the restaurant space and observation deck continue to rise above the parking structures, elevated roadway, and terminal buildings that have been added to the CTA since its original construction. The 1961 ATCT also remains in place at the east end of the CTA, maintaining the axial east-west alignment of the Theme Building and the 1961 ATCT as originally constructed.

Due to the development of the Proposed Action Alternative APM guideway in the vicinity of the Theme Building, HRG conducted an integrity analysis to assess potential impacts. The Proposed Action Alternative would build new structures immediately adjacent to the Theme Building; therefore, its immediate surroundings would be altered. In order for this alteration to be considered adverse, however, it must be shown that the integrity and/or significance of the Theme Building would be diminished. The ability of a historic resource to convey its significance is called historic integrity. Historic integrity is defined as the "authenticity of a property's historic identity, evidenced by the survival of physical characteristics that existed during the property's historic period."[22] The NPS identifies seven aspects of integrity: *location, design, setting, materials, workmanship, feeling*, and *association*. An analysis of the Proposed Action Alternative and its potential effects to the Theme Building with respect to the seven aspects of historic integrity is provided below.

- *Location* is defined as "the place where the historic property was constructed or the place where the historic event occurred." The Proposed Action Alternative would not relocate the Theme Building or any of its component parts. The Theme Building would remain in the original place where it was constructed and would retain integrity of *location* after implementation of the Proposed Action Alternative.
- *Design* is defined as "the combination of elements that create the form, plan, space, structure, and style of a property." The Proposed Action Alternative, including the construction of the APM guideway

[22] U.S. Department of the Interior, National Park Service, National Register Bulletin 16A, *How to Complete the National Register Registration Form*, 1997.

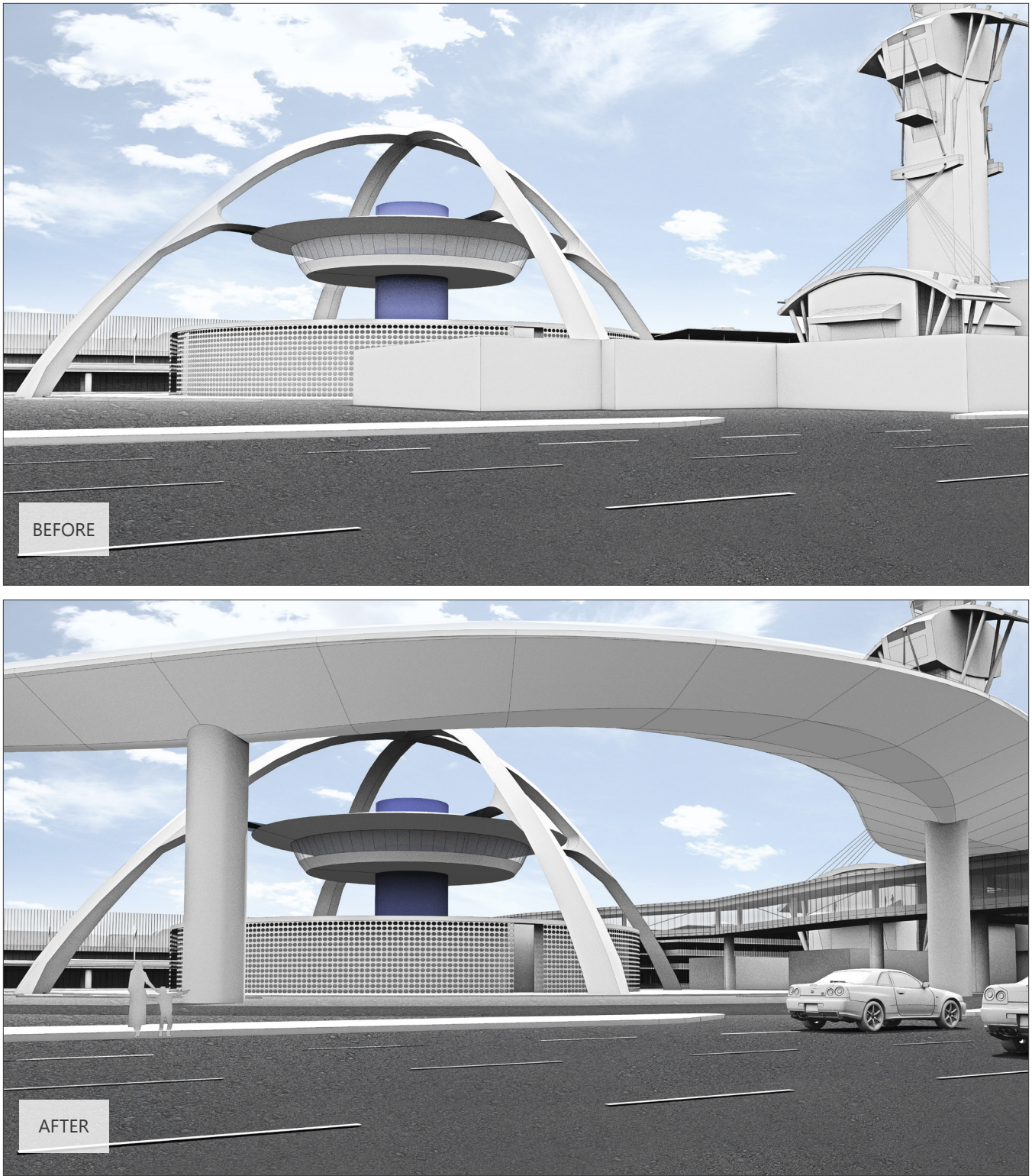
and elevated walkway adjacent to the Theme Building, would not result in any physical alteration of the Theme Building. The form, plan, space, structure and style of the Theme Building would remain intact and the Theme Building would retain integrity of *design* after implementation of the Proposed Action Alternative.

- *Setting* is defined as "the physical environment of a historic property." The proposed guideway and walkway would alter the physical environment of the Theme Building by constructing new structures to the immediate north, east and west. The APM guideway would occupy a portion of the surface parking lots located along the north side of the Theme Building, filling in a portion of the remaining surrounding flat expanse that originally defined the historic setting of the Theme Building. Construction of the elevated walkway would place a new structural element to the immediate west of the Theme Building.

  The APM guideway would be constructed within 43 feet of the Theme Building at its closest point. The elevated walkway would be approximately 20 feet from the Theme Building at its closest point. The APM guideway and walkway would further obscure and fragment views of the Theme Building from the east, north, and west, including views from the upper and lower levels of the north side of World Way after entering the CTA. Only portions of the Theme Building would be visible above and below the guideway and between the columns from the north side of the Theme Building (see **Figures 5-8** and **5-9**). Moreover, the superimposition of the horizontal and vertical elements of the guideway and its supporting concrete columns would obscure the expressive forms and composition of the Theme Building's parabolic arches, circular base, perforated screen wall, restaurant, and central circulation and utilities core.

  The heights of both structures would be approximately equal to the level of the Theme Building restaurant space. Views from the interior of the restaurant space, which was designed with canted glass walls to provide a 360-degree panorama of the surrounding airport, would be partially obstructed. The view from the restaurant space interior, and from the observation deck above, would be obstructed to the east, north, and west, leaving only the view south unimpeded.

  Because structures associated with the Proposed Action Alternative would be constructed within the parking lots that surround the Theme Building, and this flat expanse is an important component of the Theme Building setting, the integrity of the Theme Building *setting* after implementation of the Proposed Action Alternative would be adversely affected.




SOURCE: SOM, JULY 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-8**

Simulated View of Theme Building
from Terminal 1 Arrivals Level

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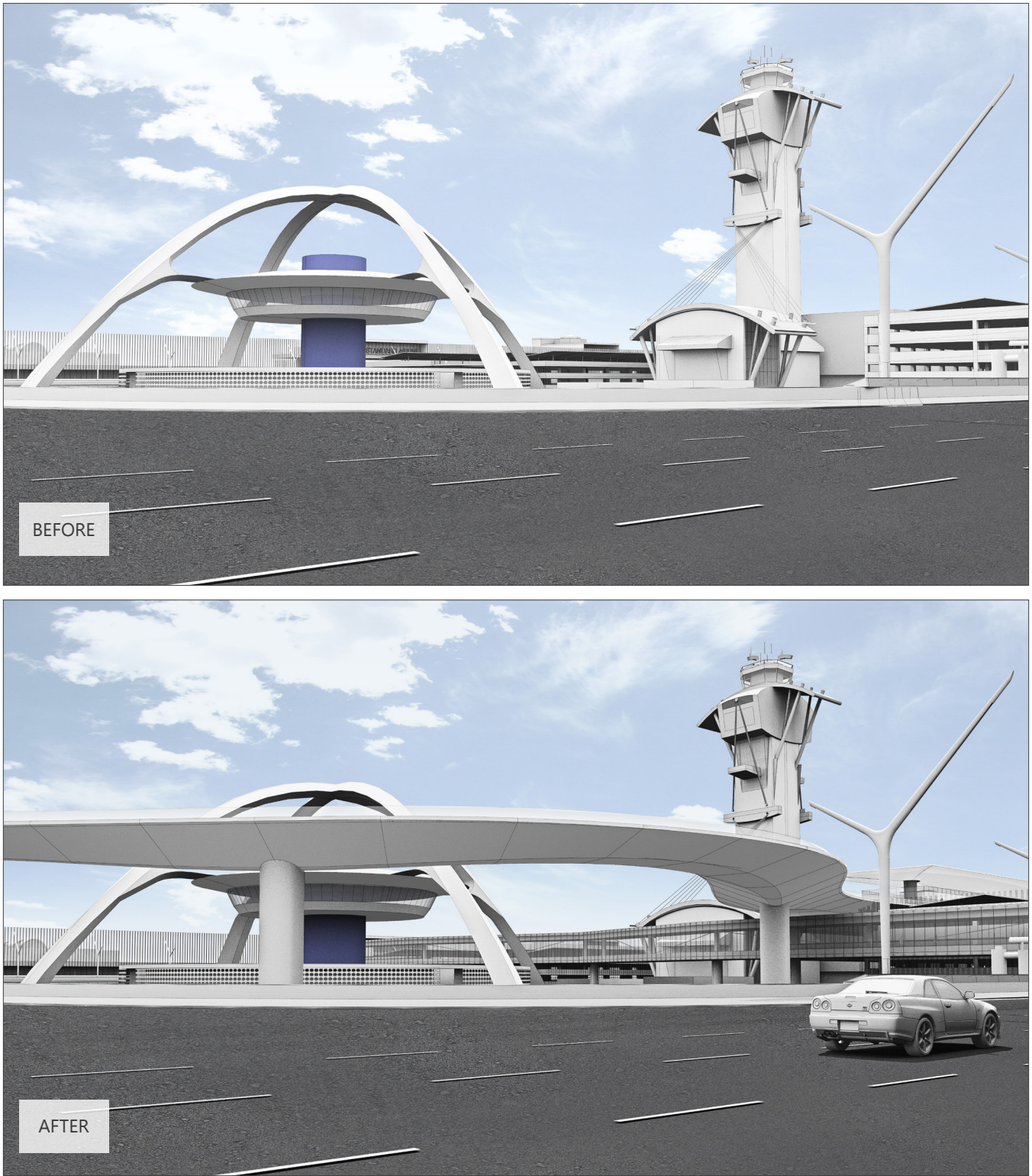


SOURCE: SOM, JULY 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-9**

Simulated View of Theme Building
from Terminal 2 Departures Level

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- *Materials* are defined as "the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property." The Proposed Action Alternative, including the construction of the APM guideway and elevated walkway adjacent to the Theme Building, would not result in any physical alteration of the Theme Building. All of the physical elements of the Theme Building would remain intact and the Theme Building would retain integrity of materials after implementation of the Proposed Action Alternative.
- *Workmanship* is defined as "the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory." The Proposed Action Alternative, including the construction of the APM guideway and elevated walkway adjacent to the Theme Building, would not result in any physical alteration of the Theme Building. All of the physical evidence of how materials were shaped and constructed to create the unique form, structure and style of the Theme Building would remain intact and the Theme Building would retain integrity of workmanship after implementation of the Proposed Action Alternative.
- *Feeling* is defined as "a property's expression of the aesthetic or historic sense of a particular period of time." Because the Proposed Action Alternative would alter the immediate surroundings of the Theme Building by constructing new structures currently occupied by surface parking, the expressive form and design of the Theme Building would be less discernible when viewed from the east, north and west. Its original function providing views from its restaurant level and observation deck would also be further reduced. For these reasons, integrity of feeling would be somewhat compromised. The Theme Building would, however, remain physically intact in its original location and its unique architectural form would continue to be discernible and understandable despite alteration to its setting. The Theme Building would remain as the iconic symbol of the Jet Age airport, and visitors would still have views of the Airport from both the restaurant level and observation deck. Although the APM would partially obstruct views, it would not detract from the overall feeling associated with the Jet Age and a Jet Age airport. Additionally, while the Proposed Action Alternative would add new visual elements in close proximity to the Theme Building, as evidenced by Figures 5-3 through 5-7, there are already a large number of structures and competing visual elements adjacent to the Theme Building. Thus, the Theme Building would retain integrity of feeling.
- *Association* is defined as "the direct link between an important historic event or person and a historic property." The Theme Building is historically significant under National Register Criterion C for its distinctive architecture and does not derive significance for its association with any persons or events. Therefore, integrity of association is not relevant to this analysis.

In summary, the Theme Building would retain integrity of *location*, *design*, *materials*, *workmanship* and *feeling* after implementation of the Proposed Action Alternative; however, integrity of *setting* would be compromised. For these reasons, the FAA determined that the APM guideway and the elevated walkway would result in an adverse effect to the Theme Building as defined by Section 106 (see **Appendix H**). FAA requested concurrence with this determination in a letter to the SHPO dated March 20, 2017. The SHPO issued a response, dated June 28, 2017 (see **Appendix H**), concurring with FAA's findings. The letter states that, "SHPO agrees with the FAA that a [*sic*] Memorandum of Understanding (MOA), in which mitigation measures are set out and roles and responsibilities for the implementation of these measures is clearly stated, is the

appropriate vehicle for the resolution of the Adverse Effect." FAA prepared a draft Memorandum of Agreement (MOA), which was provided to SHPO on March 20, 2017 (see **Appendix H**). On May 22, 2017, FAA contacted the Advisory Council on Historic Preservation requesting its participation on the Memorandum of Agreement (see **Appendix H**). On June 5, 2017, the ACHP declined by letter to participate.

Notwithstanding the adverse effect due to alterations of the setting, the Theme Building is significant under NRHP Criterion C for its architecture, and this significance is conveyed primarily through its plan, form, architecture and design features. It is through the direct experience of the building that its historic significance as a work of architecture is understood. According to NPS Guidance, a property significant under National Register Criterion C must retain most of the physical features that constitute the architectural style or construction techniques the property represents.[23] As discussed earlier, neither the APM guideway, nor the passenger walkway would physically touch the Theme Building. The Theme Building would not be physically altered by construction of the APM guideway or the elevated passenger walkway. All of the Theme Building's significant architectural features, including the symmetrically composed circular plan; crossed parabolic arches; observation deck with cantilevered, circular restaurant suspended below; and perforated concrete screen wall would remain.

Important aspects of the setting would remain intact as well. These include the surface parking area and sidewalks directly south of the Theme Building, which would continue to provide a sense of the original flat, open surroundings. As is true today, the Theme Building would remain intermittently viewable from within the CTA. Views to the Theme Building from the south side of World Way looking north would remain. Views of the Theme Building from the upper and lower levels of the north side of World Way after entering the CTA would also remain in a somewhat obscured form. In addition, the 1961 ATCT would remain in place on axis with the Theme Building. However, new views of the Theme Building from passengers utilizing the proposed APM and passenger walkways would be introduced.

According to NPS guidance, "to retain historic integrity a property would always possess several, and usually most, of the (seven) aspects" of integrity.[24] Because construction of the APM guideway and elevated walkway would not result in any physical alteration of the Theme Building, it would retain integrity of *location*, *design*, *materials*, *workmanship* and *feeling*, or five of the six relevant aspects of integrity. The Theme Building would remain physically intact in its original location and its unique architectural design would remain discernible and continue to convey its historical significance despite being partially obscured by the proposed new construction. For these reasons, the Theme Building would remain eligible for listing in the National Register after implementation of the Proposed Action Alternative.

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23 National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation, U.S Department of the Interior, National Park Service 1995.

24 National Register Bulletin 15, How to Apply the National Register Criteria for Evaluation, U.S Department of the Interior, National Park Service 1995.

#### 5.5.3.2.2 Archaeological Resources

The cultural resource records search indicated that no previously recorded archaeological resources (including historic or prehistoric archaeological resources) are located within the APE. Much of the APE is developed with surface parking lots, buildings, streets, and/or dense vegetation (i.e., sod, landscaping) which obstructed the surveyor's view of the native ground surface.

The APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Thus, surficial archaeological resources that may have existed at one time have likely been displaced by these disturbances. While discovery of archaeological resources in artificial fill deposits within the APE is unlikely, proposed excavations that would occur below the fill levels could impact intact archaeological resources that have not been disturbed or displaced by previous development. Since the Proposed Action Alternative would include excavations of varying depths across portions of the APE, including excavations at depths where native soils would be encountered, the Proposed Action Alternative could impact previously unknown buried archaeological resources that fall within the definition of historic resources or unique archeological resources.

Prior to initiation of any project-related grading or excavation activities, LAWA would retain an on-site Cultural Resource Monitor (CRM), as defined in LAWA's Archaeological Treatment Plan (ATP), who will determine if the Proposed Action Alternative is subject to archaeological monitoring. As defined in the ATP, areas are not subject to archaeological monitoring if they contain redeposited fill or have previously been disturbed (i.e., areas where project-related excavation extends into re-deposited fill or other previously disturbed soils are considered unlikely to contain/yield notable cultural resources, and therefore do not require monitoring). LAWA would retain an archaeologist to monitor excavation activities in native or virgin soils in accordance with the detailed monitoring procedures and other procedures outlined in the ATP regarding treatment for previously unidentified archaeological resources that are encountered during construction.

With compliance with LAWA's ATP, potentially significant impacts to archaeological resources that are historical resources or unique archeological resources would be reduced and the Proposed Action Alternative's impact on archaeological resources would not be significant when compared to the No Action Alternative.

#### 5.5.3.2.3 Cultural Resources

As discussed in Section 4.7.2.2, a SLF search from the NAHC did not indicate the presence of Native American cultural resources from the NAHC archives within the APE or surrounding vicinity. Results of the cultural resource records search through the SCCIC and a pedestrian survey also did not indicate the presence of any known human remains or cultural resources within the APE. As stated above, the APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Thus, surficial human remains resources that may have existed at one time have likely been displaced by these disturbances. While discovery of human remains or other cultural resources in artificial fill deposits within the APE is unlikely,

proposed excavations that would occur below the fill levels could impact intact human remains, if any are present that have not been disturbed or displaced by previous development.

Since the Proposed Action Alternative would include excavations of varying depths across portions of the APE, including excavations at depths where native soils would be encountered, the Proposed Action Alternative has the potential to impact previously unknown buried cultural resources. In the event of the discovery of human remains, LAWA would comply with guidance as to the treatment of any human remains that are encountered during construction excavations, including the procedures outlined in Section 7050.5(b) and (c) of the State Health and Safety Code, Section 5097.94(k) and (i) and Section 5097.98(a) and (b) of the Public Resources Code. Therefore, through compliance with federal, state, and local regulations, impacts from disturbance of any human remains, including those interred outside of formal or dedicated cemeteries would not be significant when compared to the No Action Alternative.

## 5.5.4 OPERATIONAL IMPACTS

### 5.5.4.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs.

#### 5.5.4.1.1 Historic and Architectural Resources

The APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Operations of the No Action Alternative would result in similar urban activity and would not introduce any activity that would have the potential to impact any historic or architectural resources.

#### 5.5.4.1.2 Archaeological Resources

The APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Operations of the No Action Alternative would result in similar urban activity and would not introduce any activity that would have the potential to disturb archaeological resources.

#### 5.5.4.1.3 Cultural Resources

The APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Operations of the No Action Alternative would result in similar urban activity and would not introduce any activity that would have the potential to disturb cultural resources.

### 5.5.4.2 Proposed Action Alternative

#### 5.5.4.2.1 Historic and Architectural Resources

As discussed in Section 5.5.3.2, neither the APM guideway nor the passenger walkway would physically touch the Theme Building. The APM guideway would be separated by approximately 43 feet at its closest point from the Theme Building. The passenger walkway would maintain approximately 20 feet of distance from the western leg of the Theme Building's parabolic arch oriented east-west (see Figure 5-1).

The APM guideway would be approximately 70 feet above ground around the Theme Building, supported on concrete columns. The proposed APM train cars would be approximately 42 feet long, 9 feet wide and 12 feet in height. The proposed APM trains would include up to 5 cars. A proposed new elevated passenger walkway, connecting the APM to Terminals 2 and 6, would angle around the west side of the Theme Building just below the level of the guideway. As discussed in Section 5.5.3.2, an integrity analysis of the Theme Building was conducted to assess potential impacts. The Proposed Action Alternative would build new structures immediately adjacent to the Theme Building; therefore its immediate surroundings would be altered. In order for this alteration to be considered adverse, however, it must be shown that the integrity and/or significance of the Theme Building would be diminished. The integrity analysis found that the Proposed Action Alternative would have no adverse effect on the: *location, design, materials, workmanship, feeling,* and *association* with respect to the Theme Building. *Association* was found to have no relevance to the analysis for the Theme Building. Operation of the Proposed Action Alternative would not affect these aspects of integrity. Operations of the Proposed Action Alternative would have the potential to affect the *setting* of the Theme Building, as discussed below.

- *Setting* is defined as "the physical environment of a historic property." The proposed guideway and walkway would alter the physical environment of the Theme Building by constructing new structures to the immediate north, east and west. The heights of both structures would be approximately equal to the level of the Theme Building restaurant space. APM trains will add another 12 feet of height as they pass by along the APM guideway. Views from the interior of the restaurant level, which was designed with canted glass walls to provide a 360-degree panorama of the surrounding airport, would be partially obstructed. The view from the restaurant level interior, and from the observation deck above, would be obstructed to the east, north, and west, leaving only the view south unimpeded. The Theme Building is located in the center of the Airport, with views of the activity associated with a transportation center. As such, although the APM trains would add a new visual element, it is in keeping with the activity associated with a large airport, and would not provide an adverse effect on the *setting*.

  The Theme Building is located within the center of the CTA surrounded by parking garages and airport roadways. Because of its location in the center of the Airport, it experiences high levels of ambient noise from vehicles and aircraft takeoffs and landings. The estimated ambient noise at the Theme Building is 76.3 dB(A). The APM would generate noise levels of approximately 64.3 dB(A) in the proximity of the Theme Building (see Table 5-23), which would cause a slight increase in noise of

0.3 dB(A). As quiet is not an element of the original setting and none of the Theme Building's uses has quiet as a critical attribute (the Theme Building is located in the middle of the CTA and is affected by both vehicle traffic and aircraft noise), audible changes related to the operation of the APM trains would not affect the setting.

Thus, operation of the Proposed Action Alternative would not have a significant adverse effect on the Theme Building when compared to the No Action Alternative.

#### 5.5.4.2.2 Archaeological Resources

The cultural resource records search indicated that no previously recorded archaeological resources (including historic or prehistoric archaeological resources) are located within the APE. The APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Operations of the Proposed Action Alternative would result in similar urban activity and would not introduce any activity that would have the potential to disturb archaeological resources. Therefore operations of the Proposed Action Alternative would not have a significant impact on archaeological resources when compared to the No Action Alternative.

#### 5.5.4.2.3 Cultural Resources

The cultural resource records search indicated that no previously recorded cultural resources (including historic or prehistoric archaeological resources) are located within the APE. The APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Operations of the Proposed Action Alternative would result in similar urban activity and would not introduce any activity that would have the potential to disturb cultural resources. Therefore operations of the Proposed Action Alternative would not have a significant impact on cultural resources when compared to the No Action Alternative.

### 5.5.5 MITIGATION MEASURES

#### 5.5.5.1 Historic and Architectural Resources

As stated above, the SHPO, through its June 28, 2017 letter, concurs with the findings in this EA and that an MOA is the appropriate vehicle for the resolution of Adverse Effect. The draft MOA (see **Appendix H**) contains the following mitigation measures to resolve the Adverse Effect:

- Prior to issuance of a building permit for the APM, LAWA shall prepare a Historic Structures Report (HSR) for the Theme Building to guide its preservation and future use. The format and content of the report shall comply with the NPS's *Preservation Brief 43: The Preparation and Use of Historic Structure Reports*.
- The Theme Building shall be rehabilitated for a new use that maintains controlled public access to the building's atrium, lobby and former restaurant space. Potential new uses for the Theme Building include, but are not limited to, a restaurant, public/educational exhibits, or a meeting/event space.

- The Theme Building shall be rehabilitated in compliance with the Secretary of the Interior's Standards for Rehabilitation and the Guidelines for Rehabilitating Historic Buildings. The general specifications for the rehabilitation project would include specifications for the treatment of character-defining features as identified in the HSR. The specifications shall include, but are not limited to, sections for the treatment of historic fabric; quality control; substitution procedures; selective demolition; cutting and patching; removal and storage of historic materials; protection and cleaning; repair options; and potential replacement of severely deteriorated features. Materials conservation plans shall be incorporated into the plans and specifications as necessary.
- The remaining space around the Theme Building, bounded on the north and south by World Way and on the east by East Way, shall be preserved and retained as open space to recall the Theme Building's historic setting. An interpretive program shall be created that may include photographic exhibits, audio/visual presentations, and interactive displays to chronicle the history and design of the Theme Building and its context within the larger airport plan, the architects, and their historic significance. This exhibit shall be located in the open space immediately surrounding the Theme Building or within the Theme Building and be made accessible to the public.
- The rehabilitation project team shall include a qualified historic architect who meets the Secretary of the Interior's Professional Qualifications Standards for historic architecture. The historic architect shall work with the project team to review project alternatives and the impacts of the proposed rehabilitation, and shall monitor construction for compliance with the recommendations in the HSR.
- LAWA shall apply the following guidelines to the final design of the APM guideway and passenger walkway adjacent to the Theme Building to reduce visual impacts:
- Minimize the number of columns and structures surrounding the Theme Building by maximizing the column support span in this area.
- Minimize the bulk of the APM guideway structure to preserve openness around the Theme Building to the extent feasible.
- Design the APM and passenger walkway structures around the Theme Building to complement the existing Theme Building structure and better harmonize the Project elements and the Theme Building.
- Implement landscape elements in the vicinity of the Theme Building that enhance passenger and visitor's visual focus on the Theme Building (i.e., make the Theme Building the visual focus of this area, not the proposed Project elements).

With implementation of these mitigation measures, significant impacts to the Theme Building, as a result of the construction of the APM guideway and pedestrian walkway, would be reduced to less than significant.

### 5.5.5.2 Archaeological Resources

As indicated in Sections 5.5.3 and 5.5.4, the Proposed Action Alternative would not have a significant impact to archaeological resources when compared to the No Action Alternative; therefore, no mitigation measures are required.

#### 5.5.5.3 Cultural Resources

As indicated in Sections 5.5.3 and 5.5.4, the Proposed Action Alternative would not have a significant impact to cultural resources when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.6 Land Use

### 5.6.1 METHODOLOGY

The assessment of potential land use and planning effects of the No Action and Proposed Action Alternatives focuses on the identification of applicable Federal, regional, State, and local land use plans and policies and assesses the consistency of the alternatives to these plans and policies. The analysis of plan consistency is designed to determine whether any inconsistencies need to be addressed before the Proposed Action Alternative can be implemented. The No Action and Proposed Action Alternatives were reviewed for consistency with development plans for SCAG, Los Angeles County, and the City of Los Angeles.

LAWA adheres to all grant assurances and applicable U.S.C. regulations related to land use compatibility. Pursuant to 49 U.S.C. § 47107(a)(10) of the 1982 Airport and Airway Improvement Act, LAWA has provided written assurance to the FAA that appropriate action is being taken, to the extent reasonable, to restrict the use of land adjacent to or in the immediate vicinity of the Airport to activities and purposes compatible with normal airport operations. A copy of the written assurance is in **Appendix I**.

### 5.6.2 SIGNIFICANCE THRESHOLDS

The FAA has not established a significance threshold for land use. The FAA cannot approve airport project funding unless the project is in compliance with development plans of public agencies responsible for the area in which the airport is located. Additionally, the determination of whether a significant impact exists for land use is often dependent on impacts of the Proposed Action or alternatives on other environmental resource categories. Since the No Action and Proposed Action Alternatives do not result in significant effects in other environmental impact categories that could affect land use compatibility, this evaluation was limited to the evaluation of land use changes in the Proposed Project Area.

### 5.6.3 CONSTRUCTION AND OPERATIONAL IMPACTS

#### 5.6.3.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur and existing land use and operations would continue under current conditions. While existing incompatible uses at Manchester Square and Belford would still be acquired and removed as part of an ongoing acquisition and relocation program, the proposed uses under the Proposed Action Alternative, however, would not be implemented. Under the No Action Alternative, plan amendments that are proposed under the Proposed Action Alternative would not occur. The existing LAX Plan specifically outlines the creation of a CONRAC and focused ground transportation facilities, which would

not occur under the No Action Alternative. Additionally, the recently adopted 2016-2040 RTP/SCS identifies the proposed APM, ITFs, and CONRAC as ground access improvements at LAX that would support SCAG's regional planning policies and major initiative to improve Airport access. As the No Action Alternative would not include the Proposed Action Alternative components, including elements outlined in the LAX Plan and identified in the 2016-2040 RTP/SCS, the No Action Alternative would be inconsistent with the LAX Plan and would conflict with SCAG's regional planning goals and policies. Additionally, the No Action Alternative would include the construction of additional off-Airport parking facilities and rental car facilities rather than a CONRAC, which would be inconsistent with the goals of the LAX Plan, LAX Specific Plan, and the 2016-2040 RTP/SCS.

#### 5.6.3.2 Proposed Action Alternative

##### 5.6.3.2.1 Southern California Association of Governments

In April 2016, SCAG adopted the *2016–2040 Regional Transportation Plan/Sustainable Communities Strategy* (2016-2040 RTP/SCS),[25] which replaced the previous 2012–2035 RTP/SCS.[26] The 2016-2040 RTP/SCS reflects changes in economic, policy, and demographic conditions since 2012 and evaluates the goals, guiding policies, and performance measures of the 2012–2035 RTP/SCS to determine if refinements are needed. The 2016-2040 RTP/SCS retained the goals identified in the 2012–2035 RTP/SCS, as well as expanded the Guiding Policies presented in the 2012-2035 RTP/SCS to address emerging technologies relative to reducing congestion and recognizing the potential for transportation investment to improve the efficiency of the transportation network and the environment. The Proposed Action Alternative includes transportation management and transportation system management elements, connections to the regional transit system, and is being implemented to improve access options for passengers and employees of LAX and reduce traffic congestion and air quality emissions, all of which are consistent with the guiding policies of the 2016-2040 RTP/SCS. Additionally, the 2016-2040 RTP/SCS identifies the proposed APM, ITFs, and CONRAC as ground access improvements at LAX that would support SCAG's regional planning policies. These components support the 2016-2040 RTP/SCS major initiative to improve airport access. As such, the Proposed Action Alternative is also consistent with the strategies identified in the 2016-2040 RTP/SCS.

The Proposed Action Alternative would be consistent with and not conflict with SCAG's regional planning goals and policies, resulting in no significant impacts to land use when compared to the No Action Alternative.

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[25] Southern California Association of Governments, *Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*, Adopted April 7, 2016, Available: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

[26] Southern California Association of Governments, *2012–2035 Regional Transportation Plan/Sustainable Communities Strategy: Towards a Sustainable Future,* adopted April 4, 2012, Available: http://rtpscs.scag.ca.gov/Documents/2012/final/f2012RTPSCS.pdf.

#### 5.6.3.2.2 City of Los Angeles

Implementation of the Proposed Action Alternative would require a number of land use plan amendments, including amendments to the City of Los Angeles General Plan, specifically to the LAX Plan, the Westchester–Playa del Rey Community Plan, and the City of Los Angeles Mobility Plan 2035, as well as subsequent zoning and plan amendments to the LAX Specific Plan. These amendments have been prepared by LAWA and approved by BOAC and the City Planning Commission. These amendments were approved by the Los Angeles City Council on June 7 and June 16, 2017.

- **LAX Plan**. Implementation of the Proposed Action Alternative would require amendments to the boundary of the LAX Plan area and an addition of a land use subarea designation, as well as associated map and text alterations and additions included in the Plan to account for the changes associated with the Proposed Action Alternative. Amendments to the LAX Plan include: updating the Vision for LAX; updating the goals and objectives to reflect the Proposed Action Alternative; adding a description of a new Airport Landside Support Area; updating policies to reflect the Proposed Action Alternative and other programs; and removing text regarding projects that are no longer relevant. Overall, the implementation of the Proposed Action Alternative would improve the landside transportation system serving the Airport, which would support the overall objective of the LAX Plan to promote an arrangement of LAX uses to encourage and contribute to the modernization of the Airport in an orderly and flexible manner.
- **Westchester-Playa Del Rey Community Plan**. Implementation of the Proposed Action Alternative would require amendments to the Westchester-Playa del Rey Community Plan, consisting of map updates to conform to the boundary of the revised LAX Plan and roadway changes. The Westchester-Playa del Rey Community Plan includes a goal to coordinate the development of LAX with the surrounding communities. The Proposed Action Alternative would serve to improve access to and from LAX and relieve congestion on surrounding roadways and therefore, would be consistent with the Westchester-Playa del Rey Community Plan.
- **Mobility Plan 2035**. Implementation of the Proposed Action Alternative would require amendments to the Citywide General Plan Circulation System, which is reflected in the City's *Mobility Plan 2035,* in order to maintain consistency with the proposed classification of streets. The Proposed Action Alternative would also require modifications to the Bike Plan in the *Mobility Plan 2035* to reflect proposed improvements. The Proposed Action Alternative would improve the landside transportation system serving LAX, thereby improving access to and from LAX and relieving congestion on Airport and surrounding roadways. The proposed ground access improvements include vehicle, transit, bicycle and pedestrian access and connections. In addition, LAWA plans to establish and enhance programs to encourage Airport and other employees to use alternative means of transportation. This is consistent with the overall aim of the Mobility Plan 2035 to achieve a transportation system that balances the needs of all road users. With the approval of the proposed amendments, the Proposed Action Alternative would be consistent with Mobility Plan 2035 roadway and bicycle maps.
- **LAX Specific Plan**. Similar to the LAX Plan discussed above, amendments to the LAX Specific Plan are proposed relative to modifying the boundary of the LAX Specific Plan area, adding a land use subarea

designation, zoning changes, and making applicable text revisions to provide consistency between the two documents. Amendments would include: changes in the text of the LAX Specific Plan to facilitate implementation of the programs and policies in the plan; the addition of an Airport Landside Support Subarea; reorganization of text for consistency and clarity; removal of the parking regulations which are specific to the LAX Master Plan; clarification of which parcels within the LAX Specific Plan are subject to the trip cap; and text on the LAX Design Guidelines, as well as updates to the associated figures. In addition, LAX Specific Plan maps and diagrams would be updated to reflect the proposed plan area changes. These amendments are necessary to obtain consistency between the Proposed Action Alternative and the LAX Specific Plan. With approval of the proposed LAX Specific Plan amendments to ensure consistency, the Proposed Action Alternative would be consistent with the LAX Specific Plan.

- **Framework Element**. The Framework Element includes primary land use objectives that call for the City to accommodate land use decisions that support existing and future business needs of the City; facilitate a reduction in vehicular trips, VMT, and air pollution; and plan for the provision of adequate supporting transportation and utility infrastructure. The Proposed Action Alternative is intended to support and accommodate the business and transportation needs of Los Angeles. In addition, the proposed ground transportation components are intended to reduce traffic congestion within the CTA and on surrounding roadways, as well as reducing VMT, thus reducing air pollutant emissions. The Proposed Action Alternative is supportive of the policies in the Framework Element, which are related to the Project's location near an identified Regional Center and to economic policies that specifically address LAX. The Proposed Action Alternative would support, and be consistent with, the policy goals of the Framework Element.

As discussed above, the Proposed Action Alternative would be consistent with, and not conflict with, the applicable land use goals and policies of the LAX Plan, Westchester-Playa del Rey Community Plan, Mobility Plan 2035, the LAX Specific Plan, and the Framework Element. Therefore, the Proposed Action Alternative would not result in significant impacts to land use when compared to the No Action Alternative.

#### 5.6.3.2.3 Los Angeles County Airport Land Use Plan

The Airport Land Use Plan (ALUP) for Los Angeles County includes policies addressing noise, safety, airspace hazards, and land use/noise compatibility criteria for new proposed land uses. The ALUP includes a Land Use Compatibility Table; ALUP policies require new uses to adhere to the criteria set forth in that table and encourage the removal of incompatible land uses. Incompatible land uses are determined from noise exposure; impacts regarding noise and compatible land use are discussed in Section 5.8.

The Proposed Action Alternative would include development of facilities that are compatible with the existing CNEL noise levels in the Proposed Project Area and would eliminate existing residential and school uses that are incompatible with the existing CNEL noise levels in the Proposed Project Area. The ALUP also contains policies addressing safety, airspace hazards, and prohibiting uses that negatively affect safe air navigation. As noted earlier, none of the Proposed Action Alternative improvements are located within any of the runway protection zones (RPZs) at LAX. The Proposed Action Alternative would not cause an obstruction to air

navigation or interfere with communications between the air traffic controllers and pilots. Based on the above, implementation of the Proposed Action Alternative would be consistent with the Los Angeles County ALUP. Thus, the Proposed Action Alternative would be consistent with the ALUP's policy of minimizing the public's exposure to excessive noise and safety hazards within areas around public airports. No significant impacts to land use would occur with the Proposed Action Alternative when compared to the No Action Alternative.

Amendments to the City General Plan as noted above, (i.e., the LAX Plan, the Westchester-Playa del Rey Community Plan, and the Mobility Plan 2035), and also amendments to the LAX Specific Plan, were reviewed and a consistency determination was made by the Airport Land Use Commission (ALUC) on May 31, 2017. The proposed amendments are consistent with ALUP policies in regards to noise, safety, airspace hazards, and land use/noise compatibility criteria for new proposed land uses.

### 5.6.4 MITIGATION MEASURES

As indicated in Section 5.6.3, impacts on land use with the implementation of the Proposed Action Alternative would not be significant when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.7 Natural Resources and Energy Supply

### 5.7.1 METHODOLOGY

The analysis for natural resources and energy supply considers the demand for consumable natural resources (e.g., water, oil, and coal) and energy (e.g., electricity and natural gas) under the Proposed Action and the No Action Alternatives. Impacts to electricity demand, water usage, fuel consumption, and other consumable materials were determined by evaluating the extent to which construction and operation of the Proposed Action Alternative would change demand in comparison with the No Action Alternative, as well as by assessing whether the change would cause demand to exceed available or future supplies, as compared with the No Action Alternative. Demand/consumption was estimated based on generation factors for type of use or on specifications for similar facilities at other locations. This analysis also considers the ability of the Proposed Action Alternative to avoid or reduce energy and water consumption through conservation programs and efficiency features.

In addition, through preliminary consultation with utility system providers and review of other documentation, existing utility infrastructure within the Proposed Project Area was identified. The proposed location of each component of the Proposed Action Alternative was compared to the location of existing utility infrastructure to identify potential points of conflict.

### 5.7.2 SIGNIFICANCE THRESHOLDS

The FAA has not established a significance threshold for consumable natural resources and energy supply. Significant impacts would occur when an action's construction or operation would cause demand for scarce consumable natural resources and energy to exceed available or future supplies.

### 5.7.3 CONSTRUCTION IMPACTS

#### 5.7.3.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Construction of these facilities would require a short-term, temporary increase in the consumption of energy and natural resources supplies. However, when compared to size and scale of the Proposed Action Alternative, it is unlikely the increase under the No Action Alternative would exceed available or future energy and natural resource supplies.

#### 5.7.3.2 Proposed Action Alternative

Construction associated with the Proposed Action Alternative would require natural resources, including: petrochemical construction materials; lumber; sand and gravel; concrete; and steel, copper, and other metals. Construction of the Proposed Action Alternative would consume energy in the form of electricity, natural gas, and transportation-related fuels, through use of construction equipment, transport of construction materials, temporary lighting, etc. In addition, construction of the Proposed Action Alternative would also require water for dust suppression, concrete production, pavement saw-cutting, and equipment cleaning. The analysis of construction-related natural resources and energy supply focuses on direct consumption, mainly in the form of transportation-related fuels; purchased electricity, natural gas consumption, and water usage.

The estimated consumption of gasoline and diesel during construction of the Proposed Action Alternative would be approximately 7,700 gallons and 40,000 gallons during a peak week, respectively. The production of gasoline in Southern California averaged approximately 135 million gallons to 180 million gallons per week; and the production of diesel within the entire State of California averaged from approximately 100 million gallons to 115 million gallons per week.[27] Therefore, construction of the Proposed Action Alternative would represent 0.006 percent of the average weekly production of gasoline in Southern California and 0.04 percent of the average weekly production of diesel in the State of California. Construction energy consumption is short-term and minor compared to long-term regional energy use. As such, construction of the Proposed Action Alternative would not exceed energy supply and distribution capabilities.

Furthermore, to reduce consumption of natural resources and energy supply, LAWA would adopt new LAX Design Guidelines as part of the Proposed Action Alternative. The LAX Design Guidelines include a list of

[27] California Energy Commission, "Petroleum Watch," August 17, 2016.

measures to be incorporated into the design, construction, and operations of the Proposed Action Alternative facilities, based on the mandatory and voluntary tiers defined in the City of Los Angeles Green Building Code (LAGBC). Measures related to the reduction of energy and water consumption during construction of the Proposed Action Alternative include minimizing the use of virgin materials, increasing the use of recycled materials, rapidly renewable materials, local materials, durable materials, and looking for opportunities to reuse materials as appropriate.

In addition to natural resource and energy supply consumption, construction of the Proposed Action Alternative would require the installation of new utility infrastructure and the relocation of existing utility lines. The Proposed Action Alternative would include new buildings and facilities, requiring new utility connections for their operations. Such connections may require some level of new infrastructure within the adjacent roadways, depending on the quantity and quality of existing service. Service disruptions would be avoided, or limited to the shortest amount of time necessary, in order to connect new infrastructure. All utilities would be relocated or installed in close coordination with the respective service providers, as identified in Section 4.9. Construction impacts to utilities and service systems would not be significant when compared to the No Action Alternative.

## 5.7.4 OPERATIONAL IMPACTS

### 5.7.4.1 No Action Alternative

Under the No Action Alternative, none of the improvements and activities proposed for the LAX Landside Access Modernization Program would be constructed. Congestion would continue to intensify within the CTA and on surrounding roadways, and traffic conditions would deteriorate, potentially increasing the consumption of transportation-related fuels as compared to the Proposed Action Alternative. Existing parking facilities would continue to operate along with new off-Airport parking lots and expanded rental car facilities. It is anticipated that operations of these facilities would require less energy than the Proposed Action Alternative. Operations of expanded parking and rental car facilities under the No Action Alternative would also require potable water for customers as well as car washing. It is expected that water usage under the No Action Alternative would be less than under the Proposed Action Alternative, as water usage for APM train washing would not occur.

### 5.7.4.2 Proposed Action Alternative

#### 5.7.4.2.1 Electricity

Components of the Proposed Action Alternative would utilize electrical energy for a wide range of functions. **Table 5-13** estimates the daily power consumption for operations of the Proposed Action Alternative for 2024 and 2030/2035.[28] As shown in Table 5-13, electricity demand for the Proposed Action Alternative in 2035

[28] The FAA's Terminal Area Forecast for LAX in 2030 has a passenger activity level of 95 MAP. As discussed in Appendix D, for planning purposes related to the proposed LAX Landside Access Modernization Program, LAWA is planning for a future condition (2035) of 95 MAP. Therefore, natural resources and energy usage would be the same for 2030 and 2035 and are discussed collectively.

would be approximately 232,000 kilowatt hours (kWh) per day or approximately 84,680 megawatt hours (MWh) per year. Operation of the Proposed Action Alternative represents approximately 0.3 percent of the 29,500,000 MWh electrical demands LADWP forecast for the Los Angeles region in 2035. Projected future electricity consumption growth for LADWP is less than one percent per year through 2035. Projections indicate that the power demand for Los Angeles will be approximately 25,400,000 MWh in 2025 and 29,500,000 MWh in 2035. LADWP does not forecast that peak demand will reach capacity through 2040. Diversification of LADWP's energy portfolio, increasing electricity from renewable energy, and new customer energy efficiency measures will help meet all of the City's needs through LADWP's Power Integrated Resource Plan (IRP) planning horizon of 2035.[29] As such, electricity demand from the operations of the Proposed Action Alternative would not exceed electrical supply and distribution capabilities.

**Table 5-13: Proposed Action Alternative Operational Electricity Usage**

| | DAILY USAGE (kWh) | |
|---|---|---|
| **COMPONENT** | **2024 1/** | **2030/2035** |
| APM Propulsion and Control Systems | 70,295 | 77,651 |
| CTA APM Stations and Parking Garages | 10,255 | 11,328 |
| ITF West, including APM Station | 11,107 | 12,269 |
| ITF East, including APM Station | 9,004 | 9,946 |
| CONRAC, including APM Station | 106,407 | 117,543 |
| APM Maintenance and Storage Facility | 2,955 | 3,264 |
| **Total** | **210,021** | **232,000** |
| **Annual Usage (MWh)** | **76,658** | **84,680** |

NOTES:

kWh = kilowatt hour MWh = megawatt hour

1/ Daily and annual usage for 2024 was estimated on a per passenger basis based on full build-out of the facility for 2030.

SOURCES: MapLAX, July 2016.

PREPARED BY: Ricondo & Associates, Inc., December 2016.

### 5.7.4.2.2 Natural Gas

Food and beverage services may be provided in the ITFs and/or CONRAC. Operations of the Proposed Action Alternative would increase consumption of natural gas resulting from heating and cooking uses. New natural gas connections under the Proposed Action Alternative are only required to serve the APM MSF pressure wash system, for space and water heating, and possibly in the ITFs and CONRAC for cooking, should food service providers locate within these spaces. Annual usage associated with operation of the APM MSF is based on square footage, and estimated at 129 million cubic feet (MMcf) or approximately 0.4 MMcf/day. As

[29] Los Angeles Department of Water and Power, *2015 Power Integrated Resource Plan,* December 2015, Available: http://www.ladwp.com/powerIRP.

full build-out of the facility would occur during Phase 1 of the Proposed Action Alternative, natural gas consumption would be generally the same for 2024 and 2030/2035.

Estimated total SoCalGas natural gas requirements to meet demand for the years 2025 is 2,456 MMcf/day (896,440 MMcf annually), and estimated total natural gas supply for 2025 is 3,875 MMcf/day (1,414,375 MMcf annually). SoCalGas estimates natural gas supply in Southern California would be 3,875 MMcf/day (1,414,375 MMcf annually) in 2035. Operation of the Proposed Action Alternative would represent approximately 0.01 percent of the estimated available natural gas supply. As such, future supplies of natural gas would be adequate to meet projected demand within the SoCalGas service area through 2035.[30]

#### 5.7.4.2.3 Water

The Proposed Action Alternative would generate a demand for potable water use in restroom and food service facilities; car and train washing operations; fire water systems; and landscaping. Through a Water Supply Assessment (WSA) prepared by LADWP, it was estimated that components of the Proposed Action Alternative would have a net increase in water demand of 171 acre-feet per year (AF/Y) in 2035. Water demand in 2024 would be approximately 9 percent less than demand in 2035; demand in 2030 would be similar to 2035. **Table 5-14** identifies the water demand for operations of the Proposed Action Alternative in 2035.

LADWP's WSA concluded that (1) the Proposed Action Alternative is consistent with the forecasts of the SCAG and the Urban Water Management Plan (UWMP); and (2) LADWP has sufficient supply to meet the projected demand of the Proposed Action Alternative. As such, operations of the Proposed Action Alternative would not cause exceedance of water supply.

Based on LADWP's water supply demand estimate, the Proposed Action Alternative would have an average water demand of approximately 153,000 gallons per day in 2035. It is estimated that 80 percent of the water demand (approximately 122,000 gallons per day) would be disposed to local sewers. The Hyperion Treatment Plant, which provides treatment capacity within the Proposed Project Area, currently processes average wastewater flows of approximately 275 million gallons per day (mgd), but has capacity to process dry-weather flows of approximately 450 mgd. Thus, the sewage requirements of operations of the Proposed Action Alternative would not exceed the capacity of existing sewage facilities.

[30] California Gas and Electric Utilities, *2016 California Gas Report*, www.socalgas.com/regulatory/cgr.shtml.

**Table 5-14: Proposed Action Alternative Water Demand**

| | BASE DEMAND | REQUIRED WATER SAVINGS[2/] | PROPOSED WATER DEMAND | |
|---|---|---|---|---|
| **PROPOSED USE[1/]** | **GPD** | **GPD** | **GPD** | **AF/Y** |
| **Proposed Action Alternative Components** | | | | |
| Consolidated Rental Car Facility | 598,805 | 323,494 | 275,311 | 308.41 |
| Intermodal Transportation Facilities | 54,266 | 26,994 | 27,272 | 30.55 |
| Automated People Mover System | 30,891 | 9,048 | 21,843 | 24.47 |
| Enabling Projects | 693 | 0 | 693 | 0.78 |
| **Proposed Water Demand Total[3/]** | | | **325,119** | **364.21** |
| **Existing Uses to be Removed** | | | -121,201 | -135.77 |
| **Water Conservation Measures[4/]** | | | -51,327 | -57.50 |
| **Net Additional Water Demand[3/]** | | | **152,591** | **170.94** |

NOTES: GPD = gallons per day AF/Y = Acre-Feet per Year

1/ Provided by LAWA in e-mail communication and confirmed in Scope Confirmation e-mail.

2/ Proposed Action would conform to Water-Efficiency Requirements Ordinance No. 180822, 2013 California Plumbing Code, 2013 California Green Building Standards Code, 2014 Los Angeles Plumbing Code, 2014 Los Angeles Green Building Code, and California Water Code Division 6, Part 2.12, Section 10951.

3/ Totals may not add due to rounding.

4/ Water conservation due to additional conservation commitments made by LAWA.

SOURCE: LADWP, Water Resources Section, *Water Supply Assessment for the LAX Landside Access Modernization Program Project*, May 3, 2016.
PREPARED BY: Ricondo & Associates, Inc., January 2017.

### 5.7.4.2.4 Transportation Fuels

The vehicle fleet in Southern California has continued to evolve toward more efficient energy usage. The CONRAC and the ITFs would feature electric vehicle charging stations to facilitate growing usage of electric vehicles. The CONRAC facility would provide on-site fueling facilities to service the various rental car companies. The estimated daily fuel requirements of the CONRAC would be approximately 27,000 gallons per day in 2024 and 30,000 gallons per day in 2030/2035.[31] Fuel would be delivered by truck in a manner similar to delivery of fuel to existing rental car sites and gas stations in the Proposed Project Area. Fuel would be stored on-site in underground storage tanks (USTs) and be dispensed through standard fleet gasoline dispensing equipment. These fueling activities currently occur at rental car facilities in the Proposed Project Area. The fueling of rental cars represents energy consumption that would occur with or without the Proposed Action Alternative.

[31] Fuel usage at the CONRAC for 2024 was estimated on a per passenger basis based on full build-out of the facility for 2030.

The Proposed Action Alternative is intended to reduce car and shuttle trips within the Airport and alleviate congestion in the Proposed Project Area. Overall VMT would decrease as a result of the Proposed Action Alternative. As such, the Proposed Action Alternative would not result in an increase in transportation energy consumption as compared to the No Action Alternative.

#### 5.7.4.2.5 Summary

Measures related to the reduction of energy and water consumption would be incorporated into the operations of the Proposed Action Alternative. Energy reduction measures include: energy efficient lighting and mechanical systems; renewable and/or alternative energy sources, including installation of a solar array; and elevator and escalator controls. Water reduction measures include: high-efficiency, low-flow plumbing and fixture fittings; capturing rain water or reusing for car/train washing; and landscape-related measures such as native plant species, xeriscaping, and use of greywater or recycled water.

As noted above, the Proposed Action Alternative would not result in demand for scarce consumable natural resources and energy exceeding available or future supplies. Therefore, no significant impacts to natural resources or energy supply would occur as a result of the Proposed Action Alternative when compared to the No Action Alternative.

### 5.7.5 MITIGATION MEASURES

As indicated in Sections 5.7.3 and 5.7.4, no significant impacts to natural resources or energy supply would occur as a result of the Proposed Action Alternative when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.8 Noise and Noise-Compatible Land Use

### 5.8.1 METHODOLOGY

This section addresses operational and construction noise associated with the Proposed Action Alternative, including road traffic noise, construction traffic and equipment noise, and transit noise. As noted in Section 4.10.1, noise analysis guidance defined in FAA Order 1050.1F states that: "surface transportation impacts, including construction noise, should be conducted using accepted methodologies from the appropriate modal administration, such as the FHWA for highway noise."[32] In accordance with FAA Order 1050.1F guidance, FHWA guidance has been used to assess existing roadway noise conditions, while Federal Railroad Administration (FRA) and Federal Transit Administration (FTA) guidance and modeling is used for the APM. Additionally, FHWA provides guidelines for roadway construction and operational noise, however defers to

[32] U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2016.

the state authority to provide specific guidance.[33] Therefore, Caltrans (which is a cooperating agency on this EA) noise standards have been utilized in this EA for roadway noise, while FRA/FTA methodologies are used for the APM. As the Proposed Action Alternative would not cause any changes to aircraft operations, departures and arrivals runway utilization, or runway configuration, noise from aircraft operations would not be affected by the Proposed Action Alternative and is not addressed in this section.

#### 5.8.1.1 Road Traffic Noise

The road traffic noise impacts analysis included the following steps:

- Identify noise-sensitive receptor locations that could be affected by Proposed Action Alternative-related changes in traffic conditions;
- Calculate road traffic noise levels at noise-sensitive receptors for existing conditions (2015) and for future cumulative conditions with and without implementation of the Proposed Action Alternative; and
- Assess the Proposed Action Alternative-related change in noise levels at the receptor locations compared to future No Action Alternative conditions, and determine whether the change would result in a significant impact.

**Appendix J** describes the noise impact analysis methodology in detail.

The Proposed Action Alternative area includes roadway segments west of the I-405 and east of the Airport between Westchester Parkway/W. Arbor Vitae Street and Imperial Highway. Traffic volume data for existing (Year 2015) and future (2024, 2030, and 2035) conditions, were reviewed to identify roadways most likely to experience increased traffic due to the Proposed Action Alternative. This was accomplished through the off-Airport traffic modeling discussed in Section 5.9.4.2.4, which analyzed the percent increase in traffic on each roadway segment in the traffic study area during the modeled peak hours.

In conjunction with the evaluation of the traffic data, a review of existing land uses was performed to determine the nature and location of noise-sensitive uses located along roadways projected to experience higher percentages of traffic volume increases than most other roads nearby. Noise-sensitive uses are places that might contain noise-sensitive equipment; individuals who are particularly susceptible to noise stimuli, such as children or the elderly; or accommodations for people to sleep. The noise-sensitive land uses include residences, hospitals, hotels, and schools, among others. Noise-sensitive receptors close to Proposed Action Alternative components were identified in a land use survey to identify locations where ambient noise measurements could be recorded to forecast increases in noise levels from operational traffic.

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[33] U.S. Department of Transportation, Federal Highway Administration, *Highway Traffic Noise: Analysis and Abatement Guidance*, December 2011.

### 5.8.1.2 Construction Traffic and Equipment Noise

#### 5.8.1.2.1 Construction Traffic Noise

The analysis of construction traffic noise impacts focused on off-Airport areas by (1) identifying major roadways near the Airport that may be used for construction worker commute routes or truck haul routes; (2) generally identifying the nature and location of noise-sensitive receptors along those routes; and (3) evaluating the traffic characteristics along those routes, specifically as such characteristics relate to existing traffic volumes. The methodology beyond this point is similar to that identified for roadway noise, as discussed above and explained in detail in **Appendix J**.

#### 5.8.1.2.2 Construction Equipment Noise

Construction activities generate noise from the operation of equipment required for demolition and construction of various facilities. Noise effects from on-site construction and staging of construction trucks were evaluated by determining the noise levels generated by different types of construction activity and calculating the construction-related noise level at the closest noise-sensitive receptor locations. Details on construction-period noise calculations are provided in **Appendix J**. Table 4-9 and Figure 4-7 provide the locations of Proposed Project Area noise-sensitive receptors.

Noise levels from outdoor construction activities, independent of background ambient noise levels, indicate that the noisiest phases of construction are typically during excavation and grading, and that noise levels from equipment with mufflers are typically 86 dBA $L_{eq}$ at 50 feet from the noise source.[34] This type of sound typically dissipates at a rate of 4.5 dBA to 6 dBA for each doubling of distance. The sound drop off rate does not take into account any intervening shielding (including landscaping or trees) or barriers, such as structures or hills between the noise source and noise receptor. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction. A higher barrier may provide as much as 20 dB of noise reduction.

### 5.8.1.3 Transit Noise

**Appendix J** provides details about the transit noise impact assessment methodology. Operational noise levels of the Proposed Action Alternative were calculated with the computer noise model SoundPLAN, which generates computer simulations of noise propagation from sources such as rail noise. Rail noise emissions were modelled according to the industry standard rail noise prediction methodologies adopted by the FRA. The FRA noise prediction model calculates an A-weighted noise level at a receiver location through direct propagation or taking into account shielding provided by barriers.

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[34] City of Los Angeles, *L.A. CEQA Thresholds Guide, Your Resource for Preparing CEQA Analyses in Los Angeles, Section I.1, Construction Noise*, 2006.

### 5.8.2 SIGNIFICANCE THRESHOLDS

Guidance defined in FAA Order 1050.1F states that: "surface transportation impacts, including construction noise, should be conducted using accepted methodologies from the appropriate modal administration, such as the Federal Highway Administration [FHWA] for highway noise."[35]

In accordance with FAA Order 1050.1F guidance, to address potential noise-related impacts associated with the Proposed Action Alternative, FHWA guidance was reviewed for roadway construction and operational noise. FHWA provides guidelines for roadway construction and operational noise, however defers to the state authority to provide specific guidance.[36] Therefore, Caltrans noise impact criteria were used to assess construction and operation of roadway improvements. For operation of the APM component, FTA criteria were used.

#### 5.8.2.1 Construction Impacts

Section 14-8.02, Noise Control, of Caltrans standard specifications provides information that can be considered in determining whether construction would result in adverse noise impacts.[37] Factors to consider when evaluating noise from construction activities include:

- Whether activities from construction noise exceed 86 dBA at 50 feet from the job site activities from 9 p.m. to 6 a.m.
- Whether construction equipment with internal combustion engines are equipped with the manufacturer recommended muffler.

#### 5.8.2.2 Road Traffic Noise

In accordance with Caltrans criteria, the Proposed Project Area would be classified as Activity Category E, which includes hotels, motels, offices, restaurants/bars, and other developed lands, properties, or activities not included in [the other Activity Categories]. Activity Category E has a Noise Abatement Criteria (NAC) Activity $L_{eq}$[h] of 72 dB.[38]

- Traffic noise impacts as defined in 23 CFR 772.5 occur when the predicted noise level in the design year approaches or exceeds the NAC specified in 23 CFR 772, or a predicted noise level substantially exceeds the existing noise level (a "substantial" noise increase). Noise levels are expressed in terms of the A-weighted decibel (dBA) and the one-hour equivalent sound level ($L_{eq}$[h]). In California a noise

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35 U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

36 U.S. Department of Transportation, Federal Highway Administration, *Highway Traffic Noise: Analysis and Abatement Guidance*, December 2011.

37 California Department of Transportation, Division of Environmental Analysis, *Traffic Noise Analysis Protocol For New Highway Construction, Reconstruction, and Retrofit Barrier Projects*, May 2011.

38 California Department of Transportation, Division of Environmental Analysis, *Traffic Noise Analysis Protocol For New Highway Construction, Reconstruction, and Retrofit Barrier Projects*, May 2011.

level is considered to approach the NAC for a given activity category if it is within 1 dBA of the NAC. In California a substantial noise increase is considered to occur when the project's predicted worst-hour design-year noise level exceeds the existing worst hour noise level by 12 dBA or more.[39]

### 5.8.2.3 Transit Noise

For transit operations noise the FTA provides the following guidance:[40]

The noise impact criteria in **Table 5-15** and **Table 5-16** are based on comparison of the existing outdoor noise levels and the future outdoor noise levels from the proposed project. They incorporate both absolute criteria, which consider activity interference caused by the transit project alone, and relative criteria, which consider annoyance due to the change in the noise environment caused by the transit project.

**Table 5-15: Land Use Categories and Metrics for Transit Noise Impact Criteria**

| LAND USE CATEGORY | NOISE METRIC (DBA) | DESCRIPTION OF LAND USE CATEGORY |
|---|---|---|
| 1 | Outdoor $L_{eq}(h)$[1/] | Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheaters and concert pavilions, as well as National Historic Landmarks with significant outdoor use. Also included are recording studios and concert halls. |
| 2 | Outdoor $L_{dn}$ | Residences and buildings where people normally sleep. This category includes homes, hospitals and hotels where a nighttime sensitivity to noise is assumed to be of utmost importance. |
| 3 | Outdoor $L_{eq}(h)$[1/] | Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, theaters, and churches where it is important to avoid interference with such activities as speech, meditation and concentration on reading material. Places for meditation or study associated with cemeteries, monuments, museums, campgrounds and recreational facilities can also be considered to be in this category. Certain historical sites and parks are also included. |

NOTE:

1/ $L_{eq}$ for the noisiest hour of transit-related activity during hours of noise sensitivity.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.
PREPARED BY: Ricondo and Associates, Inc., January 2017.

[39] California Department of Transportation, Division of Environmental Analysis, *Traffic Noise Analysis Protocol For New Highway Construction, Reconstruction, and Retrofit Barrier Projects*, May 2011.

[40] U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

## Table 5-16: Noise Levels Defining Impact for Transit Projects

| EXISTING NOISE EXPOSURE* $L_{EQ}(H)$ OR $L_{DN}$ (DBA) | PROJECT NOISE IMPACT EXPOSURE, $L_{EQ}(H)$ OR $L_{DN}$ (DBA) | | | | | |
|---|---|---|---|---|---|---|
| | CATEGORY 1 OR 2 SITES | | | CATEGORY 3 SITES | | |
| | NO IMPACT | MODERATE IMPACT | SEVERE IMPACT | NO IMPACT | MODERATE IMPACT | SEVERE IMPACT |
| <43 | <Ambient+10 | Ambient + 10 to 15 | >Ambient+15 | <Ambient+15 | Ambient + 15 to 20 | >Ambient+20 |
| 43 | <52 | 52-58 | >58 | <57 | 57-63 | >63 |
| 44 | <52 | 52-58 | >58 | <57 | 57-63 | >63 |
| 45 | <52 | 52-58 | >58 | <57 | 57-63 | >63 |
| 46 | <53 | 53-59 | >59 | <58 | 58-64 | >64 |
| 47 | <53 | 53-59 | >59 | <58 | 58-64 | >64 |
| 48 | <53 | 53-59 | >59 | <58 | 58-64 | >64 |
| 49 | <54 | 54-59 | >59 | <59 | 59-64 | >64 |
| 50 | <54 | 54-59 | >59 | <59 | 59-64 | >64 |
| 51 | <54 | 54-60 | >60 | <59 | 59-65 | >65 |
| 52 | <55 | 55-60 | >60 | <60 | 60-65 | >65 |
| 53 | <55 | 55-60 | >60 | <60 | 60-65 | >65 |
| 54 | <55 | 55-61 | >61 | <60 | 60-66 | >66 |
| 55 | <56 | 56-61 | >61 | <61 | 61-66 | >66 |
| 56 | <56 | 56-62 | >62 | <61 | 61-67 | >67 |
| 57 | <57 | 57-62 | >62 | <62 | 62-67 | >67 |
| 58 | <57 | 57-62 | >62 | <62 | 62-67 | >67 |
| 59 | <58 | 58-63 | >63 | <63 | 63-68 | >68 |
| 60 | <58 | 58-63 | >63 | <63 | 63-68 | >68 |
| 61 | <59 | 59-64 | >64 | <64 | 64-69 | >69 |
| 62 | <59 | 59-64 | >64 | <64 | 64-69 | >69 |
| 63 | <60 | 60-65 | >65 | <65 | 65-70 | >70 |
| 64 | <61 | 61-65 | >65 | <66 | 66-70 | >70 |
| 65 | <61 | 61-66 | >66 | <66 | 66-71 | >71 |
| 66 | <62 | 62-67 | >67 | <67 | 67-72 | >72 |
| 67 | <63 | 63-67 | >67 | <68 | 68-72 | >72 |
| 68 | <63 | 63-68 | >68 | <68 | 68-73 | >73 |
| 69 | <64 | 64-69 | >69 | <69 | 69-74 | >74 |
| 70 | <65 | 65-69 | >69 | <70 | 70-74 | >74 |
| 71 | <66 | 66-70 | >70 | <71 | 71-75 | >75 |
| 72 | <66 | 66-71 | >71 | <71 | 71-76 | >76 |
| 73 | <66 | 66-71 | >71 | <71 | 71-76 | >76 |
| 74 | <66 | 66-72 | >72 | <71 | 71-77 | >77 |
| 75 | <66 | 66-73 | >73 | <71 | 71-78 | >78 |
| 76 | <66 | 66-74 | >74 | <71 | 71-79 | >79 |
| 77 | <66 | 66-74 | >74 | <71 | 71-79 | >79 |
| >77 | <66 | 66-75 | >75 | <71 | 71-80 | >80 |

NOTE: $L_{dn}$ is used for land use where nighttime sensitivity is a factor; $L_{eq}$ during the hour of maximum transit noise exposure is used for land use involving only daytime activities.

SOURCE: U.S. Department of Transportation, Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, May 2006.

PREPARED BY: Ricondo and Associates, Inc., January 2017.

In accordance with Table 5-15, the Proposed Project Area would qualify as Land Use Category 2, and therefore, thresholds would be based on existing noise exposure levels for Category 2 sites.

## 5.8.3 CONSTRUCTION IMPACTS

### 5.8.3.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Development of these components would likely require the need for earthwork including excavation and grading. Construction traffic and equipment noise associated with these improvements could result in impacts to noise-sensitive uses. As discussed below in Section 5.8.3.2, impacts to noise and noise-compatible land uses as part of the Proposed Action Alternative are anticipated to not be significant. Construction efforts associated with the No Action Alternative would be comparable or reduced when assessed with those associated with the Proposed Action Alternative. However, construction of off-Airport parking and rental car facilities would be conducted by private companies and would not be subject to LAWA construction noise control measures.

### 5.8.3.2 Proposed Action Alternative

Because of the different construction shifts anticipated to be utilized for different elements of the Proposed Action Alternative, noise associated with construction of the CONRAC, the ITF East, the ITF West and roadway improvements are presented separately from noise associated with construction of the APM along with associated stations and facilities.

#### 5.8.3.2.1 CONRAC, ITFs, and Roadway Improvements

**Table 5-17** presents the estimated daily average construction noise level for the Proposed Action Alternative elements (excluding the APM Guideway) located outside the CTA. This activity would occur during two 8-hour shifts per work day (16 hours/day): the "morning" shift would occur between approximately 7:00 a.m. and 3:00 p.m., and the "afternoon" shift would take place between approximately 3:00 p.m. and 11:00 p.m. Approximately 80 percent of the construction activity would occur during the "morning" shift and 20 percent would occur during the "afternoon" shift.

As shown, peak noise levels from construction activities associated with these components would reach 86 dBA during the morning shift and in the early hours of the afternoon shift, and 84.8 dBA during the afternoon shift. Construction noise levels would not exceed the Caltrans threshold of 86 dBA between the hours of 9 p.m. and 6 a.m. Therefore, it can be assumed that these activities would not exceed 86 dBA at the threshold distance of 50 feet from the construction activities. Additionally, construction activities would be temporary in nature and would not have any long-term noise related impacts.

**Table 5-17: Estimate of Hourly Construction Activity Levels (Non-APM Components)**

| | HOUR | HOURLY ACTIVITY FACTOR | HOURLY AVERAGE SOUND LEVEL (LEQ[1/]) |
|---|---|---|---|
| NIGHTTIME | 12:00 a.m.–1:00 a.m. | 0% | 0 |
| | 1:00 a.m.–2:00 a.m. | 0% | 0 |
| | 2:00 a.m.–3:00 a.m. | 0% | 0 |
| | 3:00 a.m.–4:00 a.m. | 0% | 0 |
| | 4:00 a.m.–5:00 a.m. | 0% | 0 |
| | 5:00 a.m.–6:00 a.m. | 0% | 0 |
| | 6:00 a.m.–6:59 a.m. | 0% | 0 |
| DAYTIME | 7:00 a.m.–8:00 a.m. | 100% | 86.0 |
| | 8:00 a.m.–9:00 a.m. | 100% | 86.0 |
| | 9:00 a.m.–10:00 a.m. | 100% | 86.0 |
| | 10:00 a.m.–11:00 a.m. | 100% | 86.0 |
| | 11:00 a.m.–12:00 p.m. | 100% | 86.0 |
| | 12:00 p.m.–1:00 p.m. | 100% | 86.0 |
| | 1:00 p.m.–2:00 p.m. | 100% | 86.0 |
| | 2:00 p.m.–3:00 p.m. | 100% | 86.0 |
| | 3:00 p.m.–4:00 p.m. | 100% | 86.0 |
| | 4:00 p.m.–5:00 p.m. | 100% | 86.0 |
| | 5:00 p.m.–6:00 p.m. | 100% | 86.0 |
| | 6:00 p.m.–6:59 p.m. | 100% | 86.0 |
| EVENING | 7:00 p.m.–7:59 p.m. | 75% | 84.8 |
| | 8:00 p.m.–8:59 p.m. | 75% | 84.8 |
| | 9:00 p.m.–9:59 p.m. | 75% | 84.8 |
| NIGHTTIME | 10:00 p.m.–11:00 p.m. | 50% | 83.0 |
| | 11:00 p.m.–12:00 a.m. | 0% | 0 |

NOTES:

1/ Noise value is calculated by adding the log10 value of the activity factor to 86 dBA Leq.

2/ The penalty value added to Leq is the same level used to calculate CNEL to account for the greater sensitivity of nearby land uses in the quieter hours between 7:00 p.m. and 7:00 a.m. During evening hours, 5 dBA is added to each hourly Leq. During nighttime hours, a 10 dBA weighting is applied to each hourly Leq.

3/ CNEL represent cumulative sound level at 50 feet from the source.

4/ Daily CNEL is calculated via the following equation: Average Daily CNEL = 10*(log(Sum of Hourly Leq energy levels)] – 13.8. (13.8 represents the log10 value of 24 hours, 10*log(24)).

SOURCE: Meridian Consultants, 2016.

PREPARED BY: Ricondo & Associates, Inc., September 2016.

Construction of the roadway components of the Proposed Action Alternative would comply with LAWA Standard Control Measures on construction-related noise control. Construction equipment utilized near noise-sensitive uses would use appropriate mufflers for internal combustion engines and comply with Caltrans construction thresholds discussed above. Natural and artificial barriers, such as ground elevation changes and existing buildings, may be used to shield construction noise from noise-sensitive uses. Stationary source equipment that is flexible with regard to relocation (such as generators and compressors) would be located at the greatest distance practical from sensitive land uses, and unnecessary idling[41] of equipment would be prohibited. Additionally, construction operations would be staged as far from noise-sensitive uses as feasible. The timing and/or sequence of the noisiest on-site construction activities would avoid sensitive times of the day, as feasible (9 p.m. to 7 a.m. Monday - Friday; 6 p.m. to 8 a.m. Saturday; anytime on Sunday or holidays).

#### 5.8.3.2.2 APM Construction

**Table 5-18** presents the estimated daily average construction noise level for the APM guideway and station components that are located in the CTA. Proposed Action Alternative components within the CTA would be constructed over an 18 hour/day schedule with two shifts: a "night" shift would occur from approximately 1:00 a.m. to 9:00 a.m., and a "day" shift would occur from approximately 9:00 a.m. to 7:00 p.m. Minimal construction would occur between 7:00 p.m. and 1:00 a.m. Approximately 65 percent of the CTA APM construction activity would occur during the 8-hour "night" shift and 35 percent would occur during the 10-hour "day" shift. While construction of the APM components within the CTA would exceed the Caltrans threshold of 86 dBA at 50 feet away between the hours of 12 a.m. and 6 a.m., the nearest sensitive noise receptor is approximately 500 feet east of the CTA, the Hyatt Regency Hotel. At this distance, construction noise would be below 86 dBA at the Hyatt Regency Hotel.

**Table 5-19** presents the estimated daily average construction noise levels for the APM guideway and stations located outside of the CTA. This activity would occur over a two 8-hour shift work day (16 hours/day): the "morning" shift would occur between approximately 7:00 a.m. and 3:00 p.m., and the "afternoon" shift would take place between approximately 3:00 p.m. and 11:00 p.m. Approximately 60 percent of the construction activity would occur during the "morning" shift and 40 percent would occur during the "afternoon" shift. Construction of the APM components outside the CTA would exceed the Caltrans threshold of 86 dBA at 50 feet away between the hours of 9 p.m. and 11 p.m. The nearest sensitive noise receptor is approximately 100 feet away from the proposed APM guideway, the LAX Sheraton Hotel. At this distance, construction noise would be below 86 dBA at the LAX Sheraton Hotel.

Additionally, LAWA requires construction contractors to use noise curtains, noise blankets, temporary sound walls, or their equivalent during construction to shield nearby sensitive receptors from construction equipment-related noise when an increase of 5 dBA is projected to occur over the existing exterior level.

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[41] All nonessential idling of construction equipment shall be restricted to five minutes or less in California Air Resources Board Rule 2449.

**Table 5-18: Estimate of Hourly Construction Activity Levels (APM Guideway and Station Components within CTA)**

| | HOUR | HOURLY ACTIVITY FACTOR | HOURLY AVERAGE SOUND LEVEL (LEQ[1/]) | WEIGHTED-HOURLY AVERAGE SOUND LEVEL (LEQ + PENALTY[2/]) |
|---|---|---|---|---|
| NIGHTTIME | 12:00 a.m.–1:00 a.m. | 50% | 83.0 | 93.0 |
| | 1:00 a.m.–2:00 a.m. | 50% | 83.0 | 93.0 |
| | 2:00 a.m.–3:00 a.m. | 50% | 83.0 | 93.0 |
| | 3:00 a.m.–4:00 a.m. | 50% | 83.0 | 93.0 |
| | 4:00 a.m.–5:00 a.m. | 50% | 83.0 | 93.0 |
| | 5:00 a.m.–6:00 a.m. | 50% | 83.0 | 93.0 |
| | 6:00 a.m.–6:59 a.m. | 90% | 85.5 | 95.5 |
| DAYTIME | 7:00 a.m.–8:00 a.m. | 100% | 86.0 | 86.0 |
| | 8:00 a.m.–9:00 a.m. | 100% | 86.0 | 86.0 |
| | 9:00 a.m.–10:00 a.m. | 100% | 86.0 | 86.0 |
| | 10:00 a.m.–11:00 a.m. | 100% | 86.0 | 86.0 |
| | 11:00 a.m.–12:00 p.m. | 100% | 86.0 | 86.0 |
| | 12:00 p.m.–1:00 p.m. | 100% | 86.0 | 86.0 |
| | 1:00 p.m.–2:00 p.m. | 100% | 86.0 | 86.0 |
| | 2:00 p.m.–3:00 p.m. | 100% | 86.0 | 86.0 |
| | 3:00 p.m.–4:00 p.m. | 100% | 86.0 | 86.0 |
| | 4:00 p.m.–5:00 p.m. | 100% | 86.0 | 86.0 |
| | 5:00 p.m.–6:00 p.m. | 100% | 86.0 | 86.0 |
| | 6:00 p.m.–6:59 p.m. | 100% | 86.0 | 86.0 |
| EVENING | 7:00 p.m.–7:59 p.m. | 0% | 0 | 0 |
| | 8:00 p.m.–8:59 p.m. | 0% | 0 | 0 |
| | 9:00 p.m.–9:59 p.m. | 0% | 0 | 0 |
| NIGHTTIME | 10:00 p.m.–11:00 p.m. | 0% | 0 | 0 |
| | 11:00 p.m.–12:00 a.m. | 0% | 0 | 0 |

NOTES:

1/ Noise value is calculated by adding the log10 value of the activity factor to 86 dBA Leq.

2/ The penalty value added to Leq is the same level used to calculate CNEL to account for the greater sensitivity of nearby land uses in the quieter hours between 7:00 p.m. and 7:00 a.m. During evening hours, 5 dBA is added to each hourly Leq. During nighttime hours, a 10 dBA weighting is applied to each hourly Leq.

3/ CNEL represent cumulative sound level at 50 feet from the source.

4/ Daily CNEL is calculated via the following equation: Average Daily CNEL = 10*(log(Sum of Hourly Leq energy levels)] – 13.8. (13.8 represents the log10 value of 24 hours, 10*log(24)).

SOURCE: Meridian Consultants, 2016.

PREPARED BY: Ricondo & Associates, Inc., September 2016.

**Table 5-19: Estimate of Hourly Construction Activity Levels (APM Guideway and Station Components Outside the CTA)**

| | HOUR | HOURLY ACTIVITY FACTOR | HOURLY AVERAGE SOUND LEVEL (LEQ[1/]) | WEIGHTED-HOURLY AVERAGE SOUND LEVEL (LEQ + PENALTY[2/]) |
|---|---|---|---|---|
| NIGHTTIME | 12:00 a.m.–1:00 a.m. | 0% | 0 | 0 |
| | 1:00 a.m.–2:00 a.m. | 0% | 0 | 0 |
| | 2:00 a.m.–3:00 a.m. | 0% | 0 | 0 |
| | 3:00 a.m.–4:00 a.m. | 0% | 0 | 0 |
| | 4:00 a.m.–5:00 a.m. | 0% | 0 | 0 |
| | 5:00 a.m.–6:00 a.m. | 0% | 0 | 0 |
| | 6:00 a.m.–6:59 a.m. | 0% | 0 | 0 |
| DAYTIME | 7:00 a.m.–8:00 a.m. | 100% | 86.0 | 86.0 |
| | 8:00 a.m.–9:00 a.m. | 100% | 86.0 | 86.0 |
| | 9:00 a.m.–10:00 a.m. | 100% | 86.0 | 86.0 |
| | 10:00 a.m.–11:00 a.m. | 100% | 86.0 | 86.0 |
| | 11:00 a.m.–12:00 p.m. | 100% | 86.0 | 86.0 |
| | 12:00 p.m.–1:00 p.m. | 100% | 86.0 | 86.0 |
| | 1:00 p.m.–2:00 p.m. | 100% | 86.0 | 86.0 |
| | 2:00 p.m.–3:00 p.m. | 100% | 86.0 | 86.0 |
| | 3:00 p.m.–4:00 p.m. | 100% | 86.0 | 86.0 |
| | 4:00 p.m.–5:00 p.m. | 100% | 86.0 | 86.0 |
| | 5:00 p.m.–6:00 p.m. | 100% | 86.0 | 86.0 |
| | 6:00 p.m.–6:59 p.m. | 100% | 86.0 | 86.0 |
| EVENING | 7:00 p.m.–7:59 p.m. | 75% | 84.8 | 89.5 |
| | 8:00 p.m.–8:59 p.m. | 75% | 84.8 | 89.5 |
| | 9:00 p.m.–9:59 p.m. | 75% | 84.8 | 89.5 |
| NIGHTTIME | 10:00 p.m.–11:00 p.m. | 50% | 83.0 | 93.0 |
| | 11:00 p.m.–12:00 a.m. | 0% | 0 | 0 |

NOTES:

1/ Noise value is calculated by adding the log10 value of the activity factor to 86 dBA Leq.

2/ The penalty value added to Leq is the same level used to calculate CNEL to account for the greater sensitivity of nearby land uses in the quieter hours between 7:00 p.m. and 7:00 a.m. During evening hours, 5 dBA is added to each hourly Leq. During nighttime hours, a 10 dBA weighting is applied to each hourly Leq.

3/ CNEL represent cumulative sound level at 50 feet from the source.

4/ Daily CNEL is calculated via the following equation: Average Daily CNEL = 10*(log(Sum of Hourly Leq energy levels)] – 13.8. (13.8 represents the log10 value of 24 hours, 10*log(24)).

SOURCE: Meridian Consultants, 2016.

PREPARED BY: Ricondo & Associates, Inc., September 2016.

## 5.8.4 OPERATIONAL IMPACTS

### 5.8.4.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Development of these facilities would have the potential to create operational noise and increase traffic within the Proposed Project Area. Operations of these facilities would be consistent with the land uses within the Proposed Project Area and is not anticipated to result in significant new sources of noise.

#### 5.8.4.1.1 Roadway Noise

**Tables 5-20**, **5-21**, and **5-22** below present predicted peak hour traffic noise levels in 2024, 2030, and 2035, respectively. These tables present future noise conditions for both the No Action Alternative and Proposed Action Alternative scenarios.

As shown as bold values in Table 5-20 for 2024, eight Study Intersections would approach (within 1 dBA) or exceed the threshold of 72 dBA under the No Action Alternative. Five of the Sepulveda Boulevard and the Lincoln Avenue Study Intersections listed above exceed the Caltrans 72 dBA threshold under existing (2015) conditions (see Table 4-9). None of the No Action Alternative Study Intersections would experience a substantial noise increase of 12 dBA or greater over existing conditions in 2024.

As shown as bold values in Table 5-21 for 2030 and Table 5-22 for 2035, eight Study Intersections would approach or exceed the Caltrans threshold of 72 dBA for the No Action Alternative.

#### 5.8.4.1.2 Transit Noise

Under the No Action Alternative, the APM would not be constructed and would not be in operation. Therefore no operational APM noise would occur under the No Action Alternative.

### 5.8.4.2 Proposed Action Alternative

#### 5.8.4.2.1 Roadway Noise

Tables 5-20, 5-21, and 5-22 above present predicted peak hour traffic noise levels in 2024, 2030 and 2035, respectively.

**Table 5-20 (1 of 2): Future (2024) Modeled Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | NO ACTION ALTERNATIVE (DBA) | PROPOSED ACTION ALTERNATIVE (DBA) | COMPARISON OF PROPOSED ACTION TO NO ACTION (DBA) |
|---|---|---|---|---|
| | ***Sepulveda Boulevard*** | | | |
| **2** | South of La Tijera Boulevard | 65.4 | 65.3 | -0.1 |
| **3** | North of Westchester Parkway | 65.8 | 65.6 | -0.2 |
| **3** | South of Westchester Parkway | 69.4 | 69.2 | -0.2 |
| **4** | North of Lincoln Boulevard | 66.6 | 66.8 | 0.2 |
| **4** | South of Lincoln Boulevard | **72.1** | **72.2** | 0.1 |
| **5** | North of Century Boulevard | **77.5** | **77.1** | -0.4 |
| **5** | South of Century Boulevard | **77.3** | **77.2** | -0.1 |
| **6** | North of I-105 Westbound Ramps | **78.3** | **78.2** | -0.1 |
| **6** | South of I-105 Westbound Ramps | **76.0** | **75.8** | -0.2 |
| **7** | North of Imperial Highway | **76.5** | **76.3** | -0.2 |
| | ***Westchester Parkway*** | | | |
| **3** | East of Sepulveda Boulevard | 61.3 | 61.3 | 0.0 |
| **11** | West of Sepulveda Eastway | 61.6 | 61.6 | 0.0 |
| **11** | East of Sepulveda Eastway | 62.4 | 62.5 | 0.1 |
| **13** | West of Jenny Avenue | 61.8 | 62.8 | 1.0 |
| **13** | East of Jenny Avenue | 62.3 | 62.8 | 0.5 |
| **17** | West of Airport Boulevard | 62.4 | 62.9 | 0.5 |
| | ***Arbor Vitae Street*** | | | |
| **17** | East of Airport Boulevard | 63.0 | 63.0 | 0.0 |
| **29** | West of Aviation Boulevard | 63.2 | 62.9 | -0.3 |
| **29** | East of Aviation Boulevard | 65.6 | 65.2 | -0.4 |
| **37** | West of Isis Avenue | 65.6 | 65.3 | -0.3 |
| **37** | East of Isis Avenue | 65.5 | 65.8 | 0.3 |
| **42** | West of La Cienega Boulevard | 64.8 | 66.4 | 1.6 |
| | ***Airport Boulevard*** | | | |
| **17** | South of Westchester Parkway | 63.7 | 63.1 | -0.6 |
| **18** | North of 96th Street | 66.8 | 66.3 | -0.5 |
| **18** | South of 96th Street | 65.5 | 66.4 | 0.9 |
| **19** | North of 98th Street | 65.7 | 66.5 | 0.8 |
| **19** | South of 98th Street | 63.7 | 64.0 | 0.3 |
| **20** | North of Century Boulevard | 63.7 | 64.0 | 0.3 |
| | ***Aviation Boulevard*** | | | |
| **29** | South of Arbor Vitae Street | **71.3** | **72.9** | 1.6 |
| **30** | North of Century Boulevard | 70.7 | **72.7** | 2.0 |
| **30** | South of Century Boulevard | 68.6 | 68.9 | 0.3 |
| **31** | North of 104th Street | 68.7 | 69.0 | 0.3 |
| **31** | South of 104th Street | 68.9 | 69.4 | 0.5 |
| **32** | North of 111th Street | 68.6 | 69.1 | 0.5 |
| **32** | South of 111th Street | 68.7 | 67.2 | -1.5 |
| **33** | North of Imperial Highway | 68.7 | 67.1 | -1.6 |

**Table 5-20 (2 of 2): Future (2024) Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | NO ACTION ALTERNATIVE (DBA) | PROPOSED ACTION ALTERNATIVE (DBA) | COMPARISON OF PROPOSED ACTION TO NO ACTION (DBA) |
|---|---|---|---|---|
| | ***La Cienega Boulevard*** | | | |
| **42** | South of Arbor Vitae Street | 62.6 | 62.3 | -0.3 |
| **43** | North of I-405 Southbound Ramps | 62.9 | 62.6 | -0.3 |
| **43** | South of I-405 Southbound Ramps | 68.7 | 68.4 | -0.3 |
| **44** | North of Century Boulevard | 61.9 | 61.5 | -0.4 |
| **44** | South of Century Boulevard | 61.9 | 61.8 | -0.1 |
| **45** | North of I-405 Southbound Ramps | 62.1 | 62.1 | 0.0 |
| **45** | South of I-405 Southbound Ramps | 61.0 | 61.3 | 0.3 |
| **46** | North of 104th Street | 61.0 | 61.3 | 0.3 |
| **46** | South of 104th Street | 61.3 | 61.4 | 0.1 |
| **47** | North of Lennox Boulevard | 61.2 | 61.4 | 0.2 |
| **47** | South of Lennox Boulevard | 61.2 | 61.5 | 0.3 |
| **48** | North of 111th Street | 61.2 | 61.5 | 0.3 |
| **48** | South of 111th Street | 61.4 | 61.2 | -0.2 |
| **49** | North of I-405 Southbound Ramps | 61.5 | 61.3 | -0.2 |
| **49** | South of I-405 Southbound Ramps | 61.5 | 61.1 | -0.4 |
| **50** | North of Imperial Highway | 67.6 | 67.1 | -0.5 |
| | ***Century Boulevard*** | | | |
| **14** | East of Avion Drive | 69.7 | 69.4 | -0.3 |
| **20** | West of Airport Boulevard | 69.6 | 69.4 | -0.2 |
| **20** | East of Airport Boulevard | 69.8 | 67.7 | -2.1 |
| **27** | West of Bellanca Avenue | 69.9 | 69.6 | -0.3 |
| **27** | East of Bellanca Avenue | 70.3 | 69.7 | -0.6 |
| **30** | West of Aviation Boulevard | 70.4 | 69.7 | -0.7 |
| **30** | East of Aviation Boulevard | 67.6 | 66.4 | -1.2 |
| **38** | West of Concourse Way | 68.9 | 67.4 | -1.5 |
| **38** | East of Concourse Way | 69.0 | 68.9 | -0.1 |
| **44** | West of La Cienega Boulevard | 65.5 | 65.2 | -0.3 |
| | ***Lincoln Boulevard*** | | | |
| **4** | North of Sepulveda Boulevard | **72.9** | **73.1** | 0.2 |
| | ***111th Street*** | | | |
| **32** | East of Aviation Boulevard | 58.6 | 59.9 | 1.3 |
| **48** | West of La Cienega Boulevard | 56.1 | 55.1 | -1.0 |
| | ***104th Street*** | | | |
| **31** | East of Aviation Boulevard | 54.1 | 52.6 | -1.5 |
| **46** | West of La Cienega Boulevard | 55.7 | 55.2 | -0.5 |

NOTE: Values in **BOLD** approach or exceed the Caltrans Activity Category E threshold of 72 dBA.

SOURCE: Meridian Consultants, February 2017.

PREPARED BY: Ricondo & Associates, Inc., February 2017.

**Table 5-21 (1 of 2): Future (2030) Modeled Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | NO ACTION ALTERNATIVE (DBA) | PROPOSED ACTION ALTERNATIVE (DBA) | COMPARISON OF PROPOSED ACTION TO NO ACTION (DBA) |
|---|---|---|---|---|
| | ***Sepulveda Boulevard*** | | | |
| **2** | South of La Tijera Boulevard | 65.6 | 65.4 | -0.2 |
| **3** | North of Westchester Parkway | 66.0 | 65.8 | -0.2 |
| **3** | South of Westchester Parkway | 69.5 | 69.3 | -0.2 |
| **4** | North of Lincoln Boulevard | 66.6 | 66.8 | 0.2 |
| **4** | South of Lincoln Boulevard | 70.0 | 70.2 | 0.2 |
| **5** | North of Century Boulevard | **77.7** | **77.3** | -0.4 |
| **5** | South of Century Boulevard | **77.4** | **77.2** | -0.2 |
| **6** | North of I-105 Westbound Ramps | **78.4** | **78.2** | -0.2 |
| **6** | South of I-105 Westbound Ramps | **76.0** | **75.9** | -0.1 |
| **7** | North of Imperial Highway | **76.5** | **76.4** | -0.1 |
| | ***Westchester Parkway*** | | | |
| **3** | East of Sepulveda Boulevard | 61.5 | 61.5 | 0.0 |
| **11** | West of Sepulveda Eastway | 61.8 | 62.3 | 0.5 |
| **11** | East of Sepulveda Eastway | 62.7 | 62.7 | 0.0 |
| **13** | West of Jenny Avenue | 62.1 | 63.7 | 1.6 |
| **13** | East of Jenny Avenue | 62.5 | 63.8 | 1.3 |
| **17** | West of Airport Boulevard | 62.6 | 63.8 | 1.2 |
| | ***Arbor Vitae Street*** | | | |
| **17** | East of Airport Boulevard | 63.3 | 63.4 | 0.1 |
| **29** | West of Aviation Boulevard | 63.6 | 63.4 | -0.2 |
| **29** | East of Aviation Boulevard | 66.0 | 65.9 | -0.1 |
| **37** | West of Isis Avenue | 65.7 | 66.1 | 0.4 |
| **37** | East of Isis Avenue | 65.7 | 67.1 | 1.4 |
| **42** | West of La Cienega Boulevard | 65.3 | 66.7 | 1.4 |
| | ***Airport Boulevard*** | | | |
| **17** | South of Westchester Parkway | 64.1 | 63.0 | -1.1 |
| **18** | North of 96th Street | 67.2 | 66.2 | -1.0 |
| **18** | South of 96th Street | 66.0 | 65.5 | -0.5 |
| **19** | North of 98th Street | 66.1 | 65.6 | -0.5 |
| **19** | South of 98th Street | 64.4 | 63.7 | -0.7 |
| **20** | North of Century Boulevard | 64.6 | 63.9 | -0.7 |
| | ***Aviation Boulevard*** | | | |
| **29** | South of Arbor Vitae Street | **71.7** | **72.7** | 1.0 |
| **30** | North of Century Boulevard | **71.2** | **72.7** | 1.5 |
| **30** | South of Century Boulevard | 68.7 | 69.3 | 0.6 |
| **31** | North of 104th Street | 68.7 | 69.4 | 0.7 |
| **31** | South of 104th Street | 68.9 | 69.6 | 0.7 |
| **32** | North of 111th Street | 68.9 | 69.6 | 0.7 |
| **32** | South of 111th Street | 69.0 | 67.9 | -1.1 |
| **33** | North of Imperial Highway | 69.0 | 67.8 | -1.2 |

**Table 5-21 (2 of 2): Future (2030) Modeled Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | NO ACTION ALTERNATIVE (DBA) | PROPOSED ACTION ALTERNATIVE (DBA) | COMPARISON OF PROPOSED ACTION TO NO ACTION (DBA) |
|---|---|---|---|---|
| | ***La Cienega Boulevard*** | | | |
| **42** | South of Arbor Vitae Street | 62.8 | 63.2 | 0.4 |
| **43** | North of I-405 Southbound Ramps | 63.0 | 63.5 | 0.5 |
| **43** | South of I-405 Southbound Ramps | 68.9 | 68.7 | -0.2 |
| **44** | North of Century Boulevard | 62.0 | 62.0 | 0.0 |
| **44** | South of Century Boulevard | 62.2 | 62.7 | 0.5 |
| **45** | North of I-405 Southbound Ramps | 62.5 | 62.9 | 0.4 |
| **45** | South of I-405 Southbound Ramps | 61.4 | 62.3 | 0.9 |
| **46** | North of 104th Street | 61.3 | 62.3 | 1.0 |
| **46** | South of 104th Street | 61.6 | 62.5 | 0.9 |
| **47** | North of Lennox Boulevard | 61.5 | 62.4 | 0.9 |
| **47** | South of Lennox Boulevard | 61.5 | 62.4 | 0.9 |
| **48** | North of 111th Street | 61.5 | 62.4 | 0.9 |
| **48** | South of 111th Street | 61.7 | 62.2 | 0.5 |
| **49** | North of I-405 Southbound Ramps | 61.7 | 62.3 | 0.6 |
| **49** | South of I-405 Southbound Ramps | 61.7 | 62.1 | 0.4 |
| **50** | North of Imperial Highway | 67.8 | 68.3 | 0.5 |
| | ***Century Boulevard*** | | | |
| **14** | East of Avion Drive | 70.1 | 69.0 | -1.1 |
| **20** | West of Airport Boulevard | 69.9 | 69.0 | -0.9 |
| **20** | East of Airport Boulevard | 69.8 | 68.5 | -1.3 |
| **27** | West of Bellanca Avenue | 70.2 | 69.5 | -0.7 |
| **27** | East of Bellanca Avenue | 70.6 | 69.9 | -0.7 |
| **30** | West of Aviation Boulevard | 70.6 | 69.9 | -0.7 |
| **30** | East of Aviation Boulevard | 67.9 | 67.3 | -0.6 |
| **38** | West of Concourse Way | 69.2 | 68.5 | -0.7 |
| **38** | East of Concourse Way | 69.3 | 69.1 | -0.2 |
| **44** | West of La Cienega Boulevard | 66.2 | 65.7 | -0.5 |
| | ***Lincoln Boulevard*** | | | |
| **4** | North of Sepulveda Boulevard | **72.9** | **73.1** | 0.2 |
| | ***111th Street*** | | | |
| **32** | East of Aviation Boulevard | 60.4 | 60.3 | -0.1 |
| **48** | West of La Cienega Boulevard | 56.8 | 56.7 | -0.1 |
| | ***104th Street*** | | | |
| **31** | East of Aviation Boulevard | 55.4 | 53.3 | -2.1 |
| **46** | West of La Cienega Boulevard | 56.0 | 54.3 | -1.7 |

NOTE: Values in **BOLD** approach or exceed the Caltrans Activity Category E threshold of 72 dBA.

SOURCE: Meridian Consultants, February 2017.

PREPARED BY: Ricondo & Associates, Inc., February 2017.

**Table 5-22 (1 of 2): Future (2035) Modeled Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | NO ACTION ALTERNATIVE (DBA) | PROPOSED ACTION ALTERNATIVE (DBA) | COMPARISON OF PROPOSED ACTION TO NO ACTION (DBA) |
|---|---|---|---|---|
| | ***Sepulveda Boulevard*** | | | |
| **2** | South of La Tijera Boulevard | 65.7 | 65.5 | -0.2 |
| **3** | North of Westchester Parkway | 66.0 | 65.8 | -0.2 |
| **3** | South of Westchester Parkway | 69.5 | 69.4 | -0.1 |
| **4** | North of Lincoln Boulevard | 66.7 | 66.9 | 0.2 |
| **4** | South of Lincoln Boulevard | 70.0 | 70.2 | 0.2 |
| **5** | North of Century Boulevard | **77.7** | **77.3** | -0.4 |
| **5** | South of Century Boulevard | **77.4** | **77.4** | 0.0 |
| **6** | North of I-105 Westbound Ramps | **78.4** | **78.2** | -0.2 |
| **6** | South of I-105 Westbound Ramps | **76.1** | **75.9** | -0.2 |
| **7** | North of Imperial Highway | **76.5** | **76.5** | 0.0 |
| | ***Westchester Parkway*** | | | |
| **3** | East of Sepulveda Boulevard | 61.7 | 61.7 | 0.0 |
| **11** | West of Sepulveda Eastway | 61.9 | 61.9 | 0.0 |
| **11** | East of Sepulveda Eastway | 62.9 | 62.9 | 0.0 |
| **13** | West of Jenny Avenue | 62.3 | 63.8 | 1.5 |
| **13** | East of Jenny Avenue | 62.6 | 63.9 | 1.3 |
| **17** | West of Airport Boulevard | 62.6 | 63.9 | 1.3 |
| | ***Arbor Vitae Street*** | | | |
| **17** | East of Airport Boulevard | 63.4 | 63.5 | 0.1 |
| **29** | West of Aviation Boulevard | 63.7 | 63.5 | -0.2 |
| **29** | East of Aviation Boulevard | 66.2 | 65.9 | -0.3 |
| **37** | West of Isis Avenue | 66.2 | 66.0 | -0.2 |
| **37** | East of Isis Avenue | 66.1 | 66.6 | 0.5 |
| **42** | West of La Cienega Boulevard | 65.4 | 67.1 | 1.7 |
| | ***Airport Boulevard*** | | | |
| **17** | South of Westchester Parkway | 64.2 | 63.4 | -0.8 |
| **18** | North of 96th Street | 67.3 | 66.3 | -1.0 |
| **18** | South of 96th Street | 66.2 | 65.3 | -0.9 |
| **19** | North of 98th Street | 66.3 | 65.5 | -0.8 |
| **19** | South of 98th Street | 64.2 | 63.3 | -0.9 |
| **20** | North of Century Boulevard | 64.4 | 63.1 | -1.3 |
| | ***Aviation Boulevard*** | | | |
| **29** | South of Arbor Vitae Street | **71.8** | **73.0** | 1.2 |
| **30** | North of Century Boulevard | **71.3** | **73.6** | 2.3 |
| **30** | South of Century Boulevard | 68.7 | 69.5 | 0.8 |
| **31** | North of 104th Street | 68.7 | 69.4 | 0.7 |
| **31** | South of 104th Street | 69.0 | 69.8 | 0.8 |
| **32** | North of 111th Street | 68.9 | 69.4 | 0.5 |
| **32** | South of 111th Street | 69.1 | 67.4 | -1.7 |
| **33** | North of Imperial Highway | 69.1 | 67.8 | -1.3 |

**Table 5-22 (2 of 2): Future (2035) Modeled Peak Hour Roadway Noise Levels**

| STUDY INTERSECTION | ROADWAY SEGMENT | NO ACTION ALTERNATIVE (DBA) | PROPOSED ACTION ALTERNATIVE (DBA) | COMPARISON OF PROPOSED ACTION TO NO ACTION (DBA) |
|---|---|---|---|---|
| | ***La Cienega Boulevard*** | | | |
| **42** | South of Arbor Vitae Street | 62.7 | 62.7 | 0.0 |
| **43** | North of I-405 Southbound Ramps | 63.0 | 62.9 | -0.1 |
| **43** | South of I-405 Southbound Ramps | 68.9 | 68.5 | -0.4 |
| **44** | North of Century Boulevard | 62.0 | 61.8 | -0.2 |
| **44** | South of Century Boulevard | 62.3 | 62.2 | -0.1 |
| **45** | North of I-405 Southbound Ramps | 62.6 | 62.5 | -0.1 |
| **45** | South of I-405 Southbound Ramps | 61.5 | 61.7 | 0.2 |
| **46** | North of 104th Street | 61.5 | 61.7 | 0.2 |
| **46** | South of 104th Street | 61.7 | 61.9 | 0.2 |
| **47** | North of Lennox Boulevard | 61.7 | 61.9 | 0.2 |
| **47** | South of Lennox Boulevard | 61.7 | 61.9 | 0.2 |
| **48** | North of 111th Street | 61.7 | 61.9 | 0.2 |
| **48** | South of 111th Street | 61.8 | 61.6 | -0.2 |
| **49** | North of I-405 Southbound Ramps | 61.8 | 61.7 | -0.1 |
| **49** | South of I-405 Southbound Ramps | 61.8 | 61.4 | -0.4 |
| **50** | North of Imperial Highway | 68.0 | 67.5 | -0.5 |
| | ***Century Boulevard*** | | | |
| **14** | East of Avion Drive | 70.2 | 69.2 | -1.0 |
| **20** | West of Airport Boulevard | 69.9 | 69.2 | -0.7 |
| **20** | East of Airport Boulevard | 70.2 | 68.3 | -1.9 |
| **27** | West of Bellanca Avenue | 70.1 | 70.2 | 0.1 |
| **27** | East of Bellanca Avenue | 70.6 | 70.2 | -0.4 |
| **30** | West of Aviation Boulevard | 70.6 | 70.1 | -0.5 |
| **30** | East of Aviation Boulevard | 68.0 | 67.0 | -1.0 |
| **38** | West of Concourse Way | 69.3 | 68.1 | -1.2 |
| **38** | East of Concourse Way | 69.4 | 69.3 | -0.1 |
| **44** | West of La Cienega Boulevard | 66.4 | 65.9 | -0.5 |
| | ***Lincoln Boulevard*** | | | |
| **4** | North of Sepulveda Boulevard | **73.0** | **73.2** | 0.2 |
| | ***111th Street*** | | | |
| **32** | East of Aviation Boulevard | 60.3 | 60.5 | 0.2 |
| **48** | West of La Cienega Boulevard | 57.2 | 56.7 | -0.5 |
| | ***104th Street*** | | | |
| **31** | East of Aviation Boulevard | 55.4 | 53.3 | -2.1 |
| **46** | West of La Cienega Boulevard | 56.3 | 55.7 | -0.6 |

NOTE: Values in **BOLD** approach or exceed the Caltrans Activity Category E threshold of 72 dBA.

SOURCE: Meridian Consultants, February 2017.

PREPARED BY: Ricondo & Associates, Inc., February 2017.

### 2024

As shown in Table 5-20 in 2024, nine Study Intersections would exceed the Caltrans threshold of 72 dBA under the Proposed Action Alternative. Eight of these Study Intersections would be the same as those listed above that approach or exceed the Caltrans threshold in 2024 for the No Action Alternative. In addition to the eight Study Intersections, Aviation Boulevard Study Intersection 30 would exceed the 72 dBA threshold for the Proposed Action Alternative. Five of the Study Intersections that would exceed the Caltrans threshold of 72 dBA would experience reduced noise levels under the Proposed Action Alternative as compared with the No Action Alternative. The remaining four Study Intersections would experience minor noise increases as compared with the No Action Alternative, ranging from a 0.1 dBA increase to a 2.0 dBA increase. These noise level increases are lower than the Caltrans threshold of 12 dBA for a substantial noise increase. Therefore, since these nine Study Intersections would not experience a substantial increase under the Proposed Action Alternative, there would be no significant noise impact from the Proposed Action Alternative as compared with the No Action Alternative.

### 2030 and 2035

As shown as bold values in Table 5-21 for 2030 and Table 5-22 for 2035, eight Study Intersections would approach or exceed the Caltrans threshold of 72 dBA for the Proposed Action Alternative. These eight Study Intersections would be the same intersections as the 9 that approach or exceed the Caltrans threshold in 2024 under the Proposed Action Alternative, with the exception of Sepulveda Study Intersection 4. Of the eight intersections that approach or exceed the Caltrans threshold under the No Action and Proposed Action Alternatives, five of these Study Intersections would experience reduced noise levels or no increase in noise levels under the Proposed Action Alternative as compared with the No Action Alternative. The remaining three Study Intersections would experience minor noise increases as compared with the No Action Alternative, ranging from a 0.2 dBA increase to a 1.5 dBA increase. These noise level increases are lower than the Caltrans threshold of 12 dBA for a substantial noise increase. Therefore, since these Study Intersections approach or are above the Caltrans threshold in 2030 for both the No Action Alternative and Proposed Action Alternative and do not experience a substantial increase under the Proposed Action Alternative, there would be no significant noise impact from the Proposed Action Alternative as compared with the No Action Alternative.

#### 5.8.4.2.2 Transit Noise

**Table 5-23** provides the predicted noise levels of the proposed APM guideway at the identified noise-sensitive receptors. Noise-sensitive receptors RP6 and RP9 through RP14 would be acquired by LAWA and demolished prior to implementation of the Proposed Action Alternative. RP7 and RP8 are industrial/warehousing facilities, which are not noise-sensitive receptors. Therefore, further analysis for these receptors was not necessary.

**Table 5-23: Transit Noise Levels**

| SENSITIVE RECEPTOR ID | EXISTING LAND USE | ADDRESS/ LOCATION | DISTANCE FROM APM GUIDEWAY (FEET) | EXISTING PEAK HOUR $L_{eq}$ (dBA) | FTA NOISE THRESHOLD AT AMBIENT NOISE LEVEL (SEE TABLE 5-16, (dBA)) | PROPOSED APM SOUND LEVELS (dBA) | IMPACT |
|---|---|---|---|---|---|---|---|
| NA | LAX Theme Building | 1d Center Way, Los Angeles | 43 | 76.3 1/ | <66 | 64.3 | No |
| RP1 | Concourse Hotel | 6225 W. Century Boulevard, Los Angeles | 1,180 | 76.3 2/ | <66 | 64.2 | No |
| RP2 | LAX Sheraton Gateway Hotel | 6107 W. 98th Street, Los Angeles | 100 | 75.3 | <66 | 64.2 | No |
| RP3 | LAX Sheraton Gateway Hotel | 6101 W. Century Boulevard, Los Angeles | 100 | 71.4 | <66 | 66.3 | Yes |
| RP4 | Office Building | 6052 W. 98th Street, Los Angeles | 760 | 75.6 | <66 | 62.0 | No |
| RP5 | Four Points Sheraton Hotel | 9750 Airport Boulevard, Los Angeles | 115 | 71.7 | <66 | 52.9 | No |
| RP15 | Residential Development | 700 W. Arbor Vitae Street, Los Angeles | 2,300 | 67.3 | <63 | 44.9 | No |

NOTES:

NA = Not Applicable

RP9 through RP14 are located within Manchester Square and would be removed due to development of the CONRAC and the ITF East. RP6 would be removed due to development of the APM MSF.

1/ Existing ambient noise levels were not measured within the CTA, therefore a representative measurement at RP1 has been used for the Theme Building location. As the Theme Building is closer in proximity to roadway traffic and airport operations than RP1, it is assumed that existing noise levels would be equal to or greater than RP1.

2/ Two peak-hour measurements at the Concourse Hotel were supplemented due to technical complications with the 24-hour measurement. The higher of the two peak-hour measurements at the Concourse Hotel was 76.3 dBA.

SOURCE: Meridian Consultants, 2016.
PREPARED BY: Ricondo & Associates, Inc., September 2016.

As shown in Table 5-23, predicted noise levels associated with APM operations would result in moderate sound levels, 0.3 dBA above the FTA specified noise threshold for the existing ambient level at one sensitive receptor, RP2 (LAX Sheraton Gateway Hotel). All other noise-sensitive receptors would experience future noise levels below the FTA thresholds for the existing ambient noise levels (see Table 5-16). The results of the predictive modeling process are shown graphically on **Figure 5-10**. Because the existing ambient noise level at location RP2 is 77.4 dBA and the proposed APM sound level would be 66.3 dBA, noise associated with the operation of the APM would not be significant.

### 5.8.5 MITIGATION MEASURES

As indicated in Sections 5.8.3 and 5.8.4, implementation of the Proposed Action Alternative would not result in significant noise impacts when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.9 Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks

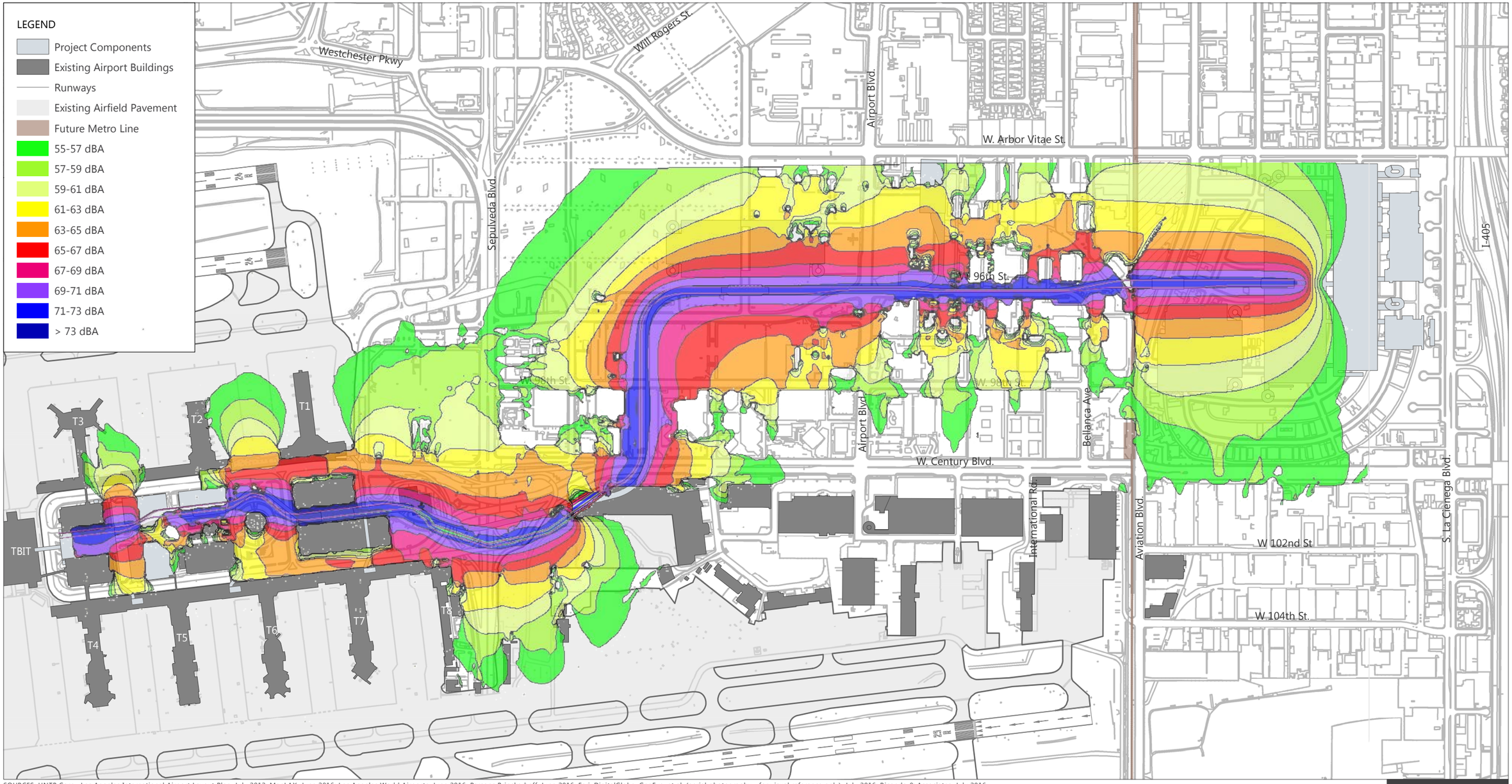
### 5.9.1 METHODOLOGY

#### 5.9.1.1 Socioeconomics

Socioeconomic data, including demographics (race and ethnicity), housing characteristics, and employment data was gathered using U.S. Census data for the two census tracts located within the Proposed Project Area with a known population (see Tables 4-12, 4-14 and 4-15).[42] Projected population, housing, and employment were compared to existing conditions of the Project site and significance thresholds to determine potential impacts. Secondary (induced) impacts were analyzed for the jurisdictions within or adjacent to the Proposed Project Area boundaries, as well as nearby cities which could potentially be affected by the Proposed Action Alternative. The jurisdictions assessed include the cities of Culver City, El Segundo, Hawthorne, and Inglewood; the Westchester-Playa del Rey Community Plan and the LAX Plan areas (City of Los Angeles); and the Los Angeles County unincorporated communities of Del Aire and Lennox (see Figure 1-1).

Social impacts were determined through the evaluation on how the implementation of the No Action and Proposed Action Alternatives could impact sensitive populations and resources important to surrounding populations.

[42] As noted in Section 4.11.2, the Proposed Project Area is comprised of six U.S. Census Tracts; however, four of these tracts have minimal or no residential or commercial uses, or census data is not collected.




SOURCES: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, June 2016; Los Angeles World Airports, June 2016; Parsons Brinckerhoff, June 2016; Esri, DigitalGlobe, GeoEye, et al. (aerial photography - for visual reference only), July 2016; Ricondo & Associates, July 2016.
PREPARED BY: Meridian Consultants, LLC, April 2016; Ricondo & Associates, Inc., September 2016.

**FIGURE 5-10**

NORTH 0 800 ft.

## Modeled Transit Noise Contours

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#### 5.9.1.2 Environmental Justice

U.S. Department of Transportation (DOT) Updated Order 5610.2(a), *Actions to Address Environmental Justice in Minority Population and Low-Income Populations* (May 2, 2012), was used to undertake the environmental justice analysis as required under Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (February 11, 1994). Environmental justice impacts were evaluated by determining whether the No Action Alternative and the Proposed Action Alternative would have disproportionately high and adverse human health or environmental effects on minority and low-income populations, including interrelated social and economic effects. Also evaluated were impacts to resources important to communities of environmental justice concern.

Environmental justice also includes the opportunity for meaningful public involvement by minority and low-income populations. Public involvement opportunities to date include the public Scoping meeting held June 22, 2016, as well as numerous public meetings held in the community during LAWA's state environmental review process. Minority and low-income populations will have the opportunity to review and comment on the Proposed Action, the alternatives considered, the demographic analysis that identifies and addresses potential impacts on these populations, and the associated impacts of each alternative.

A census tract has the potential to contain a community of environmental justice concern when the minority or low-income population of the analysis area is "meaningfully greater" than that of the surrounding areas. Poverty was determined using U.S. Department of Housing and Urban Development, Health and Human Services Poverty Guidelines as utilized by the U.S. Census. Finally, Executive Order 13166, *Improving Access to Services for Persons with Limited English Proficiency* (August 11, 2000), requires that Federal agencies provide the opportunity for Limited English Proficiency (LEP) communities to be involved in the planning process by having access to translated materials and/or translation services during meetings. For this evaluation, the LEP population was calculated within the Proposed Project Area and the public outreach effort was evaluated.

#### 5.9.1.3 Children's Environmental Health and Safety Risk

Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks* (April 21, 1997), requires federal agencies to prioritize the identification and assessment of environmental health and safety risks resulting from policies, programs, activities, and standards that may disproportionately affect children. Impacts of alternatives studied in detail were assessed with regard to compliance with Executive Order 13045. The locations of schools in the Proposed Project Area were identified and any specific health concerns for children qualitatively described. A significant impact would occur if the action would result in disproportionate health and safety risks to children.

#### 5.9.1.4 Public Services

##### 5.9.1.4.1 Fire Protection

Impacts on fire protection services were assessed by analyzing how the Proposed Action Alternative would change the need for, and response times of, fire protection services. The approach to evaluating impacts on

fire services considers whether conditions under the Proposed Action Alternative would meet key criteria set forth by the Los Angeles Fire Department (LAFD), or required by the Los Angeles Fire Code (LAFC), or Code of Federal Regulations (CFR). Key factors considered include: emergency access, response times, and station response distances.

#### 5.9.1.4.2 Law Enforcement

Impacts on law enforcement services were assessed by analyzing how the Proposed Action Alternative would change the need for, and response times of, law enforcement services. The approach to evaluating impacts on law enforcement services considers whether the Proposed Action Alternative would result in restricted emergency access, increased response times, extended station response distances, or decreased services based on requirements and standards set forth by the Los Angeles Police Department (LAPD) and Los Angeles World Airports Police Department (LAWAPD).

### 5.9.1.5 Surface Transportation

#### 5.9.1.5.1 Construction Traffic

Construction traffic impacts of the Proposed Action Alternative were determined for the peak construction period (January 2020). The estimated peak hours for construction-related traffic were determined by reviewing the estimated hourly construction-related trip activity under the Proposed Action Alternative. The a.m. peak hour was determined to be 7:00 a.m. to 8:00 a.m. and the p.m. peak hour was determined to be 4:00 p.m. to 5:00 p.m. The analysis for construction traffic included intersections that are located within the City of Los Angeles.

#### 5.9.1.5.2 On-Airport Traffic

On-Airport traffic impacts to the signalized CTA intersections and roadway links were analyzed as a result of variations in traffic accompanying the changes in passenger demand and peaking characteristics anticipated to occur in 2024 and 2030/2035. As noted in **Appendix D**, passenger forecasts for LAX from 2030 to 2035 were held constant, thus, traffic conditions on the On-Airport roadway system are anticipated to be similar in both forecast years. The traffic demand estimates prepared for this study were developed using a trip generation and trip distribution model that provides traffic volume estimates for all roadway links and curbside links within the CTA roadway system during multiple peak hour conditions for the future No Action and Proposed Action Alternatives. Signalized CTA intersections were analyzed to assess the effects of changes in vehicle activity and physical facilities throughout the CTA. It is critical to analyze vehicular intersections because these facilities meter traffic throughout the CTA roadway system and because they are key factors for vehicle throughput on the on-Airport roadways. Signalized intersections with two or more directions of vehicular travel were evaluated.

Key CTA roadway links were also analyzed to assess potential implications on overall CTA throughput. The evaluation of the roadways throughput performance accounted for any loss of vehicle throughput as a result

of the curbside operations. Roadway throughput performance, expressed in terms of vehicles per hour, is a measure of the number of vehicles that can pass a given roadway section in an hour. For this analysis, vehicle congestion created by stopped vehicles at the adjacent curbside is accounted for when evaluating the impacts on the roadway's throughput capacity. The curbside congestion reduces the roadway throughput. Key roadway links were analyzed to assess potential congestion along both the upper level and lower levels of the CTA roadway system.

Levels of service analyses for the signalized CTA intersections were prepared using TRAFFIX,® a commercially available traffic analysis program designed for preparing traffic forecasts and analyzing intersection and roadway capacities. See **Appendix K** for details.

#### 5.9.1.5.3 Off-Airport Traffic

The methodology and assumptions used in the off-Airport traffic analysis were established in conjunction with Caltrans and Los Angeles City Department of Transportation (LADOT). The methodology and assumptions were also shared with the County of Los Angeles, Department of Transportation, SCAG, Metro, and the Cities of Inglewood and El Segundo. The future 2024, 2030, and 2035 off-Airport traffic volume forecasts were developed using models and the land use/socio-economic data from SCAG's 2012 Regional Transportation Plan model data set and the City of Los Angeles' Westside Mobility Plan model as the base. The data set was also updated to include planned roadway improvements. To determine future trip generation, adjustments were made to the 2014 passenger mode splits to reflect how changes to the regional transportation network, including the Metro Crenshaw/LAX Line and Green Line, would affect passenger mode choice and resultant vehicle activity at the Airport. See **Appendix L** for additional details regarding methodology.

#### 5.9.1.5.4 Parking

Parking impacts were analyzed considering existing parking conditions, as discussed in Section 2.3.3 and in **Appendix C**, and future traffic volumes, consistent with those prepared for the on- and off-Airport traffic analyses. Key considerations included the addition/removal of parking spaces in the vicinity of the Airport.

### 5.9.2 SIGNIFICANCE THRESHOLDS

The FAA has not established significance thresholds for socioeconomic resources, environmental justice, or public services. However, FAA Order 1050.1F has identified several factors to consider when evaluating the context and intensity of potential socioeconomic and related impacts, as listed below for each environmental resource.

- Socioeconomic and Secondary (Induced) Impacts
  - Induce substantial economic growth in an area, either directly or indirectly (e.g., through establishing projects in an undeveloped area);
  - Disrupt or divide the physical arrangement of an established community;
  - Cause extensive relocation when sufficient replacement housing is unavailable;

- Cause extensive relocation of community businesses that would cause severe economic hardship for affected communities; or
- Produce a substantial loss in community tax base.

- Environmental Justice
  - Cause disproportionately high and adverse human health or environmental impacts to minorities and low-income populations, considering significant impacts in other environmental impact categories.
- Children's Environmental Health and Safety Risks
  - Cause disproportionate health and safety risks to children.

Similar to the above, the FAA has not established significance thresholds for public services. Factors to consider when determining the effects of an alternative on the availability of public services within the Proposed Project Area include an increase or decrease in water usage (see Section 5.7), transportation (discussed in this section), or utility services (see Section 5.7), as a result of an action. To determine impacts for law enforcement and fire protection services, this EA analyzes the Proposed Action Alternative for its potential to restrict emergency access, increase response times, extend station response distances, or decrease services beyond the standards required by the agencies serving LAX.

Similarly, surface transportation impacts are considered a part of socioeconomic impacts. FAA has not established a quantitative significance threshold specific to surface transportation impacts. Rather, a factor to consider when determining the effects of an alternative is whether the alternative would "disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities."[43]

Specific local significance criteria under the metrics established by these jurisdictions are presented in **Appendix L**. As noted, however, the analysis of surface transportation impacts in this EA depends on LOS outcomes related to the Proposed Action Alternative, not significance thresholds established at the local level.

## 5.9.3 CONSTRUCTION IMPACTS

### 5.9.3.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs.

[43] U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

#### 5.9.3.1.1 Socioeconomic and Secondary (Induced) Impacts

As of June 2016, there remain a total of 38 residential parcels containing 251 dwelling units, as well as two charter schools, within the Belford and Manchester Square areas that would be removed as part of the existing ANMP Relocation Plan, occurring with or without the LAX Landside Access Modernization Program. The existing ANMP Relocation Plan would remove all remaining housing units, and associated 530 residents, within the two occupied census tracts in the Proposed Project Area. The ANMP Relocation Plan includes the relocation of the Stella Middle School and Bright Start Secondary Charter Academies. The No Action Alternative would continue to implement the ANMP. The two schools are estimated to have a combined total of 33 full-time equivalent staff, which would likely relocate to the new school sites. The schools are a tenant of the Los Angeles Unified School District. The school administration, with LAWA's assistance, is searching for a new location closer to their student base, but has not yet made a determination as to where they will relocate.

The acquisitions and relocations completed to date under the ANMP Relocation Plan have been performed in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as well as California Government Code §7260, which establishes a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity. Compliance with these regulations would continue under the No Action Alternative.

Additionally, the Proposed Project Area site currently contains approximately 360 homeless people camping on city streets within Manchester Square.[44] As noted above, the Manchester Square area is located within the ANMP area. As the ANMP Relocation Plan is completed, city streets and rights-of-way in this area will no longer be accessible to the public, including homeless people. The City of Los Angeles is undertaking a phased approach by which the city streets and rights-of-way will be to closed to access, vacated, and fenced off to prohibit unauthorized access.

Homeless people currently in the area would have access to existing City, County, and local programs supporting homeless people. As part of the County and City of Los Angeles' initiatives to combat homelessness[45], the Los Angeles Homeless Services Authority (LAHSA) would continue to coordinate and fund such programs that provide shelter, housing, and services to homeless people. LAWA would continue to coordinate with the City of Los Angeles to ensure homeless people are aware of these available services and programs through on-site outreach workers. City Councilmember for the district, Mike Bonin, in partnership with the Los Angeles Mayor's Office, County Supervisor Mark Ridley Thomas' Office, and LAWA, has

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[44] Los Angeles Homeless Services Authority, "Homeless Count 2016 Result by Census Tract." The estimate of homeless people in the Belford and Manchester Square areas is based on U.S. Census tracts 2772.00 and 2774.00.

[45] The County of Los Angeles issued Recommended Strategies to Combat Homelessness on February 9, 2016 and the City of Los Angeles issued a Comprehensive Homeless Strategy on February 10, 2016. Additionally, the Mayor of Los Angeles issued Executive Directive No. 16 on April 29, 2016, "Implementation of the Comprehensive Homeless Strategy". The strategies are designed to house those who are currently homeless, prevent residents who have homes from falling into homelessness, and implement a street-based plan that protects public health and public safety along with the civil rights of people experiencing homelessness.

developed a City/County Task Force focused on providing outreach services and housing opportunities to homeless people camping in Manchester Square, relocation assistance, and increasing law enforcement patrols to maintain safety and security in the area. The Task Force consists of various City and County Departments responsible for providing homeless outreach services, including LAHSA, the Los Angeles County Department of Mental Health, the Los Angeles Police Department's Homeless Outreach Partnership Endeavor (HOPE) Team, and non-profit outreach service provider People Assisting the Homeless (PATH). This team is augmented by the LAWAPD, LAPD, and other necessary City Departments, such as the Los Angeles Bureau of Sanitation. Over the past year, the Task Force has provided a number of people with access to housing, with many more currently in the process of searching for housing opportunities. The Task Force will continue to focus on this as the City and County work together to increase services in the area.

Other socioeconomic effects associated with the No Action Alternative include generation of a minimal number of construction jobs associated with rental car facility expansion on private land; however, these jobs would be short-term and temporary in nature, and would not result in the generation of substantial increases in employment, nor would they substantially impact the community tax base. Additionally construction vehicles and construction worker vehicles would utilize existing major roads and would not require the construction of new roads that could result in the relocation of housing or businesses. Any employees required for the construction of the No Action Alternative would likely commute from the local Los Angeles area.

Minimal change to economic activity is anticipated to occur under the No Action Alternative. Minor disruption to economic activity may occur due to construction related to the anticipated expansion of existing private rental car and parking facilities. Temporary closures to such expanding facilities may occur; however, it is anticipated that this loss of economic activity would be compensated at other nearby private rental car and parking facilities. Construction activities under the No Action Alternative are not anticipated to adversely affect surrounding businesses.

#### 5.9.3.1.2 Environmental Justice and Children's Environmental Health and Safety Risk

The population of the Proposed Project Area can be characterized as having a larger percentage of minority population when compared to that of the City of Los Angeles or Los Angeles County (see Table 4-13). The census tracts within the Proposed Project Area have a slightly less percentage of residents below the poverty level than the City of Los Angeles (21.3 percent and 19.9 percent for Census tracts 2772 and 2774 respectively versus 22.1 percent for the City of Los Angeles), but slightly greater than for Los Angeles County (18.2 percent for Los Angeles County).

Construction-related air quality impacts on the residential and recreational areas, including schools, in the vicinity of and within the Proposed Project Area would not exceed applicable significant impact thresholds (including federal ambient air quality standards) under the No Action Alternative (see Section 5.1). An analysis of climate (see Section 5.2), noise (see Section 5.8), and surface transportation (see Section 5.9.3.1.4) indicates that under the No Action Alternative, the rental car companies and private parking operators would expand their facilities to meet projected demand, causing some construction traffic on area roadways. Effects of this

construction on lighting and visual character (see Section 5.10), hazardous materials (see Section 5.4), and water resources (see Section 5.11) are anticipated to be minimal, assuming compliance with applicable regulations. Impacts associated with relocation of the residents under the No Action Alternative would be avoided or minimized through early and consistent communication regarding the benefits offered under the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Effects associated with the loss of access to rights-of-way within Manchester Square under the No Action Alternative would be avoided or minimized because the homeless people would have access to existing City, County, and local programs supporting homeless people, as well as on-site outreach and relocation assistance. Therefore, there would not be disproportionately high and adverse human health or environmental impacts to minority and low-income populations attributable to construction associated with the No Action Alternative.

#### 5.9.3.1.3 Public Services

Under the No Action Alternative, construction associated with the LAX Landside Access Modernization Program would not occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Construction of these facilities would temporarily disrupt local traffic patterns, but are not anticipated to substantially interfere with public services.

#### 5.9.3.1.4 Surface Transportation

Under the No Action Alternative, construction associated with the LAX Landside Access Modernization Program would not occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Construction of these facilities would temporarily disrupt local traffic patterns but are not anticipated to substantially reduce the levels of service on local roadways.

Minimal change to economic activity is anticipated to occur under the No Action Alternative. A potential increase in economic activity may occur due to the anticipated expansion of existing private rental car and parking facilities; however, this would be similar to what already occurs today, as private businesses expand to meet demand for these services if it makes economic sense for them to do so. No businesses would be displaced as a result of the No Action Alternative.

### 5.9.3.2 Proposed Action Alternative

#### 5.9.3.2.1 Socioeconomic and Secondary (Induced) Impacts

Construction of the Proposed Action Alternative would not include any permanent or temporary residential structures that would induce population growth directly through the construction of housing. However, as in the No Action Alternative, the Proposed Action Alternative would continue to implement the existing ANMP Relocation Plan for the Belford and Manchester Square areas. The existing ANMP Relocation Plan would remove the remaining 251 dwelling units, and associated 530 residents, as well as two charter schools, within

the two occupied census tracts in the Proposed Project Area. These acquisitions would occur under both the No Action Alternative and the Proposed Action Alternative.

If the land acquisition under the existing ANMP Relocation Plan for the Belford and Manchester Square areas is not completed by commencement of construction of the Proposed Action Alternative, LAWA and the City of Los Angeles may be required to exercise the use of eminent domain to acquire these remaining properties. The acquisition of these properties would displace existing housing, but would be done so in compliance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 as well as California Government Code §7260, which establishes a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity.

Additionally, the Proposed Action Alternative site currently contains approximately 360 homeless people camping on city streets within Manchester Square.[46] As noted above, the Manchester Square area is located within the ANMP area. As the ANMP Relocation Plan is completed, city streets and rights-of-way in this area will no longer be accessible to the public, including homeless people.

LAHSA would continue to coordinate and fund such programs that provide shelter, housing, and services to homeless people within the County and City of Los Angeles. Additionally, Proposition HHH was approved in 2016 by City of Los Angeles voters, which is a bond measure that would raise up to $1.2 billion to help pay for housing for chronically homeless people. Prior to start of construction activities, LAWA would coordinate with the City of Los Angeles to ensure existing homeless people are aware of these available services and programs prior to vacation of City rights-of-way and closure of the area. As in the No Action Alternative, effects associated with the loss of access to rights-of-way within Manchester Square under the Proposed Action Alternative would be avoided or minimized, because the homeless people would have access to existing City, County, and local programs supporting homeless people.

The relocation of remaining Belford and Manchester Square residents would be similar to the No Action Alternative. Thus, impacts would not be significant when compared to the No Action Alternative.

Other socioeconomic effects associated with the Proposed Action Alternative include the generation of construction employment, which could indirectly induce population growth in jurisdictions adjacent to the Proposed Project Area. As shown in **Table 5-24**, construction of the Proposed Action Alternative would generate approximately 20 to 2,500 annual construction jobs between years 2018 and 2030. On most days, there would be far fewer construction workers at the work sites, as construction workers are typically on the work site on a temporary basis and during limited hours. Construction workers would likely commute from the vicinity and would not require a relocation of their residency as a consequence of the construction job opportunities generated by the Proposed Action Alternative.

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[46] Los Angeles Homeless Services Authority, "Data & Reports–Information on Los Angeles County's Homeless Population," https://www.lahsa.org/homeless-count/reports, accessed December 2016.

**Table 5-24: Proposed Action Alternative Construction Employment**

| CONSTRUCTION YEAR | NUMBER OF EMPLOYEES |
|---|---|
| **Phase 1** | |
| 2018 | 589 |
| 2019 | 1,461 |
| 2020 | 2,447 |
| 2021 | 1,485 |
| 2022 | 1,817 |
| 2023 | 1,467 |
| 2024 | 148 |
| **Phase 2** | |
| 2025 | 21 |
| 2026 | 42 |
| 2027 | 299 |
| 2028 | 269 |
| 2029 | 172 |
| 2030 | 154 |

SOURCE: Connico, April 2016.
PREPARED BY: Ricondo & Associates, Inc., May 2016.

SCAG's 2016–2040 RTP/SCS[47] Growth Forecast includes the components of the Proposed Action Alternative as ground access improvement projects to be initiated and/or completed by 2040. The anticipated new employment generated by construction of the Proposed Action Alternative fits within SCAG's future employment forecast for jurisdictions adjacent to the Proposed Project Area through year 2040. Peak employment of 2,447 construction employees in 2020 associated with construction of the Proposed Action Alternative represents less than 1 percent of SCAG's employment forecast for adjacent jurisdictions, which totals approximately 2,200,000 employees.[48] As the employment generated by the Proposed Action Alternative accounts for a small percent of SCAG's employment forecast for jurisdictions adjacent to the Airport, it is not likely to indirectly induce substantial population growth. Furthermore, construction jobs associated with the Proposed Action Alternative would be temporary in nature; due to the employment patterns of construction workers in Southern California, and the operation of the market for construction labor, construction workers are not likely, to any notable degree, relocate their residency as a consequence of the temporary construction employment opportunities presented by the Proposed Action Alternative.

47 Southern California Association of Governments, *Final 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy: A Plan for Mobility, Accessibility, Sustainability and a High Quality of Life*, Adopted April 7, 2016, Available: http://scagrtpscs.net/Pages/FINAL2016RTPSCS.aspx.

48 Estimated by applying annual growth rates calculated from the SCAG 2016–2040 RTP/SCS Growth Forecast.

Therefore, construction employment generated by the Proposed Action Alternative would not indirectly induce substantial population growth in jurisdictions adjacent to the Proposed Project Area. Overall, employment impacts associated with the Proposed Action Alternative would be consistent with existing forecasts and would result in benefits to socioeconomics as a result of increased employment opportunities as compared to the No Action Alternative; however it is not anticipated to substantially alter the local tax base.

Construction of the Proposed Action Alternative is anticipated to minimally affect economic activity of existing businesses within the Proposed Project Area. LAWA would maintain access to all existing businesses; lane and roadway closures, to the extent possible, would occur during off-peak hours, especially within the CTA or along any main access roads. As detailed in Section 5.9.3.2.5, a Construction Traffic Project Task Force would be implemented to coordinate roadway construction scheduling and detours with local stakeholders to ensure roadway construction impacts would be less than significant to businesses within the Proposed Project Area. Further details are provided in Section 5.9.3.2.5.

Several businesses would be removed/and or relocated to enable construction of the Proposed Action Alternative. Appendix A provides a description and list of the Proposed Action Alternative enabling projects and a list of facilities that would be acquired, demolished, and relocated. These projects are described in Section A.2 and Table A-2. Table A-4 provides a list of properties to be acquired as enabling projects for the Proposed Action Alternative facility components. Table A-5 provides a list of properties to be acquired for roadway improvement components of the Proposed Action Alternative. Construction of the Proposed Action Alternative is not anticipated to limit the ability for these businesses to operate once relocated. As such, construction of the Proposed Action Alternative is not anticipated to result in a significant impact to economic activity.

#### 5.9.3.2.2 Environmental Justice

Population characteristics and demographics in the Proposed Project Area are noted above under the No Action Alternative. The resident population and homeless people that would be affected by the Proposed Action Alternative are located within the ANMP Relocation Plan Area, as these areas are subjected to significant aircraft noise levels. LAWA has been acquiring parcels located within the ANMP Relocation Plan Area through voluntary acquisition since the early 2000s. While a portion of the resident population and homeless people are minority and/or low-income populations, the proportions of these populations are not substantially different compared to the City of Los Angeles and Los Angeles County.

Furthermore, the impacts to the resident population resulting from relocation would be minimized or avoided through compliance with Federal and State law and early and consistent communication with the public, as discussed above in the Socioeconomic and Secondary (Induced) Impacts section. Accordingly, there would be no disproportionately high or adverse impacts to an environmental justice community as a result of the relocation of remaining Belford and Manchester Square residents when compared to the No Action Alternative. Effects associated with the loss of access to rights-of-way within Manchester Square under the Proposed Action Alternative would be avoided or minimized because the homeless people would have access

to existing City, County, and local programs supporting homeless people, as well as on-site outreach and relocation assistance, similar to the No Action Alternative.

It is not anticipated that construction of the Proposed Action Alternative would result in significant adverse impacts to air quality, climate, noise, or traffic as noted in Sections 5.1, 5.2, 5.8, and 5.9. Additionally, no significant construction impacts related to lighting and visual character, hazardous materials or water resources are anticipated under the Proposed Action Alternative. Therefore, there are no disproportionately high or adverse impacts to an environmental justice community as a result of construction of the Proposed Action Alternative compared to the No Action Alternative.

#### 5.9.3.2.3 Children's Environmental Health and Safety Risk

Construction-related air quality impacts on the residential and recreational areas, including schools, in the vicinity of and within the Proposed Project Area would not exceed applicable significance thresholds, including the NAAQS (see Section 5.1). Similarly, no significant noise, hazardous materials or health-related impacts are expected. Therefore, construction of the Proposed Action Alternative would not result in significant health or safety risks to children when compared to the No Action Alternative.

#### 5.9.3.2.4 Public Services

Construction of the Proposed Action Alternative would alter ground access in the vicinity of LAX. Construction activities would include temporary and intermittent local roadway and/or lane closures along W. Century Boulevard, S. Sepulveda Boulevard, Westchester Parkway/W. Arbor Vitae Street, Airport Boulevard, Aviation Boulevard, W. 96th Street, W. 98th Street, and S. La Cienega Boulevard.

LAPD, LAWAPD, and LAFD average response times in and around the Proposed Project Area may temporarily increase as a result of the response distance, roadway closures, and traffic conditions. Construction of the proposed roadway improvements would contribute to increases in traffic congestion at various locations within the Proposed Project Area until the year 2024, when the majority of the roadway improvements would be completed. Traffic congestion would improve after 2024; however, the remaining roadway improvements would not be completed until 2030. Therefore, the phased implementation of these roadway improvements by 2024 and 2030 could cause temporary increases in emergency access times within the Proposed Project Area. LAWA would coordinate with LAPD, LAWAPD, and LAFD regarding emergency access and other design needs to ensure that there is adequate emergency access throughout the Proposed Project Area during construction. In the event construction activities would result in deterioration of traffic conditions, LAPD, LAWAPD, and LAFD would continue to implement use of emergency sirens and alternate response routes to help facilitate emergency access. Emergency service response times would not deteriorate to where they would be significant, as compared to the No Action Alternative. Additionally, the LAFD may utilize its temporary bike medic patrol teams during construction of the Proposed Action Alternative as a result of various road closures. This temporary mobile support would allow the LAFD to adequately provide emergency response within the CTA.

As described above, traffic congestion associated with construction of the Proposed Action Alternative could impede LAWAPD's, LAPD's and LAFD's emergency response activities. Therefore, construction of the Proposed Action Alternative could result in an increase in emergency response times. However, with the implementation of project design features detailed below in Section 5.9.3.2.5, impacts would not be significant when compared to the No Action Alternative.

#### 5.9.3.2.5 Surface Transportation

Construction activities associated with the Proposed Action Alternative would generate increased traffic associated with construction employees and deliveries in the vicinity of the Proposed Project Area, including the proposed staging areas (see Figure 4-2). Only a portion of the proposed construction staging areas would be utilized for the Proposed Action Alternative. Potential construction haul routes would be located along Imperial Highway, Aviation Boulevard, W. Century Boulevard, Airport Boulevard, and Sepulveda Boulevard. Alternate construction routes could be located on W. Arbor Vitae Street/Westchester Parkway and Sepulveda Boulevard north of W. 96th Street. These roads would potentially experience an increase in traffic due to construction hauling and employee traffic. Additionally, construction of proposed roadway improvements would result in temporary lane closures and detours throughout the Proposed Project Area.

The task of managing traffic congestion within the CTA and the adjacent off-Airport roadways during Project construction, particularly for the APM construction phases, would be addressed through LAWA staff and contracts with the entities that would construct the Proposed Action Alternative. Proactive decision-making would be important, along with the ability to quickly assess and address traffic congestion. Traffic control strategies would focus on both private and commercial vehicles accessing the CTA. To address local concerns LAWA would implement the following project design features (elements incorporated as part of the project to minimize environmental effects of the Proposed Action) to minimize construction traffic impacts.

- Construction Traffic Project Task Force. LAWA would establish a Project Task Force specific to the Proposed Action Alternative that may be comprised of key stakeholders from LAWA, the Coordination and Logistic Management Team (CALM), other City departments, and others as deemed appropriate. This Project Task Force would provide input into worksite traffic control plans and other traffic management plans that are developed for the Project. The Project Task Force would review the traffic management plans to ensure the following topics are considered:
  - Coordination with all other LAWA construction projects;
  - Coordination with other public infrastructure projects;
  - Detour impact analysis for pedestrian, business, bicycle, and traffic flow;
  - Coordinate closures and restricted access with all potential special events and holiday traffic flow
  - Notification to the public with use of static signage, changeable message signs, media announcements, Airport website, etc.;

- Work with LAWA police and the Los Angeles Police Department to enforce delivery times and routes;
- Coordinate with police and fire personnel regarding maintenance of emergency access and response times;
- Monitor and coordinate deliveries;
- Establish detour routes;
- Work with residential and commercial neighbors regarding upcoming construction activities; and
- Analyze traffic conditions to determine the need for additional traffic signals, signs, lane restriping, signal modifications, etc.

The Project Task Force would collaborate with the appropriate groups to develop a comprehensive and long-term communication and construction impact outreach strategy for implementation during construction. The Task Force would work closely with other LAWA departments, including Public Relations, Planning and Development, and Operations. The Task Force would also ensure that an innovative and effective construction outreach and communication strategy is developed to keep key stakeholders, businesses, and residents notified and informed during construction of the Proposed Action Alternative.

Prior to initiation of construction, contractors would be required to complete a Traffic Management Plan (TMP) with associated Haul Routes and Worksite Traffic Control Plans (WTCP), as well as Temporary Traffic Signal (TTS) Plans, and Temporary Street Lighting (TSL) Plans if TTSs and TSLs are needed. The TMP would include a description of how the contractor will manage all construction-related traffic, deliveries, shift hours, parking locations, haul routes, and modifications to shuttle system operations, if any. The WTCP would detail the locations for variable message and other signs, any lane striping changes, any detours, and traffic signal modifications. The WTCP, TTS, TSL, and Haul Routes would require input from the Project Task Force as well as any appropriate agencies and departments. Contractor compliance would be monitored throughout the duration of their contract. LAWA would require contractors to implement and comply with the following TMP measures to reduce construction-related traffic impacts associated with projects at LAX, including:

Designated Truck Delivery Hours

To the extent possible, truck deliveries of bulk materials such as aggregate, bulk cement, dirt, etc. to the project site, and hauling of material from the project site, shall be scheduled during off-peak hours to avoid the peak commuter and Airport traffic periods on designated haul routes. Peak commuter traffic periods are between 7:00 a.m. to 9:00 a.m. and 4:30 p.m. to 6:30 p.m. Monday through Friday. Peak Airport traffic periods occur throughout most of the day, therefore, to the extent possible, truck delivery hours shall be limited to overnight hours from 1:00 a.m. to 7:00 a.m.

Designated Truck Routes

For dirt, aggregate, bulk cement, and all other materials and equipment, truck deliveries would be on designated routes only (freeways and non-residential streets). Designated truck routes are limited to:

- Aviation Boulevard (Imperial Highway to Manchester Boulevard)
- Manchester Boulevard (Aviation Boulevard to I-405)
- Florence Avenue (Aviation Boulevard to I-405)
- La Cienega Boulevard (north of Imperial Highway)
- Pershing Drive (Westchester Parkway to Imperial Highway)
- Westchester Parkway (Pershing Drive to Sepulveda Boulevard)
- Century Boulevard (Sepulveda Boulevard to Aviation Boulevard)
- Sepulveda Boulevard (Westchester Parkway to Imperial Highway)
- Imperial Highway (Pershing Drive to I-405)
- I-405
- I-105

Stockpile Locations

All stockpile locations must be pre-approved by LAWA. Stockpile locations/laydown/staging areas shall be accessed by construction vehicles with minimal disruption near residential neighborhoods.

- Maintenance of Traffic. To ensure that continued vehicular access to community facilities is maintained, the contractor shall provide at least one lane of traffic in each direction on access cross streets that are not going to be dead-ended during construction. If one lane of traffic cannot be maintained, the contractor shall provide a detour route for motorists.
- Worksite Traffic Control Plans. Before the start of construction, Worksite Traffic Control Plans (WTCP) and Traffic Circulation Plans, including identification of detour requirements, will be formulated in cooperation with the affected municipalities and other jurisdictions (County, State) in accordance with the Work Area Traffic Control Handbook (WATCH) manual and the California Manual on Uniform Traffic Control Devices (MUTCD) as required by the relevant municipality. The WTCPs will be based on lane requirements and other special requirements defined by the LADOT, the affected municipalities for construction within their City and from other appropriate agencies for construction in those jurisdictions. The WTCP's shall be designed to maintain designated Safe Routes to School wherever possible during times of the year when nearby schools are in session. The WTCP's shall be reviewed and coordinated with the LAWA Project Task Force 30 days in advance of any restriction or closure, or with as much notice as technically feasible.

- Roadway Closure Restrictions. No designated major or secondary highway will be closed to vehicular or pedestrian traffic except at night or on weekends, unless approval is granted by the jurisdiction in which it is located.
- Traffic Maintenance During Construction. The following would be implemented during construction when appropriate City departments or local jurisdictions deem necessary:
  - Deliveries and pick-ups of construction materials shall be scheduled during non-peak travel periods to the degree possible and coordinated to reduce the potential of trucks waiting to load or unload for protracted periods of time.
  - Access shall remain unobstructed, or equivalent alternate access provided, for land uses in proximity to the Proposed Action Alternative site during construction.
  - Unless otherwise specified in the WTCP, the contractor shall maintain access to the businesses that rely on on-street parking and pedestrian access during construction. If it is necessary to temporarily restrict access to a business, the contractor shall provide the facility advance notice of restrictions. Unless otherwise specified in the WTCP, the contractor shall schedule access restrictions to off-peak hours or during times when the business is closed and shall not fully restrict access for the total hours of operation of business on any given day of operation.
  - Relative to maintaining access to businesses, construction activities shall be sequenced to minimize the temporary removal of multiple blocks of on-street parking at one time unless otherwise specified by the WTCP.
  - Contractors shall use temporary special signage to inform the public of closure information in advance of temporary closures. Signage shall also provide special access directions, if warranted.
  - Notice of closure will be prepared by the contractor with legible maps and reviewed prior to dissemination by the Project Task Force.
  - A construction management plan shall be developed by the contractor and will be implemented during construction, to include the following:
    - Establish requirements for the loading, unloading, and storage of materials on the project site.
    - Coordinate with the City and emergency and safety service providers to ensure adequate access is maintained to the project site and neighboring businesses.
  - In addition to the measures identified above, the contractor would be required to comply with City and local jurisdiction guidelines and regulations.

Although there may be short-term localized impacts associated with construction activities, the Proposed Action Alternative would not disrupt local traffic patterns or substantially reduce the levels of service of roads

serving LAX and its surrounding communities.[49] The project design features above would be implemented by LAWA to address local requirements regarding construction traffic impacts. Due to the temporary nature of construction activities, construction-related traffic impacts for the Proposed Action Alternative would not be significant when compared to the No Action Alternative.

## 5.9.4 OPERATIONAL IMPACTS

### 5.9.4.1 No Action Alternative

#### 5.9.4.1.1 Socioeconomic and Secondary (Induced) Impacts

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur and existing operations at LAX facilities would continue. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. While operations of these facilities may generate some employment growth, it would be consistent with adopted growth forecasts or policies and would not generate a substantial increase in employment. It is expected that any employees for operations of facilities under the No Action Alternative would likely commute from the local Los Angeles area and would not affect population and housing.

#### 5.9.4.1.2 Environmental Justice and Children's Environmental Health and Safety Risk

An analysis of air quality (see Section 5.1), climate (see Section 5.2), noise (see Section 5.8), and traffic (see Section 5.9.4.1.4) indicates that under the No Action Alternative, surface traffic and congestion are anticipated to continue to increase on area roadways and intersections, as LAX would continue to have one single-point of entry. Operational impacts related to lighting and visual character (see Section 5.10), hazardous materials (see Section 5.4), or water resources (see Section 5.11) are anticipated to be similar to existing conditions. There would be no disproportionately high or adverse impacts to an environmental justice community or children attributable to the No Action Alternative.

#### 5.9.4.1.3 Public Services

Under the No Action Alternative, improvements associated with the Proposed Action Alternative would not be constructed; therefore, this alternative would not result in an increase of uses that would generate a demand for fire protection or law enforcement services by passengers or employees. The on-site demand for fire protection and law enforcement services would be similar to existing conditions. However, without the Proposed Action Alternative improvements, there would be an increase over time in traffic congestion and degradation of level of service throughout the existing street network. This increased traffic congestion would

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[49] U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

result from an increase in vehicles traveling to the CTA and would subsequently affect emergency response activities for the LAPD, LAWAPD, and LAFD.

#### 5.9.4.1.4 Surface Transportation

The No Action Alternative would not involve the development of any of the LAX Landside Access Modernization Program, including roadway improvements. Therefore, the physical roadway network would be consistent with existing conditions. Expected traffic conditions are shown and compared to the Proposed Action Alternative below in Section 5.9.4.2.4.

### 5.9.4.2 Proposed Action Alternative

#### 5.9.4.2.1 Socioeconomic and Secondary (Induced) Impacts

Operations of the Proposed Action Alternative would not include any residential uses; its operations would not directly contribute to the projected population and housing growth within or adjacent to the Proposed Project Area. Additionally, the employment that would be generated for operations of the Proposed Action Alternative is unlikely to indirectly induce population growth within or adjacent to the Proposed Project Area. Operation of the CONRAC is estimated to require approximately 1,200 employees. The other components of the Proposed Action Alternative, including the APM and ITFs, is estimated to only require a modest number of employees (approximately 100) to carry out maintenance, operations, and administrative functions, or support for various on-site commercial amenities.

While approximately 1,300 employees would be required to operate the components of the Proposed Action Alternative, the estimated 1,200 employees required to operate the CONRAC would likely be absorbed from the existing rental car workforce already supporting LAX. These employees of rental car companies would likely transfer their existing place of employment at various locations near LAX to the CONRAC. As such, the Proposed Action Alternative would result in a net increase in approximately 100 employees (see **Table 5-25**), which represents a less than 1 percent increase in employment on the LAX Footprint (i.e., all properties owned by LAWA within and outside the CTA).[50] Any employees associated with operations of the Proposed Action Alternative would likely commute from the vicinity of LAX, similar to existing patterns for LAX employees.

[50] Flaming, Daniel, Ph.D., President, Economic Roundtable, Personal Communication, March 1, 2016.

**Table 5-25: Proposed Action Alternative Operational Employment**

| | NUMBER OF EMPLOYEES | PERCENTAGE INCREASE |
|---|---|---|
| Estimated 2013 Employment on LAX Footprint | **33,226** | |
| Landside Access Modernization Program Operational Employment | **1,300** | |
| APM, ITFs, and other Project Components | 100 | 0.3% |
| CONRAC (existing rental car workforce) | 1,200 | 0.0% |

SOURCE: Flaming, Daniel, Ph.D., President, Economic Roundtable, Personal Communication, March 1, 2016.
PREPARED BY: Ricondo & Associates, Inc., January 2017.

Implementation of the Proposed Action Alternative would also involve enabling projects that would require the demolition/relocation of several existing facilities. These existing facilities currently support various industrial, commercial, and institutional uses that contain an existing workforce, which is included within the 2013 estimate of 33,200 employees located on the LAX Footprint. As previously noted, the majority of these facilities would be accommodated elsewhere on LAWA-owned property. The Stella Middle School and Bright Start Secondary Charter Academies would be relocated under the existing ANMP in both the No Action and Proposed Action Alternatives. The schools are estimated to have a combined total of 33 full-time equivalent staff. As such, the Proposed Action Alternative would not displace a substantial number of existing employees on the LAX Footprint. The businesses and schools would be relocated in accordance with the provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act.

The 1,300 persons required to operate the Proposed Action Alternative would represent less than 1 percent of SCAG's employment forecast through year 2040 for jurisdictions within or in the vicinity of the Proposed Project Area (2,625,400 jobs) and is accounted for in SCAG's 2016–2040 RTP/SCS Growth Forecast. Therefore, operational employment generated by the Proposed Action Alternative would not indirectly induce population growth within or adjacent to the Proposed Project Area. The Proposed Action Alternative would not cause significant socioeconomic or secondary (induced) impacts when compared to the No Action Alternative.

The Proposed Action Alternative is not anticipated to result in significant impacts to businesses within the Proposed Project Area. Under the Proposed Action Alternative, existing rental car operations would be consolidated into the CONRAC, which has been sized to accommodate the rental car companies' projected demand. The proposed parking facilities have been sized to accommodate projected increases in demand for airport parking.

As described in Section 5.9.3.2.1, enabling projects associated with the Proposed Action Alternative would require properties to be acquired, demolished, and relocated (see **Appendix A**). Operation of the Proposed Action Alternative is not anticipated to limit the ability for these businesses to operate once relocated. As such, operation of the Proposed Action Alternative is not anticipated to result in a significant impact to existing businesses.

#### 5.9.4.2.2 Environmental Justice and Children's Environmental Health and Safety Risk

Population characteristics and demographics in the Proposed Project Area are noted above under the No Action Alternative (see Section 5.9.3.1). The operation of the Proposed Action Alternative would not result in significant impacts to air quality, climate, noise, or traffic. Additionally, no significant operational impacts related to lighting and visual character, hazardous materials or water resources from the Proposed Action Alternative are anticipated. Therefore, no disproportionately high or adverse impacts to an environmental justice community or children would occur when compared to the No Action Alternative.

#### 5.9.4.2.3 Public Services

Emergency access for law enforcement and fire protection services throughout the Proposed Project Area would be provided by the existing and proposed street systems. Improved traffic flow associated with the Proposed Action Alternative would improve response times for the LAFD, LAWAPD and LAPD over time. As such, the Proposed Action Alternative would not restrict emergency access, increase response times, or extend station response distances. Impacts would not be significant.

Operation of the Proposed Action Alternative would not result in a substantial increase in on-Airport population or land use changes that would require a substantial increase in fire protection or law enforcement services to maintain adequate services or require new or expanded facilities. However, the Proposed Action Alternative would introduce new uses to the site which would substantially increase the amount of occupied space within the Proposed Project Area. Accordingly, additional law enforcement personnel may be required to increase patrols in areas outside of the CTA, such as the ITFs and CONRAC. LAWAPD may also need to expand its deployment of foot/bicycle officers patrolling the CTA in order to maintain Transportation Security Administration (TSA)-mandated response times; however, this would not represent a substantial increase in law enforcement services.

Therefore, impacts on law enforcement services during operation of the Proposed Action Alternative would not be significant when compared to the No Action Alternative.

In addition to law enforcement and fire protection services, a number of medical facilities are located within the Proposed Project Area. Currently, urgent care within the CTA is provided either by LAFD bike medic patrol teams, which provide emergency medical technicians (EMTs) and first-aid support in lieu of transporting passengers off-site, or by transporting non-emergency patients to the Reliant Urgent Care facility, located at 9601 S. Sepulveda Blvd. Concentra also operates an Urgent Care facility at 6033 W. Century Boulevard. As part of the Proposed Action Alternative, the Reliant Urgent Care facility would be relocated to either another portion of LAWA property or to an off-Airport location. However, medical facilities would still be available to passengers and employees and impacts would not be significant when compared to the No Action Alternative.

### 5.9.4.2.4 Surface Transportation

## On-Airport Traffic

On-Airport traffic includes the CTA curbsides, roadways, and public parking facilities. Existing LOS conditions and volume to capacity (V/C) ratios for CTA intersections at Airport peak departures and arrivals hours are provided in Table 4-17. All intersections currently operate at LOS A with the exception of World Way South and Center Way (Exit) on the lower level, which operates at LOS B.

**Table 5-26** identifies the future LOS conditions for CTA intersections under the No Action Alternative and the Proposed Action Alternative for 2024 and 2030/2035. As shown in Table 5-26, the V/C for each intersection would be reduced, and the corresponding LOS improved, for each future Proposed Action Alternative scenario when compared to the No Action Alternative scenario for the same timeframe. Operations of the Proposed Action Alternative improve the LOS at CTA intersections during both the arrivals and departures level peak hours as compared to the No Action Alternative.

**Table 5-26: Peak Hour CTA Signalized Intersection Level of Service Analysis**

| | 2024 NO ACTION ALTERNATIVE | | 2024 PROPOSED ACTION ALTERNATIVE | | 2030/2035 NO ACTION ALTERNATIVE | | 2030/2035 PROPOSED ACTION ALTERNATIVE | |
|---|---|---|---|---|---|---|---|---|
| INTERSECTION [1/] | V/C | LOS [2/] | V/C | LOS [2/] | V/C | LOS [2/] | V/C | LOS [2/] |
| **DEPARTURES - Upper Level Roadway** | | | | | | | | |
| World Way North and Sky Way | 0.645 | B | --- [3/] | --- [3/] | 0.746 | C | --- [3/] | --- [3/] |
| World Way South and West Way | 0.738 | C | 0.664 | B | 0.860 | D | 0.765 | C |
| World Way South and East Way | 0.638 | B | 0.524 | A | 0.745 | C | 0.604 | B |
| **ARRIVALS - Lower Level Roadway** | | | | | | | | |
| World Way North and Sky Way | 0.741 | C | --- [3/] | --- [3/] | 0.790 | C | --- [3/] | --- [3/] |
| World Way South and Center Way (Exit) | 0.910 | E | 0.820 | D | 0.920 | E | 0.745 | C |
| East Way and World Way South | 0.484 | A | 0.366 | A | 0.498 | A | 0.378 | A |

NOTES:

V/C = volume to capacity ratio

LOS = level of service

1/ The departures peak hour occurred from 9:51 a.m. to 10:51 a.m. The arrivals peak hour occurred from 11:15 a.m. to 12:15 p.m.

2/ Level of Service range: A (excellent) to F (failure).

3/ The intersection of World Way North and Sky Way would be removed as part of the Proposed Action Alternative.

SOURCE: Ricondo & Associates, Inc., May 2016.
PREPARED BY: Ricondo & Associates, Inc., January 2017.

In addition to signalized intersections within the CTA, key CTA roadway links were also analyzed to assess potential implications on overall CTA throughput. **Table 5-27** identifies the future LOS conditions for CTA roadway links under the No Action Alternative and the Proposed Action Alternative for 2024 and 2030/2035.

## Table 5-27: Peak Hour CTA Roadway Level of Service Analysis

| ROADWAY LINK [1/] | 2024 NO ACTION ALTERNATIVE | | 2024 PROPOSED ACTION ALTERNATIVE | | 2030/2035 NO ACTION ALTERNATIVE | | 2030/2035 PROPOSED ACTION ALTERNATIVE | |
|---|---|---|---|---|---|---|---|---|
| | V/C [2/] | LOS [3/] | V/C [2/] | LOS [3/] | V/C [2/] | LOS [3/] | V/C [2/] | LOS [3/] |
| **DEPARTURES - Upper Level Roadway Links** | | | | | | | | |
| Adjacent to Terminal 1 | 1.56 | F | 0.82 | D | 1.91 | F | 0.97 | E |
| Adjacent to Terminal 2 | 1.41 | F | 0.90 | D | 1.62 | F | 1.03 | F |
| Adjacent to Terminal 3 | 1.17 | F | 0.50 | A | 1.35 | F | 0.59 | A |
| Adjacent to TBIT | 1.27 | F | 0.50 | A | 1.57 | F | 0.58 | A |
| Adjacent to Terminal 4 | 1.32 | F | 0.50 | A | 1.63 | F | 0.60 | A |
| Adjacent to Terminal 5 | 1.79 | F | 0.87 | D | 2.07 | F | 1.04 | F |
| Adjacent to Terminal 6 | 1.58 | F | 0.87 | D | 1.95 | F | 1.00 | F |
| Adjacent to Terminal 7 | 1.61 | F | 0.96 | E | 1.87 | F | 1.15 | F |
| **ARRIVALS - Lower Level Roadway Links** | | | | | | | | |
| Adjacent to Terminal 1 Inner Curbside | 2.95 | F | 0.91 | E | 3.06 | F | 2.29 | F |
| Adjacent to Terminal 2 Inner Curbside | 0.30 | A | 0.18 | A | 0.29 | A | 0.15 | A |
| Adjacent to Terminal 3 Inner Curbside | 0.05 | A | 0.01 | A | 0.05 | A | 0.02 | A |
| Adjacent to TBIT Inner Curbside | 0.39 | A | 0.24 | A | 0.21 | A | 0.15 | A |
| Adjacent to Terminal 4 Inner Curbside | 0.22 | A | 0.16 | A | 0.15 | A | 0.09 | A |
| Adjacent to Terminal 5 Inner Curbside | 0.05 | A | 0.01 | A | 0.35 | A | 0.20 | A |
| Adjacent to Terminal 6 Inner Curbside | 0.17 | A | 0.10 | A | 0.45 | A | 0.27 | A |
| Adjacent to Terminal 7 Inner Curbside | 0.12 | A | 0.07 | A | 0.21 | A | 0.10 | A |
| Adjacent to Terminal 1 Outer Curbside | 1.84 | F | 0.57 | A | 1.93 | F | 0.70 | B |
| Adjacent to Terminal 2 Outer Curbside | 1.99 | F | 0.89 | D | 2.08 | F | 1.17 | F |
| Adjacent to Terminal 3 Outer Curbside | 1.86 | F | 0.55 | A | 1.63 | F | 0.56 | A |
| Adjacent to TBIT Outer Curbside | 1.10 | F | 0.76 | C | 1.05 | F | 0.72 | C |
| Adjacent to Terminal 4 Outer Curbside | 0.89 | D | 0.53 | A | 0.74 | C | 0.36 | A |
| Adjacent to Terminal 5 Outer Curbside | 2.03 | F | 1.51 | F | 2.56 | F | 1.93 | F |
| Adjacent to Terminal 6 Outer Curbside | 1.12 | F | 0.66 | B | 1.17 | F | 0.75 | C |
| Adjacent to Terminal 7 Outer Curbside | 1.09 | F | 0.67 | B | 1.14 | F | 0.75 | C |

NOTES:

V/C = volume to capacity ratio

LOS = level of service

1/ The departures peak hour occurred from 9:51 a.m. to 10:51 a.m. The arrivals peak hour occurred from 11:15 a.m. to 12:15 p.m.

2/ Volume to capacity ratio for roadway links.

3/ Level of Service range: A (excellent) to F (failure).

SOURCE: Ricondo & Associates, Inc., February 2017.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

As shown in Table 5-27, CTA roadway LOS would improve as a result of implementation of the Proposed Action Alternative when compared to the No Action Alternative for all future scenario years. The elimination of the commercial vehicles in the CTA would also substantially reduce the weaving at the slip ramps connecting the lower level inner and outer curbsides, thereby resulting in a smoother traffic flow. With the absence of commercial vehicles parking on the lower outer curbsides, the exiting vehicles from the inner curbside and the entering vehicles to the inner curbside would have an extra lane to merge or diverge.

**Table 5-28** provides a summary of the LOS conditions for intersections and key roadway links in future years 2024 and 2030/2035 for both the No Action and Proposed Action Alternatives. As shown, the level of service of several roadway links and intersections would be reduced under the No Action Alternative; without the proposed Project improvements, traffic congestion would worsen on Airport roadways.

**Table 5-28: On-Airport Traffic Intersection and Roadway Link Level of Service Summary**

| | INTERSECTIONS | | | | ROADWAY LINKS | | | |
|---|---|---|---|---|---|---|---|---|
| | 2024 | | 2030/2035 | | 2024 | | 2030/2035 | |
| LOS | NO ACTION ALTERNATIVE | PROPOSED ACTION ALTERNATIVE | NO ACTION ALTERNATIVE | PROPOSED ACTION ALTERNATIVE | NO ACTION ALTERNATIVE | PROPOSED ACTION ALTERNATIVE | NO ACTION ALTERNATIVE | PROPOSED ACTION ALTERNATIVE |
| A | 1 | 2 | 1 | 1 | 7 | 13 | 7 | 12 |
| B | 2 | 1 | - | 1 | - | 2 | - | 1 |
| C | 2 | - | 3 | 2 | - | 1 | - | 3 |
| D | - | 1 | 1 | - | 1 | 5 | 1 | - |
| E | 1 | - | 1 | - | - | 2 | - | 1 |
| F | - | - | - | - | 16 | 1 | 16 | 7 |
| Total | 6 | 4 [1/] | 6 | 4 [1/] | 24 | 24 | 24 | 24 |

NOTE:

1/ Two CTA intersections would be removed under the Proposed Action Alternative.

SOURCE: Ricondo & Associates, Inc., May 2016.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

## Off-Airport Traffic

The Proposed Action Alternative includes traffic-related project design features, as discussed in **Appendix A**, to minimize the reductions in LOS to off-Airport traffic with implementation of the Proposed Action Alternative. Project design features include, but are not limited to, the following major components:

- Implementation of a site-wide Transportation Demand Management (TDM) program for LAX-site employees to provide a variety of additional transportation access choices in order to promote non-auto travel.
- Intelligent signal system improvements, including signal controller upgrades and installation of closed circuit television (CCTV) cameras at key intersections.
- Specific intersection improvements, including physical improvements, and signal system and phasing enhancements.
- Fair-share contributions to highway improvements.

To quantify off-Airport traffic conditions for the Proposed Action Alternative, a level of service analysis was conducted for 70 intersections within the traffic analysis study area (see Figure 4-11). For the purposes of this analysis, if there is a change from LOS A, B, C, or D under the No Action Alternative, to LOS E or F under the Proposed Action Alternative, the impact thresholds of the local jurisdiction where the intersection is located were considered to determine if the reduction in level of service would result in a local impact. The intersection impacts for morning, afternoon, and midday peaks of the future (2024) Proposed Action Alternative, as compared to the future (2024) No Action Alternative, are shown in **Table 5-29**.

Under the Proposed Action Alternative, two intersections have a reduction in LOS in 2024 when compared to the No Action Alternative. At La Cienega Boulevard and Manchester Boulevard, the afternoon peak LOS changes from D (fair) under the No Action Alternative to E (poor) under the Proposed Action Alternative. The second intersection, La Cienega Boulevard and Arbor Vitae Street has a reduction in LOS during the morning peak from LOS D (fair) to LOS E (poor). Based on the local jurisdiction's guidance, these were determined not to be local impacts.

The intersection impacts for morning, afternoon, and midday peaks of the future (2030) Proposed Action Alternative, as compared to the future (2030) No Action Alternative, are shown in **Table 5-30**. When the No Action Alternative LOS is compared to the future (2030) Proposed Action Alternative LOS, one intersection (La Cienega Boulevard and Arbor Vitae Street) has a reduction in LOS during the morning and afternoon peak hours. During the morning peak hour, the LOS changed from LOS D (fair) under the No Action Alternative to LOS E (poor) under the Proposed Action Alternative. Although this change is a reduction, according to the City of Inglewood's guidance, it is not a local impact. During the afternoon peak hour, the No Action Alternative level of service went from LOS D (fair) to LOS F (failure) under the Proposed Action Alternative. This is considered both a reduction in LOS and a local impact according to the City of Inglewood's published guidance. However, the Proposed Action Alternative's LOS could be improved by adding additional right-of-way to widen this intersection. The City of Inglewood expressed its intent in meetings with LAWA staff not to widen the intersection given the residential uses east of the I-405 freeway along Arbor Vitae Street. Because the local jurisdiction prefers not to minimize this impact, and when considering operational traffic impacts as a whole, the Proposed Action Alternative would not disrupt local traffic patterns or substantially reduce the levels of service of roads serving LAX and its surrounding communities, no significant surface transportation impact would occur when comparing the Proposed Action Alternative to the No Action Alternative.

The intersection impacts for morning, afternoon, and midday peaks of the future (2035) Proposed Action Alternative, as compared to the future (2035) No Action Alternative, are shown in **Table 5-31**. In 2035, the La Cienega Boulevard and Arbor Vitae Street intersection again experiences a reduction in LOS, in the morning and afternoon peak hours, of the future (2035) Proposed Action Alternative when compared the No Action Alternative. In 2035, the LOS for both the morning and afternoon peak hours is reduced from LOS D (fair) to LOS F (failure). While this is considered a reduction in level of service, because the local jurisdiction prefers to not minimize this impact, and when considering operational traffic impacts as a whole, the Proposed Action Alternative would not disrupt local traffic patterns or substantially reduce the levels of service of roads serving LAX and its surrounding communities, no significant surface transportation impact would occur when comparing the Proposed Action Alternative to the No Action Alternative.

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## Table 5-29 (1 of 2): Future (2024) Off-Airport Traffic Impacts

| | | 2024 NO ACTION ALTERNATIVE | | | | | | 2024 PROPOSED ACTION ALTERNATIVE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | a.m. | | midday | | p.m. | | a.m. | | midday | | p.m. | | REDUCTION IN LOS TO E OR F? | | |
| # | INTERSECTION | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | a.m. | midday | p.m. |
| 1 | Sepulveda Boulevard and Manchester Avenue | 0.736 | C | 0.697 | B | 0.917 | E | 0.733 | C | 0.680 | B | 0.901 | E | --- | --- | --- |
| 2 | Sepulveda Boulevard and La Tijera Boulevard | 0.579 | A | 0.613 | B | 0.677 | B | 0.593 | A | 0.608 | B | 0.696 | B | --- | --- | --- |
| 3 | Sepulveda Boulevard and Westchester Parkway | 0.768 | C | 0.910 | E | 0.914 | E | 0.799 | C | 0.890 | D | 0.880 | D | --- | --- | --- |
| 4 | Sepulveda Boulevard and Lincoln Boulevard | 0.645 | B | 0.609 | B | 0.692 | B | 0.659 | B | 0.597 | A | 0.688 | B | --- | --- | --- |
| 5 | Sepulveda Boulevard and Century Boulevard | 0.789 | C | 0.643 | B | 0.834 | D | 0.729 | C | 0.601 | B | 0.793 | C | --- | --- | --- |
| 6 | Sepulveda Boulevard and I-105 Westbound Ramps (n/o Imperial Highway) | 1.085 | F | 1.002 | F | 0.973 | E | 1.044 | F | 0.948 | E | 0.935 | E | --- | --- | --- |
| 7 | Sepulveda Boulevard and Imperial Highway | 0.769 | C | 0.632 | B | 0.910 | E | 0.712 | C | 0.632 | B | 0.849 | D | --- | --- | --- |
| 8 | Sepulveda Boulevard and Mariposa Avenue | 0.886 | D | --- | --- | 0.835 | D | 0.882 | D | --- | --- | 0.835 | D | --- | --- | --- |
| 9 | Sepulveda Boulevard and Grand Avenue | 1.146 | F | --- | --- | 0.983 | E | 1.144 | F | --- | --- | 0.989 | E | --- | --- | --- |
| 10 | Sepulveda Boulevard and El Segundo Boulevard | 0.840 | D | --- | --- | 1.036 | F | 0.844 | D | --- | --- | 1.033 | F | --- | --- | --- |
| 11 | Sepulveda Eastway and Westchester Parkway | 0.450 | A | --- | --- | 0.727 | C | 0.472 | A | --- | --- | 0.723 | C | --- | --- | --- |
| 12 | La Tijera Boulevard and Manchester Avenue | 0.562 | A | 0.612 | B | 0.624 | B | 0.579 | A | 0.622 | B | 0.600 | A | --- | --- | --- |
| 13 | Jenny Avenue and Westchester Parkway | 0.208 | A | 0.295 | A | 0.432 | A | 0.336 | A | 0.339 | A | 0.388 | A | --- | --- | --- |
| 14 | Avion Drive and Century Boulevard | 0.436 | A | 0.445 | A | 0.555 | A | 0.439 | A | 0.381 | A | 0.512 | A | --- | --- | --- |
| 15 | La Tijera Boulevard and Airport Boulevard | 0.522 | A | 0.550 | A | 0.658 | B | 0.560 | A | 0.520 | A | 0.647 | B | --- | --- | --- |
| 16 | Airport Boulevard and Manchester Avenue | 0.607 | B | 0.688 | B | 0.750 | C | 0.640 | B | 0.607 | B | 0.683 | B | --- | --- | --- |
| 17 | Airport Boulevard and Arbor Vitae Street/Westchester Parkway | 0.696 | B | 0.787 | C | 1.032 | F | 0.669 | B | 0.539 | A | 0.834 | D | --- | --- | --- |
| 18 | Airport Boulevard and 96th Street | 0.311 | A | 0.483 | A | 0.504 | A | 0.496 | A | 0.621 | B | 0.680 | B | --- | --- | --- |
| 19 | Airport Boulevard and 98th Street | 0.392 | A | 0.523 | A | 0.561 | A | 0.633 | B | 0.688 | B | 0.692 | B | --- | --- | --- |
| 20 | Airport Boulevard and Century Boulevard | 0.611 | B | 0.691 | B | 0.660 | B | 0.540 | A | 0.669 | B | 0.681 | B | --- | --- | --- |
| 21 | Nash Street /I-105 Westbound Ramps and Imperial Highway | 0.521 | A | --- | --- | 0.446 | A | 0.520 | A | --- | --- | 0.410 | A | --- | --- | --- |
| 22 | Nash Street and El Segundo Boulevard | 0.635 | B | --- | --- | 0.694 | B | 0.631 | B | --- | --- | 0.679 | B | --- | --- | --- |
| 23 | Douglas Street and Imperial Highway | 0.369 | A | --- | --- | 0.706 | C | 0.403 | A | --- | --- | 0.699 | B | --- | --- | --- |
| 24 | Douglas Street and El Segundo Boulevard | 0.830 | D | --- | --- | 0.967 | E | 0.826 | D | --- | --- | 0.963 | E | --- | --- | --- |
| 25 | I-405 Northbound Ramps and La Tijera Boulevard | 0.877 | D | 0.833 | D | 0.842 | D | 0.813 | D | 0.771 | C | 0.787 | C | --- | --- | --- |
| 26 | I-405 Southbound Ramps and La Tijera Boulevard | 0.777 | C | 0.609 | B | 0.906 | E | 0.774 | C | 0.602 | B | 0.819 | D | --- | --- | --- |
| 27 | Bellanca Avenue and Century Boulevard | 0.613 | B | --- | --- | 0.688 | B | 0.381 | A | --- | --- | 0.493 | A | --- | --- | --- |
| 28 | Aviation Boulevard/Florence Avenue and Manchester Avenue | 0.749 | C | 0.755 | C | 0.814 | D | 0.673 | B | 0.685 | B | 0.663 | B | --- | --- | --- |
| 29 | Aviation Boulevard and Arbor Vitae Street | 0.912 | E | 0.638 | B | 0.792 | C | 0.813 | D | 0.601 | B | 0.696 | B | --- | --- | --- |
| 30 | Aviation Boulevard and Century Boulevard | 0.863 | D | 0.838 | D | 1.013 | F | 0.750 | C | 0.763 | C | 0.865 | D | --- | --- | --- |
| 31 | Aviation Boulevard and 104th Street | 0.640 | B | 0.640 | B | 0.784 | C | 0.620 | B | 0.668 | B | 0.741 | C | --- | --- | --- |
| 32 | Aviation Boulevard and 111th Street | 0.739 | C | 0.696 | B | 0.731 | C | 0.727 | C | 0.723 | C | 0.757 | C | --- | --- | --- |
| 33 | Aviation Boulevard and Imperial Highway | 0.724 | C | 0.667 | B | 0.865 | D | 0.602 | B | 0.609 | B | 0.867 | D | --- | --- | --- |
| 34 | Aviation Boulevard and West 120th Street | 0.821 | D | --- | --- | 0.920 | E | 0.814 | D | --- | --- | 0.918 | E | --- | --- | --- |
| 35 | Aviation Boulevard and El Segundo Boulevard | 0.971 | E | --- | --- | 1.063 | F | 0.969 | E | --- | --- | 1.060 | F | --- | --- | --- |
| 36 | Hindry Avenue and Manchester Boulevard | 0.722 | C | --- | --- | 0.790 | C | 0.710 | C | --- | --- | 0.663 | B | --- | --- | --- |
| 37 | Hindry Avenue and Arbor Vitae Street | 23.4s | C | 14.7 s | B | 18.0s | C | 0.563 | A | 0.347 | A | 0.514 | A | --- | --- | --- |

## Table 5-29 (2 of 2): Future (2024) Off-Airport Traffic Impacts

| | | 2024 NO ACTION ALTERNATIVE | | | | | | 2024 PROPOSED ACTION ALTERNATIVE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | a.m. | | midday | | p.m. | | a.m. | | midday | | p.m. | | REDUCTION IN LOS TO E OR F? | | |
| # | INTERSECTION | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | a.m. | midday | p.m. |
| 38 | Concourse Way and Century Boulevard | 0.306 | A | --- | --- | 0.466 | A | 0.637 | B | --- | --- | 0.617 | B | --- | --- | --- |
| 39 | I-105 Ramps (e/o Aviation Boulevard) and Imperial Highway | 0.781 | C | 0.412 | A | 0.679 | B | 0.768 | C | 0.548 | A | 0.689 | B | --- | --- | --- |
| 40 | La Cienega Boulevard and Florence Avenue | 0.769 | C | 0.956 | E | 1.125 | F | 0.695 | B | 0.864 | D | 1.056 | F | --- | --- | --- |
| 41 | La Cienega Boulevard and Manchester Boulevard | 0.749 | C | 0.859 | D | 0.838 | D | 0.819 | D | 0.857 | D | 0.959 | E | --- | --- | Yes |
| 42 | La Cienega Boulevard and Arbor Vitae Street | 0.813 | D | 0.667 | B | 0.806 | D | 0.910 | E | 0.653 | B | 0.865 | D | Yes | --- | --- |
| 43 | La Cienega Boulevard and I-405 Southbound Ramps (n/o Century Bl) | 0.783 | C | 0.653 | B | 0.642 | B | 0.665 | B | 0.557 | A | 0.547 | A | --- | --- | --- |
| 44 | La Cienega Boulevard and Century Boulevard | 0.930 | E | 0.693 | B | 0.915 | E | 0.858 | D | 0.709 | C | 0.923 | E | --- | --- | --- |
| 45 | La Cienega Boulevard and I-405 Southbound Ramps (s/o Century Bl) | 0.362 | A | --- | --- | 0.343 | A | 0.313 | A | --- | --- | 0.365 | A | --- | --- | --- |
| 46 | La Cienega Boulevard and 104th Street | 0.406 | A | --- | --- | 0.419 | A | 0.419 | A | --- | --- | 0.416 | A | --- | --- | --- |
| 47 | La Cienega Boulevard and Lennox Boulevard | 0.515 | A | --- | --- | 0.748 | C | 0.560 | A | --- | --- | 0.758 | C | --- | --- | --- |
| 48 | La Cienega Boulevard and 111th Street | 0.320 | A | --- | --- | 0.374 | A | 0.316 | A | --- | --- | 0.397 | A | --- | --- | --- |
| 49 | La Cienega Boulevard and I-405 Southbound Ramps (n/o Imperial Hwy) | 0.511 | A | --- | --- | 0.393 | A | 0.513 | A | --- | --- | 0.389 | A | --- | --- | --- |
| 50 | La Cienega Boulevard and Imperial Highway | 0.466 | A | 0.296 | A | 0.834 | D | 0.503 | A | 0.301 | A | 0.830 | D | --- | --- | --- |
| 51 | La Cienega Boulevard and West 120th Street | 0.814 | D | --- | --- | 0.962 | E | 0.784 | C | --- | --- | 0.968 | E | --- | --- | --- |
| 52 | La Cienega Boulevard and El Segundo Boulevard | 0.719 | C | --- | --- | 0.901 | E | 0.716 | C | --- | --- | 0.908 | E | --- | --- | --- |
| 53 | I-405 Northbound Off-Ramp/Ash Avenue and Manchester Avenue | 0.882 | D | 0.748 | C | 0.845 | D | 0.873 | D | 0.718 | C | 0.838 | D | --- | --- | --- |
| 54 | I-405 Northbound Ramps and Century Boulevard | 0.952 | E | 0.716 | C | 0.826 | D | 0.973 | E | 0.589 | A | 0.864 | D | --- | --- | --- |
| 55 | I-405 Northbound Ramps (e/o La Cienega Bl) and Imperial Highway | 0.619 | B | --- | --- | 0.803 | D | 0.639 | B | --- | --- | 0.779 | C | --- | --- | --- |
| 56 | I-405 Northbound Ramps and El Segundo Boulevard | 0.784 | C | --- | --- | 0.802 | D | 0.795 | C | --- | --- | 0.807 | D | --- | --- | --- |
| 57 | Inglewood Avenue and Manchester Boulevard | 0.771 | C | --- | --- | 0.850 | D | 0.772 | C | --- | --- | 0.847 | D | --- | --- | --- |
| 58 | Inglewood Avenue and Arbor Vitae Street | 0.662 | B | --- | --- | 0.763 | C | 0.670 | B | --- | --- | 0.743 | C | --- | --- | --- |
| 59 | Inglewood Avenue and Century Boulevard | 0.837 | D | n/a | n/a | 1.000 | E | 0.732 | C | n/a | n/a | 0.895 | D | --- | n/a | --- |
| 60 | Inglewood Avenue and Lennox Boulevard | 0.904 | E | --- | --- | 1.023 | F | 0.902 | E | --- | --- | 1.023 | F | --- | --- | --- |
| 61 | Inglewood Avenue and Imperial Highway | 1.055 | F | --- | --- | 1.144 | F | 1.057 | F | --- | --- | 1.148 | F | --- | --- | --- |
| 62 | Inglewood Avenue and El Segundo Boulevard | 0.853 | D | --- | --- | 0.991 | E | 0.865 | D | --- | --- | 0.997 | E | --- | --- | --- |
| 63 | La Brea Avenue and Manchester Boulevard | 0.834 | D | --- | --- | 0.866 | D | 0.836 | D | --- | --- | 0.866 | D | --- | --- | --- |
| 64 | La Brea Avenue and Arbor Vitae Street | 0.597 | A | --- | --- | 0.764 | C | 0.593 | A | --- | --- | 0.775 | C | --- | --- | --- |
| 65 | La Brea Avenue/Hawthorne Boulevard and Century Boulevard | 0.834 | D | --- | --- | 0.903 | E | 0.857 | D | --- | --- | 0.904 | E | --- | --- | --- |
| 66 | Hawthorne Boulevard and Lennox Boulevard | 0.772 | C | --- | --- | 0.856 | D | 0.765 | C | --- | --- | 0.838 | D | --- | --- | --- |
| 67 | Hawthorne Boulevard and I-105 Westbound Ramps/111th Street | 0.890 | D | --- | --- | 1.020 | F | 0.884 | D | --- | --- | 1.005 | F | --- | --- | --- |
| 68 | Hawthorne Boulevard and Imperial Avenue | 0.812 | D | --- | --- | 0.985 | E | 0.799 | C | --- | --- | 0.990 | E | --- | --- | --- |
| 69 | Hawthorne Boulevard and 120th Street | 0.645 | B | --- | --- | 0.802 | D | 0.652 | B | --- | --- | 0.810 | D | --- | --- | --- |
| 70 | Hawthorne Boulevard and El Segundo Boulevard | 0.741 | C | --- | --- | 0.867 | D | 0.750 | C | --- | --- | 0.871 | D | --- | --- | --- |

NOTE: --- = NOT AVAILABLE / NO

SOURCE: Raju Associates, Inc., *Draft Transportation Study for the Landside Access Modernization Program DEIR*, September 2016.
PREPARED BY: Ricondo and Associates, Inc., February 2017.

## Table 5-30 (1 of 2): Future (2030) Off-Airport Traffic Impacts

| | | 2030 NO ACTION ALTERNATIVE | | | | | | 2030 PROPOSED ACTION ALTERNATIVE | | | | | | REDUCTION IN LOS TO E OR F? | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | a.m. | | midday | | p.m. | | a.m. | | midday | | p.m. | | | | |
| # | INTERSECTION | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | a.m. | midday | p.m. |
| 1 | Sepulveda Boulevard and Manchester Avenue | 0.748 | C | 0.722 | C | 0.947 | E | 0.734 | C | 0.689 | B | 0.918 | E | --- | --- | --- |
| 2 | Sepulveda Boulevard and La Tijera Boulevard | 0.581 | A | 0.630 | B | 0.697 | B | 0.592 | A | 0.610 | B | 0.697 | B | --- | --- | --- |
| 3 | Sepulveda Boulevard and Westchester Parkway | 0.799 | C | 0.946 | E | 0.955 | E | 0.806 | D | 0.909 | E | 0.894 | D | --- | --- | --- |
| 4 | Sepulveda Boulevard and Lincoln Boulevard | 0.682 | B | 0.641 | B | 0.706 | C | 0.689<br>.0.831 | B | 0.610 | B | 0.699 | B | --- | --- | --- |
| 5 | Sepulveda Boulevard and Century Boulevard | 0.825 | D | 0.771 | C | 0.928 | E | 0.831 | D | 0.773 | C | 0.852 | D | --- | --- | --- |
| 6 | Sepulveda Boulevard and I-105 Westbound Ramps (n/o Imperial Highway) | 1.096 | F | 1.019 | F | 0.993 | E | 1.040 | F | 0.950 | E | 0.935 | E | --- | --- | --- |
| 7 | Sepulveda Boulevard and Imperial Highway | 0.775 | C | 0.640 | B | 0.934 | E | 0.707 | C | 0.639 | B | 0.847 | D | --- | --- | --- |
| 8 | Sepulveda Boulevard and Mariposa Avenue | 0.887 | D | --- | --- | 0.824 | D | 0.883 | D | --- | --- | 0.828 | D | --- | --- | --- |
| 9 | Sepulveda Boulevard and Grand Avenue | 1.146 | F | --- | --- | 0.984 | E | 1.147 | F | --- | --- | 0.988 | E | --- | --- | --- |
| 10 | Sepulveda Boulevard and El Segundo Boulevard | 0.846 | D | --- | --- | 1.042 | F | 0.848 | D | --- | --- | 1.042 | F | --- | --- | --- |
| 11 | Sepulveda Eastway and Westchester Parkway | 0.472 | A | --- | --- | 0.763 | C | 0.497 | A | --- | --- | 0.750 | C | --- | --- | --- |
| 12 | La Tijera Boulevard and Manchester Avenue | 0.588 | A | 0.635 | B | 0.668 | B | 0.597 | A | 0.642 | B | 0.629 | B | --- | --- | --- |
| 13 | Jenny Avenue and Westchester Parkway | 0.208 | A | 0.317 | A | 0.454 | A | 0.343 | A | 0.433 | A | 0.471 | A | --- | --- | --- |
| 14 | Avion Drive and Century Boulevard | 0.482 | A | 0.554 | A | 0.614 | B | 0.469 | A | 0.457 | A | 0.528 | A | --- | --- | --- |
| 15 | La Tijera Boulevard and Airport Boulevard | 0.570 | A | 0.609 | B | 0.705 | C | 0.599 | A | 0.567 | A | 0.674 | B | --- | --- | --- |
| 16 | Airport Boulevard and Manchester Avenue | 0.643 | B | 0.740 | C | 0.800 | D | 0.672 | B | 0.647 | B | 0.715 | C | --- | --- | --- |
| 17 | Airport Boulevard and Arbor Vitae Street/Westchester Parkway | 0.728 | C | 0.841 | D | 1.119 | F | 0.739 | C | 0.663 | B | 0.922 | E | --- | --- | --- |
| 18 | Airport Boulevard and 96th Street | 0.320 | A | 0.532 | A | 0.569 | A | 0.478 | A | 0.501 | A | 0.570 | A | --- | --- | --- |
| 19 | Airport Boulevard and 98th Street | 0.418 | A | 0.564 | A | 0.597 | A | 0.649 | B | 0.619 | B | 0.661 | B | --- | --- | --- |
| 20 | Airport Boulevard and Century Boulevard | 0.627 | B | 0.787 | C | 0.715 | C | 0.622 | B | 0.669 | B | 0.707 | C | --- | --- | --- |
| 21 | Nash Street /I-105 Westbound Ramps and Imperial Highway | 0.534 | A | --- | --- | 0.466 | A | 0.541 | A | --- | --- | 0.480 | A | --- | --- | --- |
| 22 | Nash Street and El Segundo Boulevard | 0.641 | B | --- | --- | 0.707 | C | 0.639 | B | --- | --- | 0.696 | B | --- | --- | --- |
| 23 | Douglas Street and Imperial Highway | 0.395 | A | --- | --- | 0.736 | C | 0.428 | A | --- | --- | 0.714 | C | --- | --- | --- |
| 24 | Douglas Street and El Segundo Boulevard | 0.841 | D | --- | --- | 0.982 | E | 0.844 | D | --- | --- | 0.978 | E | --- | --- | --- |
| 25 | I-405 Northbound Ramps and La Tijera Boulevard | 0.934 | E | 0.868 | D | 0.863 | D | 0.853 | D | 0.808 | D | 0.800 | C | --- | --- | --- |
| 26 | I-405 Southbound Ramps and La Tijera Boulevard | 0.776 | C | 0.633 | B | 0.951 | E | 0.767 | C | 0.618 | B | 0.863 | D | --- | --- | --- |
| 27 | Bellanca Avenue and Century Boulevard | 0.631 | B | | | 0.743 | C | 0.426 | A | | | 0.499 | A | --- | --- | --- |
| 28 | Aviation Boulevard/Florence Avenue and Manchester Avenue | 0.776 | C | 0.818 | D | 0.872 | D | 0.682 | B | 0.715 | C | 0.706 | C | --- | --- | --- |
| 29 | Aviation Boulevard and Arbor Vitae Street | 0.960 | E | 0.703 | C | 0.871 | D | 0.868 | D | 0.645 | B | 0.775 | C | --- | --- | --- |
| 30 | Aviation Boulevard and Century Boulevard | 0.927 | E | 0.873 | D | 1.043 | F | 0.811 | D | 0.849 | D | 0.910 | E | --- | --- | --- |
| 31 | Aviation Boulevard and 104th Street | 0.781 | C | 0.717 | C | 0.850 | D | 0.729 | C | 0.760 | C | 0.818 | D | --- | --- | --- |
| 32 | Aviation Boulevard and 111th Street | 0.883 | D | 0.812 | D | 0.819 | D | 0.773 | C | 0.822 | D | 0.763 | C | --- | --- | --- |
| 33 | Aviation Boulevard and Imperial Highway | 0.822 | D | 0.693 | B | 0.896 | D | 0.603 | B | 0.615 | B | 0.898 | D | --- | --- | --- |
| 34 | Aviation Boulevard and West 120th Street | 0.873 | D | --- | --- | 0.955 | E | 0.837 | D | --- | --- | 0.923 | E | --- | --- | --- |
| 35 | Aviation Boulevard and El Segundo Boulevard | 0.984 | E | --- | --- | 1.074 | F | 0.980 | E | --- | --- | 1.076 | F | --- | --- | --- |
| 36 | Hindry Avenue and Manchester Boulevard | 0.723 | C | --- | --- | 0.839 | D | 0.726 | C | --- | --- | 0.738 | C | --- | --- | --- |
| 37 | Hindry Avenue and Arbor Vitae Street | 28.4 s | D | 15.6 s | C | 20.4 s | C | 0.615 | B | 0.373 | A | 0.627 | B | --- | --- | --- |

## Table 5-30 (2 of 2): Future (2030) Off-Airport Traffic Impacts

| | | 2030 NO ACTION ALTERNATIVE | | | | | | 2030 PROPOSED ACTION ALTERNATIVE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | a.m. | | midday | | p.m. | | a.m. | | midday | | p.m. | | REDUCTION IN LOS TO E OR F? | | |
| # | INTERSECTION | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | a.m. | midday | p.m. |
| 38 | Concourse Way and Century Boulevard | 0.327 | A | --- | --- | 0.508 | A | 0.621 | B | --- | --- | 0.620 | B | --- | --- | --- |
| 39 | I-105 Ramps (e/o Aviation Boulevard) and Imperial Highway | 0.819 | D | 0.428 | A | 0.705 | C | 0.800 | C | 0.537 | A | 0.733 | C | --- | --- | --- |
| 40 | La Cienega Boulevard and Florence Avenue | 0.801 | D | 1.000 | F | 1.149 | F | 0.735 | C | 0.919 | E | 1.095 | F | --- | --- | --- |
| 41 | La Cienega Boulevard and Manchester Boulevard | 0.780 | C | 0.890 | D | 0.865 | D | 0.749 | C | 0.886 | D | 0.888 | D | --- | --- | --- |
| 42 | La Cienega Boulevard and Arbor Vitae Street | 0.861 | D | 0.700 | B | 0.834 | D | 0.974 | E | 0.735 | C | 1.037 | F | Yes | --- | **Yes** |
| 43 | La Cienega Boulevard and I-405 Southbound Ramps (n/o Century Bl) | 0.801 | D | 0.690 | B | 0.689 | B | 0.677 | B | 0.628 | B | 0.611 | B | --- | --- | --- |
| 44 | La Cienega Boulevard and Century Boulevard | 0.952 | E | 0.769 | C | 1.036 | F | 0.875 | D | 0.777 | C | 0.950 | E | --- | --- | --- |
| 45 | La Cienega Boulevard and I-405 Southbound Ramps (s/o Century Bl) | 0.373 | A | --- | --- | 0.370 | A | 0.281 | A | --- | --- | 0.395 | A | --- | --- | --- |
| 46 | La Cienega Boulevard and 104th Street | 0.453 | A | --- | --- | 0.476 | A | 0.453 | A | --- | --- | 0.473 | A | --- | --- | --- |
| 47 | La Cienega Boulevard and Lennox Boulevard | 0.545 | A | --- | --- | 0.799 | C | 0.527 | A | --- | --- | 0.749 | C | --- | --- | --- |
| 48 | La Cienega Boulevard and 111th Street | 0.402 | A | --- | --- | 0.423 | A | 0.350 | A | --- | --- | 0.429 | A | --- | --- | --- |
| 49 | La Cienega Boulevard and I-405 Southbound Ramps (n/o Imperial Hwy) | 0.539 | A | --- | --- | 0.414 | A | 0.496 | A | --- | --- | 0.426 | A | --- | --- | --- |
| 50 | La Cienega Boulevard and Imperial Highway | 0.515 | A | 0.320 | A | 0.875 | D | 0.597 | A | 0.324 | A | 0.877 | D | --- | --- | --- |
| 51 | La Cienega Boulevard and West 120th Street | 0.832 | D | --- | --- | 0.980 | E | 0.826 | D | --- | --- | 0.984 | E | --- | --- | --- |
| 52 | La Cienega Boulevard and El Segundo Boulevard | 0.738 | C | --- | --- | 0.910 | E | 0.750 | C | --- | --- | 0.914 | E | --- | --- | --- |
| 53 | I-405 Northbound Off-Ramp/Ash Avenue and Manchester Avenue | 0.905 | E | 0.771 | C | 0.880 | D | 0.891 | D | 0.745 | C | 0.890 | D | --- | --- | --- |
| 54 | I-405 Northbound Ramps and Century Boulevard | 0.976 | E | 0.740 | C | 0.868 | D | 0.846 | D | 0.605 | B | 0.771 | C | --- | --- | --- |
| 55 | I-405 Northbound Ramps (e/o La Cienega Bl) and Imperial Highway | 0.639 | B | --- | --- | 0.819 | D | 0.683 | B | --- | --- | 0.834 | D | --- | --- | --- |
| 56 | I-405 Northbound Ramps and El Segundo Boulevard | 0.792 | C | --- | --- | 0.812 | D | 0.809 | D | --- | --- | 0.798 | C | --- | --- | --- |
| 57 | Inglewood Avenue and Manchester Boulevard | 0.789 | C | --- | --- | 0.873 | D | 0.788 | C | --- | --- | 0.890 | D | --- | --- | --- |
| 58 | Inglewood Avenue and Arbor Vitae Street | 0.669 | B | --- | --- | 0.789 | C | 0.688 | B | --- | --- | 0.785 | C | --- | --- | --- |
| 59 | Inglewood Avenue and Century Boulevard | 0.857 | D | --- | --- | 1.039 | F | 0.752 | C | --- | --- | 0.945 | E | --- | --- | --- |
| 60 | Inglewood Avenue and Lennox Boulevard | 0.935 | E | --- | --- | 1.066 | F | 0.929 | E | --- | --- | 1.043 | F | --- | --- | --- |
| 61 | Inglewood Avenue and Imperial Highway | 1.079 | F | --- | --- | 1.176 | F | 1.052 | F | --- | --- | 1.164 | F | --- | --- | --- |
| 62 | Inglewood Avenue and El Segundo Boulevard | 0.869 | D | --- | --- | 1.001 | F | 0.886 | D | --- | --- | 1.007 | F | --- | --- | --- |
| 63 | La Brea Avenue and Manchester Boulevard | 0.851 | D | --- | --- | 0.893 | D | 0.853 | D | --- | --- | 0.908 | E | --- | --- | --- |
| 64 | La Brea Avenue and Arbor Vitae Street | 0.618 | B | --- | --- | 0.790 | C | 0.614 | B | --- | --- | 0.794 | C | --- | --- | --- |
| 65 | La Brea Avenue/Hawthorne Boulevard and Century Boulevard | 0.859 | D | --- | --- | 0.961 | E | 0.695 | B | --- | --- | 0.797 | C | --- | --- | --- |
| 66 | Hawthorne Boulevard and Lennox Boulevard | 0.805 | D | --- | --- | 0.885 | D | 0.791 | C | --- | --- | 0.869 | D | --- | --- | --- |
| 67 | Hawthorne Boulevard and I-105 Westbound Ramps/111th Street | 0.905 | E | --- | --- | 1.028 | F | 0.901 | E | --- | --- | 1.020 | F | --- | --- | --- |
| 68 | Hawthorne Boulevard and Imperial Avenue | 0.844 | D | --- | --- | 1.016 | F | 0.809 | D | --- | --- | 1.021 | F | --- | --- | --- |
| 69 | Hawthorne Boulevard and 120th Street | 0.656 | B | --- | --- | 0.822 | D | 0.658 | B | --- | --- | 0.832 | D | --- | --- | --- |
| 70 | Hawthorne Boulevard and El Segundo Boulevard | 0.760 | C | --- | --- | 0.886 | D | 0.781 | C | --- | --- | 0.889 | D | --- | --- | --- |

NOTES: --- = NOT AVAILABLE / NO

SOURCE: Raju Associates, Inc., *Draft Transportation Study for the Landside Access Modernization Program*, September 2016. (Appendix L of this EA)
PREPARED BY: Ricondo and Associates, Inc., February 2017

## Table 5-31 (1 of 2): Future (2035) Off-Airport Traffic Impacts

| | | 2035 NO ACTION ALTERNATIVE | | | | | | 2035 PROPOSED ACTION ALTERNATIVE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | a.m. | | midday | | p.m. | | a.m. | | midday | | p.m. | | REDUCTION IN LOS TO E OR F? | | |
| # | INTERSECTION | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | a.m. | midday | p.m. |
| 1 | Sepulveda Boulevard and Manchester Avenue | 0.752 | C | 0.739 | C | 0.961 | E | 0.750 | C | 0.722 | C | 0.937 | E | --- | --- | --- |
| 2 | Sepulveda Boulevard and La Tijera Boulevard | 0.589 | A | 0.651 | B | 0.733 | C | 0.612 | B | 0.649 | B | 0.734 | C | --- | --- | --- |
| 3 | Sepulveda Boulevard and Westchester Parkway | 0.812 | D | 0.965 | E | 0.971 | E | 0.831 | D | 0.954 | E | 0.912 | E | --- | --- | --- |
| 4 | Sepulveda Boulevard and Lincoln Boulevard | 0.685 | B | 0.648 | B | 0.715 | C | 0.706 | C | 0.632 | B | 0.719 | C | --- | --- | --- |
| 5 | Sepulveda Boulevard and Century Boulevard | 0.839 | D | 0.777 | C | 0.947 | E | 0.844 | D | 0.780 | C | 0.887 | D | --- | --- | --- |
| 6 | Sepulveda Boulevard and I-105 Westbound Ramps (n/o Imperial Highway) | 1.104 | F | 1.025 | F | 1.001 | F | 1.063 | F | 0.975 | E | 0.963 | E | --- | --- | --- |
| 7 | Sepulveda Boulevard and Imperial Highway | 0.792 | C | 0.647 | B | 0.940 | E | 0.733 | C | 0.658 | B | 0.893 | D | --- | --- | --- |
| 8 | Sepulveda Boulevard and Mariposa Avenue | 0.888 | D | --- | --- | 0.823 | D | 0.888 | D | --- | --- | 0.827 | D | --- | --- | --- |
| 9 | Sepulveda Boulevard and Grand Avenue | 1.146 | F | --- | --- | 0.984 | E | 1.149 | F | --- | --- | 0.987 | E | --- | --- | --- |
| 10 | Sepulveda Boulevard and El Segundo Boulevard | 0.848 | D | --- | --- | 1.050 | F | 0.850 | D | --- | --- | 1.049 | F | --- | --- | --- |
| 11 | Sepulveda Eastway and Westchester Parkway | 0.491 | A | --- | --- | 0.787 | C | 0.506 | A | --- | --- | 0.755 | C | --- | --- | --- |
| 12 | La Tijera Boulevard and Manchester Avenue | 0.613 | B | 0.649 | B | 0.695 | B | 0.624 | B | 0.667 | B | 0.664 | B | --- | --- | --- |
| 13 | Jenny Avenue and Westchester Parkway | 0.212 | A | 0.338 | A | 0.457 | A | 0.356 | A | 0.442 | A | 0.468 | A | --- | --- | --- |
| 14 | Avion Drive and Century Boulevard | 0.515 | A | 0.572 | A | 0.640 | B | 0.483 | A | 0.466 | A | 0.537 | A | --- | --- | --- |
| 15 | La Tijera Boulevard and Airport Boulevard | 0.619 | B | 0.621 | B | 0.725 | C | 0.629 | B | 0.573 | A | 0.682 | B | --- | --- | --- |
| 16 | Airport Boulevard and Manchester Avenue | 0.682 | B | 0.761 | C | 0.832 | D | 0.701 | C | 0.657 | B | 0.725 | C | --- | --- | --- |
| 17 | Airport Boulevard and Arbor Vitae Street/Westchester Parkway | 0.744 | C | 0.858 | D | 1.153 | F | 0.754 | C | 0.677 | B | 0.933 | E | --- | --- | --- |
| 18 | Airport Boulevard and 96th Street | 0.341 | A | 0.553 | A | 0.580 | A | 0.475 | A | 0.500 | A | 0.568 | A | --- | --- | --- |
| 19 | Airport Boulevard and 98th Street | 0.433 | A | 0.573 | A | 0.625 | B | 0.657 | B | 0.618 | B | 0.655 | B | --- | --- | --- |
| 20 | Airport Boulevard and Century Boulevard | 0.672 | B | 0.800 | C | 0.725 | C | 0.650 | B | 0.671 | B | 0.717 | C | --- | --- | --- |
| 21 | Nash Street /I-105 Westbound Ramps and Imperial Highway | 0.547 | A | --- | --- | 0.480 | A | 0.549 | A | --- | --- | 0.496 | A | --- | --- | --- |
| 22 | Nash Street and El Segundo Boulevard | 0.646 | B | --- | --- | 0.721 | C | 0.642 | B | --- | --- | 0.708 | C | --- | --- | --- |
| 23 | Douglas Street and Imperial Highway | 0.398 | A | --- | --- | 0.739 | C | 0.438 | A | --- | --- | 0.715 | C | --- | --- | --- |
| 24 | Douglas Street and El Segundo Boulevard | 0.848 | D | --- | --- | 0.989 | E | 0.855 | D | --- | --- | 0.986 | E | --- | --- | --- |
| 25 | I-405 Northbound Ramps and La Tijera Boulevard | 0.981 | E | 0.887 | D | 0.876 | D | 0.878 | D | 0.817 | D | 0.804 | D | --- | --- | --- |
| 26 | I-405 Southbound Ramps and La Tijera Boulevard | 0.773 | C | 0.639 | B | 0.975 | E | 0.766 | C | 0.623 | B | 0.885 | D | --- | --- | --- |
| 27 | Bellanca Avenue and Century Boulevard | 0.654 | B | --- | --- | 0.761 | C | 0.455 | A | --- | --- | 0.498 | A | --- | --- | --- |
| 28 | Aviation Boulevard/Florence Avenue and Manchester Avenue | 0.795 | C | 0.843 | D | 0.895 | D | 0.703 | C | 0.732 | C | 0.712 | C | --- | --- | --- |
| 29 | Aviation Boulevard and Arbor Vitae Street | 0.996 | E | 0.731 | C | 0.902 | E | 0.884 | D | 0.675 | B | 0.778 | C | --- | --- | --- |
| 30 | Aviation Boulevard and Century Boulevard | 0.961 | E | 0.900 | D | 1.051 | F | 0.824 | D | 0.869 | D | 0.948 | E | --- | --- | --- |
| 31 | Aviation Boulevard and 104th Street | 0.790 | C | 0.752 | C | 0.875 | D | 0.782 | C | 0.776 | C | 0.866 | D | --- | --- | --- |
| 32 | Aviation Boulevard and 111th Street | 0.957 | E | 0.867 | D | 0.872 | D | 0.842 | D | 0.819 | D | 0.820 | D | --- | --- | --- |
| 33 | Aviation Boulevard and Imperial Highway | 0.878 | D | 0.694 | B | 0.923 | E | 0.652 | B | 0.640 | B | 0.923 | E | --- | --- | --- |
| 34 | Aviation Boulevard and West 120th Street | 0.905 | E | --- | --- | 0.968 | E | 0.869 | D | --- | --- | 0.941 | E | --- | --- | --- |
| 35 | Aviation Boulevard and El Segundo Boulevard | 0.991 | E | --- | --- | 1.076 | F | 0.987 | E | --- | --- | 1.078 | F | --- | --- | --- |
| 36 | Hindry Avenue and Manchester Boulevard | 0.731 | C | --- | --- | 0.862 | D | 0.737 | C | --- | --- | 0.757 | C | --- | --- | --- |
| 37 | Hindry Avenue and Arbor Vitae Street | 49.4s | E | 16.5 s | C | 24.1s | C | 0.667 | B | 0.389 | A | 0.656 | B | --- | --- | --- |

## Table 5-31 (2 of 2): Future (2035) Off-Airport Traffic Impacts

| | | 2035 NO ACTION ALTERNATIVE | | | | | | 2035 PROPOSED ACTION ALTERNATIVE | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | a.m. | | midday | | p.m. | | a.m. | | midday | | p.m. | | REDUCTION IN LOS TO E OR F? | | |
| # | INTERSECTION | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | V/C | LOS | a.m. | midday | p.m. |
| 38 | Concourse Way and Century Boulevard | 0.337 | A | --- | --- | 0.528 | A | 0.562 | A | --- | --- | 0.637 | B | --- | --- | --- |
| 39 | I-105 Ramps (e/o Aviation Boulevard) and Imperial Highway | 0.838 | D | 0.440 | A | 0.713 | C | 0.815 | D | 0.536 | A | 0.749 | C | --- | --- | --- |
| 40 | La Cienega Boulevard and Florence Avenue | 0.826 | D | 1.022 | F | 1.162 | F | 0.738 | C | 0.936 | A | 1.107 | F | --- | --- | --- |
| 41 | La Cienega Boulevard and Manchester Boulevard | 0.801 | D | 0.908 | E | 0.880 | D | 0.761 | C | 0.902 | A | 0.902 | E | --- | --- | Yes |
| 42 | La Cienega Boulevard and Arbor Vitae Street | 0.887 | D | 0.724 | C | 0.852 | D | 1.022 | F | 0.760 | A | 1.070 | F | **Yes** | --- | **Yes** |
| 43 | La Cienega Boulevard and I-405 Southbound Ramps (n/o Century Bl) | 0.809 | D | 0.703 | C | 0.705 | C | 0.682 | B | 0.616 | B | 0.605 | B | --- | --- | --- |
| 44 | La Cienega Boulevard and Century Boulevard | 0.985 | E | 0.813 | D | 1.088 | F | 0.877 | D | 0.816 | A | 0.963 | E | --- | --- | --- |
| 45 | La Cienega Boulevard and I-405 Southbound Ramps (s/o Century Bl) | 0.385 | A | --- | --- | 0.381 | A | 0.327 | A | --- | --- | 0.407 | A | --- | --- | --- |
| 46 | La Cienega Boulevard and 104th Street | 0.478 | A | --- | --- | 0.506 | A | 0.461 | A | --- | --- | 0.477 | A | --- | --- | --- |
| 47 | La Cienega Boulevard and Lennox Boulevard | 0.583 | A | --- | --- | 0.836 | D | 0.619 | B | --- | --- | 0.845 | D | --- | --- | --- |
| 48 | La Cienega Boulevard and 111th Street | 0.433 | A | --- | --- | 0.453 | A | 0.445 | A | --- | --- | 0.453 | A | --- | --- | --- |
| 49 | La Cienega Boulevard and I-405 Southbound Ramps (n/o Imperial Hwy) | 0.565 | A | --- | --- | 0.424 | A | 0.592 | A | --- | --- | 0.421 | A | --- | --- | --- |
| 50 | La Cienega Boulevard and Imperial Highway | 0.532 | A | 0.341 | A | 0.899 | D | 0.598 | A | 0.357 | A | 0.899 | D | --- | --- | --- |
| 51 | La Cienega Boulevard and West 120th Street | 0.848 | D | --- | --- | 0.999 | E | 0.810 | D | --- | --- | 1.004 | F | --- | --- | --- |
| 52 | La Cienega Boulevard and El Segundo Boulevard | 0.748 | C | --- | --- | 0.918 | E | 0.744 | C | --- | --- | 0.926 | E | --- | --- | --- |
| 53 | I-405 Northbound Off-Ramp/Ash Avenue and Manchester Avenue | 0.923 | E | 0.778 | C | 0.896 | D | 0.907 | E | 0.746 | C | 0.913 | E | --- | --- | Yes |
| 54 | I-405 Northbound Ramps and Century Boulevard | 0.993 | E | 0.761 | C | 0.890 | D | 0.995 | E | 0.752 | C | 0.908 | E | --- | --- | --- |
| 55 | I-405 Northbound Ramps (e/o La Cienega Bl) and Imperial Highway | 0.653 | B | --- | --- | 0.832 | D | 0.689 | B | --- | --- | 0.813 | D | --- | --- | --- |
| 56 | I-405 Northbound Ramps and El Segundo Boulevard | 0.801 | D | --- | --- | 0.818 | D | 0.812 | D | --- | --- | 0.814 | D | --- | --- | --- |
| 57 | Inglewood Avenue and Manchester Boulevard | 0.804 | D | --- | --- | 0.887 | D | 0.801 | D | --- | --- | 0.907 | E | --- | --- | --- |
| 58 | Inglewood Avenue and Arbor Vitae Street | 0.674 | B | --- | --- | 0.802 | D | 0.698 | B | --- | --- | 0.798 | C | --- | --- | --- |
| 59 | Inglewood Avenue and Century Boulevard | 0.873 | D | n/a | n/a | 1.064 | F | 0.757 | C | n/a | n/a | 0.958 | E | --- | --- | --- |
| 60 | Inglewood Avenue and Lennox Boulevard | 0.952 | E | --- | --- | 1.086 | F | 0.950 | E | --- | --- | 1.086 | F | --- | --- | --- |
| 61 | Inglewood Avenue and Imperial Highway | 1.095 | F | --- | --- | 1.195 | F | 1.095 | F | --- | --- | 1.198 | F | --- | --- | --- |
| 62 | Inglewood Avenue and El Segundo Boulevard | 0.879 | D | --- | --- | 1.007 | F | 0.896 | D | --- | --- | 1.009 | F | --- | --- | --- |
| 63 | La Brea Avenue and Manchester Boulevard | 0.863 | D | --- | --- | 0.911 | E | 0.870 | D | --- | --- | 0.925 | E | --- | --- | --- |
| 64 | La Brea Avenue and Arbor Vitae Street | 0.626 | B | --- | --- | 0.805 | D | 0.623 | B | --- | --- | 0.803 | D | --- | --- | --- |
| 65 | La Brea Avenue/Hawthorne Boulevard and Century Boulevard | 0.876 | D | --- | --- | 0.986 | E | 0.884 | D | --- | --- | 0.985 | E | --- | --- | --- |
| 66 | Hawthorne Boulevard and Lennox Boulevard | 0.821 | D | --- | --- | 0.902 | E | 0.806 | D | --- | --- | 0.880 | D | --- | --- | --- |
| 67 | Hawthorne Boulevard and I-105 Westbound Ramps/111th Street | 0.919 | E | --- | --- | 1.039 | F | 0.910 | E | --- | --- | 1.025 | F | --- | --- | --- |
| 68 | Hawthorne Boulevard and Imperial Avenue | 0.861 | D | --- | --- | 1.037 | F | 0.849 | D | --- | --- | 1.037 | F | --- | --- | --- |
| 69 | Hawthorne Boulevard and 120th Street | 0.669 | B | --- | --- | 0.833 | D | 0.668 | B | --- | --- | 0.847 | D | --- | --- | --- |
| 70 | Hawthorne Boulevard and El Segundo Boulevard | 0.775 | C | --- | --- | 0.898 | D | 0.784 | C | --- | --- | 0.899 | D | --- | --- | --- |

NOTES: --- = NOT AVAILABLE / NO

SOURCE: Raju Associates, Inc., *Draft Transportation Study for the Landside Access Modernization Program*, September 2016. (Appendix L of this EA)
PREPARED BY: Ricondo and Associates, Inc., February 2017

Also in 2035, at La Cienega Boulevard and Manchester Boulevard, the p.m. peak LOS changes from D (fair) under the No Action Alternative to E (poor) under the Proposed Action Alternative. Although this is a reduction in level of service, based on the local jurisdiction's guidance, this was determined not to be a local impact. The I-405 Northbound Off-Ramp/Ash Avenue and Manchester Avenue intersection also experiences a reduction in level of service in the afternoon peak hour going from LOS D (fair) under the No Action Alternative to LOS E (poor) under the Proposed Action Alternative. However, the local jurisdiction's impact criteria do not consider this a local impact.

*Parking*

Implementation of the Proposed Action Alternative would eliminate approximately 200 metered street parking spaces, primarily around the areas where the ITF West, APM MSF, and roadway improvements would be constructed. Although this would result in a permanent loss of 200 spaces, the ITF West would provide approximately 8,000 parking spaces and the ITF East would provide approximately 8,300 parking spaces, greatly offsetting the loss of on-street parking. While the Proposed Action Alternative would result in a net increase in 16,100 public parking spaces, this increase in parking spaces is projected to meet the increased future demand for parking at LAX. Therefore, there would be no impacts to existing off-Airport parking operations as a result of the Proposed Action Alternative when compared to the No Action Alternative.

### 5.9.5 MITIGATION MEASURES

As indicated in Sections 5.9.3 and 5.9.4, implementation of the Proposed Action Alternative would not cause significant impacts to socioeconomics (including public services and surface transportation), environmental justice, and children's environmental health and safety risk, when compared to the No Action Alternative; therefore, mitigation measures for these components beyond project design features are not required.

## 5.10 Visual Effects

### 5.10.1 METHODOLOGY

Impacts from light emissions associated with the No Action and Proposed Action Alternatives were determined by evaluating the extent to which lighting or views would change, and the potential for the changes to create an annoyance for sensitive land uses (e.g., residential uses, hotels, and natural areas) in the vicinity of the Airport. The primary focus of the analysis of light emissions was on light spillover effects. Light spillover effects involve light that shines beyond the area intended for illumination that can be a source of annoyance to adjoining properties, particularly for residences where light (e.g., direct illumination) might disturb sleep or privacy. Impacts to visual character and resources were determined by considering the potential changes in landscape and views in the vicinity of the Airport. The methodology used to assess visual character impacts included how the Proposed Action Alternative would affect views across the Project site. Photographs capturing various viewpoints within the Proposed Project Area were conducted to document existing conditions in the area. Conceptual diagrams of each project component were overlaid on these

photos to determine the scale and massing of the Proposed Action Alternative components in the built environment. These images are included in **Appendix M**.

## 5.10.2 SIGNIFICANCE THRESHOLDS

The FAA has not established significance thresholds for visual effects. However, based on guidance in FAA Order 1050.1F, the following factors should be considered when evaluating light emissions and visual effects of an action:

- Light Emissions
  - The degree to which the action would have the potential to create annoyance or interfere with normal activities from light emissions; and
  - The degree to which the action would have the potential to affect the visual character of the area due to the light emissions, including the importance, uniqueness, and aesthetic value of the affected visual resources.
- Visual Effects
  - The degree to which the action would have the potential to affect the nature of the visual character of the area, including the importance, uniqueness, and aesthetic value of the affected visual resources;
  - The degree to which the action would have the potential to contrast with the visual resources and/or visual character in the study area; and
  - The degree to which the action would have the potential to block or obstruct the views of visual resources, including whether these resources would still be viewable from other locations.

## 5.10.3 CONSTRUCTION IMPACTS

### 5.10.3.1 No Action Alternative

Under the No Action Alternative, none of the proposed improvements or activities associated with the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Construction of these components would not significantly contrast with the existing environment, or result in the permanent obstruction of any visual resources. Given the existing level of ambient light, it would be unlikely construction lighting associated with the No Action Alternative would create an annoyance or interfere with normal activities.

### 5.10.3.2 Proposed Action Alternative

#### 5.10.3.2.1 Light Emissions

Construction of the Proposed Action Alternative would be conducted during various hours of the day depending on the location of proposed construction activities. Construction activities during nighttime hours

would require lighting associated with vehicles, perimeter lighting, and safety lighting. However, various buffer mechanisms, such as screened chain link fencing, existing vegetation features, or setbacks within the staging areas, would be utilized to shield any nighttime light from spilling over onto surrounding uses. Construction activities would follow standard construction practices as well as local regulations to minimize the spillover of light onto adjacent light-sensitive uses. The nearest light-sensitive uses to the proposed nighttime construction activities include the residential uses located north of Westchester Parkway/W. Arbor Vitae Street between Sepulveda Boulevard and Bellanca Avenue, as well as the hotel buildings along W. Century Boulevard and Airport Boulevard. The residential light-sensitive uses are located more than 300 feet from construction staging areas, while some hotels are located adjacent to designated construction staging areas. Given the numerous light sources that generate varying degrees of light emissions within and around the Proposed Project Area, it would be unlikely that construction lighting associated with the Proposed Action Alternative would create an annoyance or interfere with normal activities, nor would it interfere with the visual character of the area. Therefore, construction of the Proposed Action Alternative would not result in significant light emissions impacts when compared to the No Action Alternative.

#### 5.10.3.2.2 Visual Character and Resources

Construction of the Proposed Action Alternative would result in temporary changes to the visual character of the Proposed Project Area, as viewed from surrounding uses and nearby vantage points. Construction staging areas would be located adjacent to or within the construction sites for the proposed facilities to minimize any visual nuisances within surrounding areas (see Figure 4-2). Temporary construction fencing, including screening, canopies or other buffer mechanisms, would be installed to screen construction activities and equipment along major public approach and perimeter roadways. While construction of the Proposed Action Alternative would introduce new features, the existing area is highly urbanized with a variety of airport buildings, hotels, offices, surface parking lots, vacant lots, scattered residential, and light industrial uses. The proposed new features would not significantly contrast with the existing environment.

Construction of the Proposed Action Alternative would also involve the acquisition and demolition of existing facilities, as identified in Section 1.3.3 and **Appendix A**. The demolition of these facilities includes existing parking structures and roadways, and airport, commercial, industrial, and residential properties. None of the structures identified as historic properties would be demolished or directly impacted by the Proposed Action Alternatives (see Section 5.5). Therefore, demolition of these buildings would not diminish a valued focal or panoramic view.

Areas where construction activities would be most visible include the hotel, commercial, and office uses along W. Century Boulevard, W. Arbor Vitae Street, W. 96th Street, Airport Boulevard, and Aviation Boulevard. Construction activities occurring within the mostly vacated Manchester Square area would be visible from surrounding commercial, industrial, and surface parking uses, as well as a limited number of residences east of I-405. However, views of the Proposed Project Area east of I-405 are limited due to existing vegetation, elevation differences, and surrounding low- and medium-rise buildings. Additionally, a number of sound walls of varying height, such as the 6-foot-tall fences and landscape buffers separating residential uses north

of Westchester Parkway/W. Arbor Vitae Street between Sepulveda Boulevard and Bellanca Avenue would shield views of construction activities from the north.

While construction activities would be visible from on- and off-site vantage points, there are no notable views within the Proposed Project Area. As previously described, the Proposed Action Alternative would incorporate various temporary construction fencing features to screen much of the construction activities along major public approach and perimeter roadways, which would reduce temporary visual impacts. Additionally, construction of the Proposed Action Alternative would not contrast or affect the nature of the visual character of the Proposed Project Area, nor would it block or obstruct the views of any visual resource. Effects of the Proposed Action Alternative on the Theme Building are discussed in Section 5.5.3. Construction of the Proposed Action Alternative would not cause or create a significant visual impact when compared to the No Action Alternative.

## 5.10.4 OPERATIONAL IMPACTS

### 5.10.4.1 No Action Alternative

Under the No Action Alternative, none of the improvements and activities proposed for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Given the existing level of ambient light, it would be unlikely new lighting associated with the No Action Alternative would create an annoyance or interfere with normal activities. The proposed parking and rental car facilities would not substantially contrast with the existing environment and no viewsheds of unique or critical value have been identified.

### 5.10.4.2 Proposed Action Alternative

#### 5.10.4.2.1 Light Emissions

The components of the Proposed Action Alternative would contribute sources of lighting typical of a modern airport transportation area, which currently contains moderate to high levels of ambient lighting. While operations of the Proposed Action Alternative would introduce new sources of lighting, particularly within the predominantly vacant Manchester Square and Belford areas, these introduced sources of lighting would be shielded and directed downward to minimize light spillover onto adjacent light-sensitive uses. Additionally, in accordance with the LAX Design Guidelines, the Proposed Action Alternative would incorporate various features throughout the new facilities, such as screening, street trees, landscape buffer zones, and other appropriate mechanisms to minimize light spillover. The incorporation of these design features would ensure that light spillover would not create an annoyance or interfere with normal activities, or interfere with the visual character of the area. Therefore, operations of the Proposed Action Alternative would not result in significant light emissions impacts when compared to the No Action Alternative.

### 5.10.4.2.2 Visual Character and Resources

In the analysis of visual impacts, consideration was given to the extent to which changes in the various viewsheds would change with implementation of the Proposed Action Alternative. The visual analysis included views across the project area and not from residential land uses. There would be no residences close to any of the proposed components discussed below. As discussed in Section 4.12, the existing Proposed Project Area is primarily developed and heavily urbanized, comprised of various Airport, regional commercial, general commercial, and medium-density residential land uses with no characteristic viewsheds. Development of the Proposed Action Alternative would provide a modern airport transportation system that would connect passengers with remote facilities to the CTA, including: an elevated APM guideway and associated facilities, ITFs, a CONRAC, and roadway improvements. Visual effects of each component are discussed below:

- The APM guideway would span 2.25 miles from the CONRAC to the west end of the CTA, traveling primarily along the W. 96th Street Corridor.
  - Outside of the CTA, the scale and massing of the APM guideway would be compatible with the surrounding urban environment and would not contrast with the visual character of the area. In accordance with the LAX Design Guidelines, the design of the APM guideway would be straight-lined with a tapered edge profile to make the structure appear lighter and more refined and would not block or obstruct the views of visual resources.
  - Within the CTA, the APM guideway and associated facilities would not collectively contribute to the visual quality of the CTA. The APM would be consistent with existing uses within the CTA and would complement existing Airport structures, as well as the Theme Building, the 1961 and 1996 ATCTs, and the illuminated pylons just east of the CTA. The APM guideway would not compromise existing views of the 1961 ATCT. The APM guideway would be close to the south side of the 1961 ATCT and partially obscure views of lower portions of the tower from the south. However, despite the APM guideway, the 1961 ATCT would remain a dominant visual feature within the CTA. To the west of the 1961 ATCT, the APM guideway alignment travels around the north side of the Theme Building structure. The APM guideway would not compromise existing views of the Theme Building from the south. However, due to the proximity of the APM guideway and operating trains on the north side, the APM guideway would partially obscure the view the Theme Building from this vantage point. However, through implementation of design guidelines, impacts would not be significant (see Section 5.5).
- The proposed ITF East and CONRAC would be located in the currently mostly vacated area of Manchester Square; the ITF West would be constructed in the area currently occupied by existing Parking Lot C. The scale and massing of the ITFs and CONRAC would be compatible with surrounding low- and medium-rise buildings and would not be out of character for the area. The proposed building heights would be similar to or less than those of surrounding buildings, and would not block or obstruct the views of visual resources.
- Proposed roadway improvements would facilitate the movement of passengers and overall flow throughout the Proposed Project Area. While these roadway improvements would result in a change

in the visual character of the existing area, they would be consistent with a modern airport transportation system and would not significantly contrast with the existing environment, or result in the obstruction of visual resources.

Overall, the Proposed Project Area is distinguished by a highly-built environment comprised of a variety of architectural styles and building materials, a high level of continuous vehicle and pedestrian activities, as well as numerous ongoing construction activities. The Proposed Action Alternative would conform to this existing environment by introducing elements of architectural design that are appropriate for providing services to Airport passengers. A variety of edge and landscape treatments would also be incorporated into the design, in accordance with the LAX Design Guidelines and the Century Corridor Streetscape Plan, to create a cohesive, attractive, and functional environment for multiple users of the Airport. The Proposed Action Alternative would comply with the aesthetic-related goals and policies identified in the LAX Plan, LAX Specific Plan, and Westchester–Playa del Rey Community Plan, which would establish buffers between the components of the Proposed Action Alternative and the community (see Section 5.6). The Proposed Action Alternative would also comply with the goals and policies of the Mobility Plan 2035 by integrating streetscape signage and wayfinding, street trees and landscaping, and street lighting elements to integrate safe, accessible, and vibrant streets. As such, a visual continuity of streetscapes would be created that would encourage pedestrian activity and consistency of quality airport and related uses. This visual enhancement would support the function of a transportation-oriented environment near the Airport that would be conducive with the Airport's image as a gateway to the City of Los Angeles. Therefore, implementation of the Proposed Action Alternative would not result in significant visual impacts when compared to the No Action Alternative.

### 5.10.5 MITIGATION MEASURES

As indicated in Sections 5.10.3 and 5.10.4, implementation of the Proposed Action Alternative would not result in significant impacts to light emissions or visual effects when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.11 Water Resources

### 5.11.1 METHODOLOGY

Potential surface water and groundwater impacts were evaluated by comparing the location of the Proposed Project Area with water resources identified in Section 4.13.

The water resources analysis compares existing drainage conditions with conditions projected for the Proposed Action Alternative. The analysis describes conditions for the existing Proposed Project Area, as well as for areas proposed to be acquired. Changes in impervious surface were used to approximate changes in stormwater runoff. Impervious factors for the different types of land use were referenced from the City of Los Angeles Storm Drain Design Manual.[51] The peak flow rate generated from a particular land use and area has

[51] City of Los Angeles, Department of Public Works, *Storm Drain Design Manual-Part G*, June 1973.

been estimated or calculated and compared to the design capacity of the existing drainage system using the Los Angeles County Modified Rational Method.

## 5.11.2 SIGNIFICANCE THRESHOLDS

FAA Order 1050.1F, which defines the water resources impact categories, specifies that a significant impact to surface waters or groundwater would exist if the action would cause an exceedance of water quality standards established by federal, state, local, or tribal regulatory agencies or contaminate the public drinking water supply, including an aquifer used for public water supply, such that public health may be adversely affected.

## 5.11.3 CONSTRUCTION IMPACTS

### 5.11.3.1 No Action Alternative

#### 5.11.3.1.1 Surface Water

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Development of these components would likely require the need for earthwork including excavation and grading.

Construction of these facilities would potentially require a site-specific SWPPP in accordance with the NPDES Program General permits authorized under the CWA for construction activities and would be administered by the State Water Resources Control Board (SWRCB). Compliance with the NPDES General Permit would require stormwater BMPs to be incorporated into construction plans. Construction of off-Airport parking and rental car facilities would be conducted by private companies and would not be subject to the LAX SWPPP and NPDES permit. Therefore these activities would have the potential for impacts to surface water resources.

#### 5.11.3.1.2 Groundwater

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Development of these components would likely require the need for earthwork including excavation and grading. Construction of these components would not be anticipated to occur at depths or locations that would have the potential to impact groundwater resources. Construction of these components would not require the use of groundwater.

Contaminated groundwater may be encountered during foundation construction for components of the No Action Alternative. Furthermore, the possibility exists that previously unidentified soil and/or perched groundwater contamination could be encountered during other construction activities during implementation of the No Action Alternative. The handling of any contaminated materials would comply with all applicable local, state, and federal laws to avoid any significant impacts related to contamination of groundwater

supplies. Construction of off-Airport parking and rental car facilities would be conducted by private companies and would not be subject to LAWA hazardous materials/waste control measures. Therefore, these activities would have the potential for impacts to groundwater resources.

### 5.11.3.2 Proposed Action Alternative

#### 5.11.3.2.1 Surface Water

As noted in Section 4.13, there are no surface water streams within the LAX area. The Proposed Project Area is primarily within the North Dominguez Channel Sub-Basin located within the Dominguez Channel Watershed with portions located within the Imperial and Argo Sub-Basins, part of the larger Santa Monica Bay Watershed. Thus, stormwater runoff within the Proposed Project Area is received by both watersheds.

Site clearing and grading operations associated with the Proposed Action Alternative have the greatest potential for discharging sediment and pollutants downstream during storm events. Construction and grading activities would involve earth movement and the use of heavy construction equipment. Peak stormwater runoff could result in short-term sheet erosion with areas of exposed or stockpiled soils. Additionally, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase runoff and erosion potential.

The Proposed Action Alternative would be required to develop a site-specific SWPPP in accordance with the NPDES Program General permits authorized under the CWA for construction activities and would be administered by the SWRCB. As required under the SWRCB's General Permit for Construction Activities, LAWA has prepared stormwater BMP guidance instructions applicable to airport improvement projects.[52] This document outlines the procedures for preparing and implementing a construction SWPPP before beginning any construction activities so that the activities are in compliance with the general permit, and water quality impacts are minimized. These requirements, which would be incorporated into each project-specific SWPPP as appropriate, include:

- Soil stabilization (erosion control) techniques such as seeding and planting, mulching, and check dams
- Sediment control methods such as detention basins, silt fences, and dust control
- Contractor training programs
- Material transfer practices
- Waste management practices such as providing designated storage areas and containers for specific waste for regular collection

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[52] City of Los Angeles, Los Angeles World Airports, *2016 Design and Construction Handbook: Environmental – Guidance Manual for Construction Storm Water Pollution Prevention*, Issued November 2015, Available http://www.lawa.org/uploadedFiles/LAXDev/DCH/Environmental/ LAWA%20Guidance%20Manual%20-%20Construction%20SWPP.pdf.

- Roadway cleaning/tracking control practices
- Vehicle and equipment cleaning and maintenance practices
- Fueling practices

Adherence to the site-specific SWPPP and implementation of standard BMPs during construction would assure that discharges of pollutants of concern to a receiving water body by surface water runoff would be minimized. Therefore surface water impacts from construction of the Proposed Action Alternative would not be significant when compared to the No Action Alternative.

#### 5.11.3.2.2 Groundwater

Construction of the Proposed Action Alternative would not require the use of groundwater, and thus, would not draw upon groundwater supplies. Construction of the APM, ITFs, and CONRAC foundations would occur at depths up to 100 feet below ground surface (bgs). As discussed in Section 4.13.2.2, the central and western portions of the Proposed Project Area have a groundwater depth of approximately 88 to 100 feet deep; the eastern portion of the Proposed Project Area, adjacent to the I-405, has a groundwater depth of approximately 55 to 88 feet below the ground surface.

As discussed in Section 5.4.3, contaminated groundwater may be encountered during foundation construction for components of the Proposed Action Alternative. Furthermore, the possibility exists that previously unidentified soil and/or perched groundwater contamination could be encountered during other construction activities during implementation of the Proposed Action Alternative. However, the handling of any contaminated materials would comply with all applicable local, state, and federal laws to avoid any significant impacts related to contamination of groundwater supplies. Therefore, impacts to groundwater would not be significant when compared to the No Action Alternative.

### 5.11.4 OPERATIONAL IMPACTS

### 5.11.4.1 No Action Alternative

#### 5.11.4.1.1 Surface Water

Under the No Action Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. Development of these components would have the potential to increase impervious surfaces within the Proposed Project Area.

An estimated 16,300 off-Airport parking spaces would need to be developed to meet parking demands; minimally this would require approximately 80 to 100 acres of surface area for parking spaces and vehicle access. This would not necessarily be constructed on existing undeveloped land and therefore would not necessarily add 80 to 100 acres of impermeable surfaces. Additionally, these spaces could be accommodated in a parking garage, which would also reduce the amount of impermeable surfaces created.

Rental car facilities would also need to be expanded under the No Action Alternative. Approximately 21 acres of facilities would be required to meet anticipated rental car demands. This could occur on existing undeveloped surfaces or could be developed at existing rental car facilities as garage structures. Therefore the expansion of rental car facilities would not necessarily result in any increase in impervious surfaces, but could potentially redevelop 21 pervious acres into impervious surfaces.

The redevelopment of pervious surfaces to impervious has the potential to increase stormwater runoff and contribute pollutants to surface waters. It is anticipated that stormwater runoff from any such facilities would be required to be mitigated through project-specific site design measures.

#### 5.11.4.1.2 Groundwater

Under the No Alternative, none of the proposed improvements or activities for the LAX Landside Access Modernization Program would occur. However, it is anticipated that if the No Action Alternative was implemented, private rental car and parking operators would expand or construct new facilities to accommodate future needs. None of the No Action Alternative components would be anticipated to use groundwater or draw on groundwater supplies.

### 5.11.4.2 Proposed Action Alternative

#### 5.11.4.2.1 Surface Water

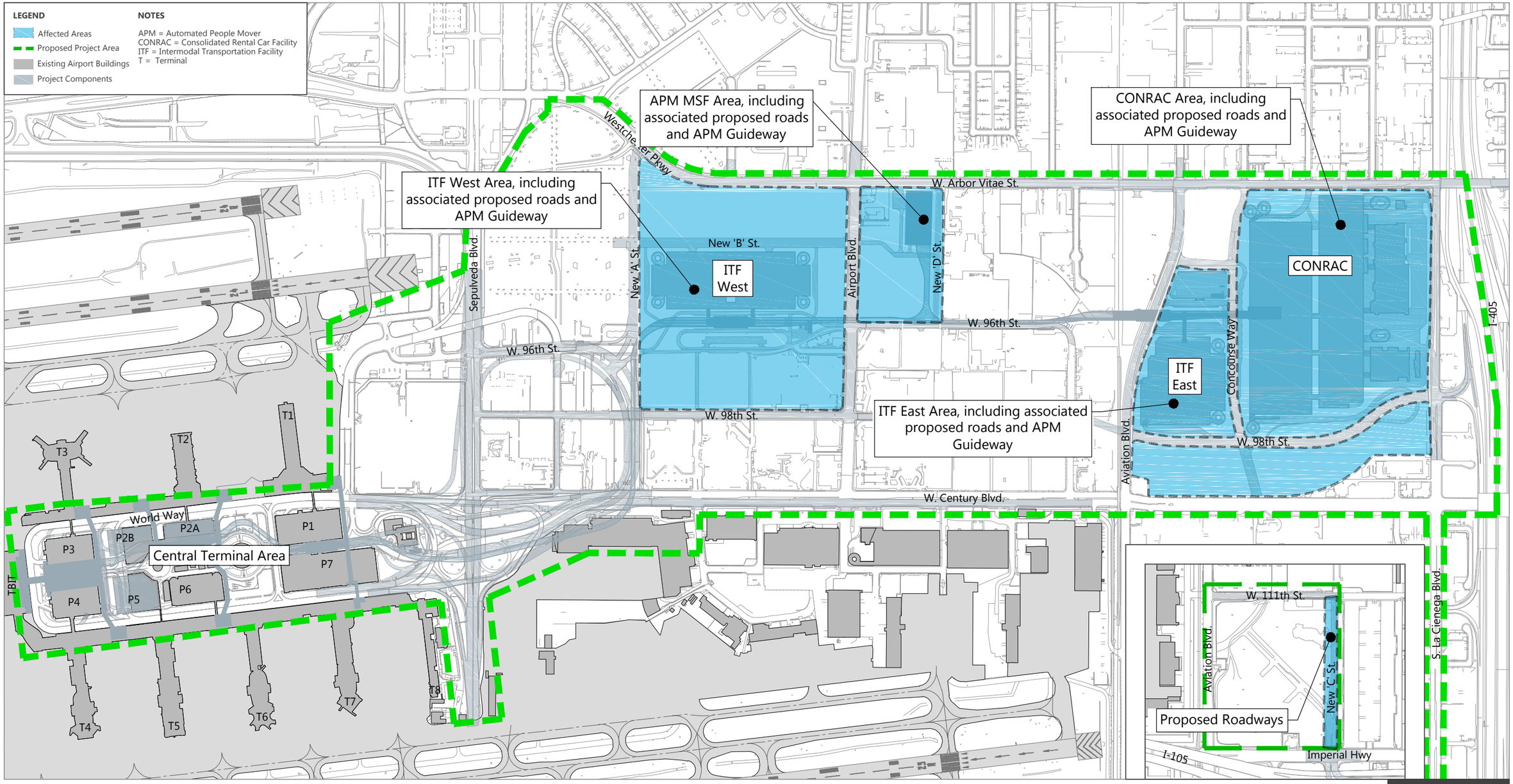
Implementation of Proposed Action Alternative components would result in changes to impervious surfaces. Project features associated with each of the major Proposed Action Alternative components are discussed below; the changes in impervious surfaces are summarized in **Table 5-32**. Drainage areas for each of the main Proposed Action Alternative components where pervious surfaces are being converted to impervious surfaces are identified in **Figure 5-11**. The changes in drainage areas for the main Proposed Action Alternative components include the respective facilities as well as the roadway improvements proposed in the vicinity of each facility.

**Table 5-32: Future Proposed Action Alternative Site Imperviousness**

| PROJECT AREA | PROJECT CONDITION | TOTAL DRAINAGE AREA | AREA 100% IMPERVIOUS (ACRES) | AREA 25% IMPERVIOUS (ACRES) | AREA PERVIOUS (ACRES) | COMPOSITE PERCENT IMPERVIOUS |
|---|---|---|---|---|---|---|
| CONRAC | Existing | 75 | 22 | 3 | 50 | 30% |
| | Future (2035) | 75 | 72 | 0 | 3 | 96% |
| ITF East | Existing | 32 | 14 | 4 | 14 | 47% |
| | Future (2035) | 32 | 27 | 0 | 5 | 84% |
| ITF West | Existing | 71 | 69 | 0 | 2 | 97% |
| | Future (2035) | 71 | 70 | 0 | 1 | 99% |
| APM MSF | Existing | 20 | 7 | 0 | 13 | 35% |
| | Future (2035) | 20 | 11 | 0 | 9 | 55% |
| New Roadways | Existing | 34 | 5 | 0 | 29 | 15% |
| | Future (2035) | 34 | 7 | 0 | 27 | 20% |

SOURCE: CDM Smith, 2016.
PREPARED BY: Ricondo & Associates, Inc., March 2016.

**[Preliminary Draft for Discussion Purposes Only]**




SOURCE: HNTB Corp., Los Angeles International Airport Layout Plan, July 2012; MapLAX, June 2016; CDM Smith, April 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-11**

Drainage Areas for Project Components

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Peak runoff elevations or depths in the storm drain system for the 10-year design storm[53] were assessed for future Proposed Action Alternative conditions as well as the on-site storage volumes needed to maintain existing downstream peak depths, which are summarized in **Table 5-33**. These calculations were made to determine the capacity of the existing storm drain system and to determine how much on-site storage is required to prevent flooding downstream. The estimated volume of stormwater detention that would be required for each Proposed Action Alternative component to maintain existing downstream peak depths is identified. Peak runoff depths in storm drains downstream that exceed existing drainage system peak depths for the 10-year storm are considered significant impacts as they may cause surface flooding unless sufficient detention is provided.

As shown in Table 5-33, additional flow is attributed to the Proposed Action Alternative, which will add to an already surcharged condition in the Dominguez Channel Watershed as described in Section 4.13. LAWA has identified detention requirements, which will be incorporated into design of the Proposed Action components.

**Table 5-33: Project-Related 10-Year Storm Peak Depths**

| COMPONENT | EXISTING DOWNSTREAM PEAK DEPTH (FEET) | FUTURE DOWNSTREAM PEAK DEPTH (FEET) | DIFFERENCE IN PEAK DEPTH (FEET) | DETENTION VOLUME REQUIRED ($ft^3$) |
|---|---|---|---|---|
| CONRAC | 4.44 (to the north)<br>12.81 (to the south) | 6.28 (to the north)<br>15.13 (to the south) | +1.8 (to the north)<br>+2.32 (to the south) | 571,000 |
| ITF East | 9.57 | 12.04 | +2.47 | 200,000 |
| ITF West | 12.41 (to the south)<br>12.45 (to the east) | 12.80 (to the south)<br>12.87 (to the east) | +0.39 (to the south)<br>+0.42 (to the east) | 94,000 |
| APM MSF | 5.21 | 7.67 | +2.46 | 23,000 |
| Roadways | 1.39 | 1.39 | 0.00 | 0 |

NOTE: $FT^3$ = cubic feet
SOURCE: CDM Smith, April 2016.
PREPARED BY: Ricondo & Associates, Inc., July 2016.

**Table 5-34** presents the volume of stormwater that would require management to meet the water quality treatment requirement for each Proposed Action Alternative component, as well as the additional on-site runoff storage/detention that would be needed to fully address peak runoff depth downstream for the 10-year storm event. The design and sizing of drainage system and stormwater quality treatment facilities for the Proposed Action Alternative will be required to accommodate those storage requirements. LAWA has determined that sufficient space is available to accommodate these requirements within the Proposed Project

[53] The FAA, Los Angeles County Department of Public Works, and the City of Los Angeles design criteria state that the design and improvements of storm drains should provide flood protection capacity for a minimum of a 10-year storm event.

Area. Following Table 5-34 is a description of the design provisions for each Proposed Action Alternative component that could meet the storage requirements.

**Table 5-34: Storage Volume Requirements for On-Site Stormwater Management**

| PROJECT COMPONENT | WATER QUALITY REQUIREMENT ($ft^3$) | ADDITIONAL DRAINAGE REQUIREMENT ($ft^3$) | TOTAL ($ft^3$) |
|---|---|---|---|
| CONRAC | 220,000 | 351,000 | 571,000 |
| ITF East | 70,000 | 130,000 | 200,000 |
| ITF West | 45,000 | 49,000 | 94,000 |
| APM MSF Facility | 7,000 | 16,000 | 23,000 |
| APM Guideway (entire length) | 54,000 | New Storm Drains | 54,000 |
| New Roadways | 130,000 | New Storm Drains | 130,000 |

NOTE: $FT^3$ = cubic feet

Source: CDM Smith, April 2016.
PREPARED BY: Ricondo & Associates, Inc., July 2016.

- **CONRAC.** Proposed on-site cisterns, or functional equivalent, would be supplemented to provide an additional 40,000 $ft^3$ of detention in the north and 31,000 $ft^3$ of detention in the south; a detention design depth of 5 feet would necessitate a footprint of 0.2 acre and 0.1 acre on the facility site, respectively.
- **ITF East.** A 1.9-acre site for combined retention and detention would be provided, or functional equivalent, to retain 70,000 $ft^3$ of runoff for water quality treatment (a 1.3-acre footprint) and detain 130,000 $ft^3$ to meet developed drainage requirements (a 0.6-acre footprint) at the ITF East facility.
- **ITF West.** A 1.1-acre site for combined retention and detention would be provided, or functional equivalent, to retain 45,000 $ft^3$ (0.86 acre) of runoff and detain 50,000 $ft^3$ (0.23 acre).
- **APM MSF.** A 0.2-acre site for combined retention and detention would be provided, or functional equivalent, to retain 7,000 $ft^3$ of runoff (0.13 acre) and detain 16,000 $ft^3$ (0.07 acre).
- **Roadways and APM Guideway.** For roadways, approximately 2.5 acres of swales would be provided, or functional equivalent, to retain 130,000 $ft^3$ of runoff. For the APM guideway, approximately 1 acre of surface-level bioretention features will be provided to treat 54,000 $ft^3$ of runoff.

Additionally, LAWA would construct or support on a fair-share basis, improvements to the existing storm drain lines with larger diameter lines to address the existing drainage deficiencies within the storm drain lines along W. 96th Street, Airport Boulevard, and W. Century Boulevard in order to accommodate required detention.

The Proposed Action Alternative would alter and redirect stormwater flows through portions of the Proposed Project Area; however, the Proposed Action Alternative would not result in a permanent, adverse change to the movement of surface water sufficient to produce a substantial change in the current or direction of water flow. Stormwater discharges to existing drainage features would continue similar to existing conditions. Thus, the Proposed Action Alternative would not have a significant impact on the movement of surface water when

compared to the No Action Alternative because it would not cause a substantial change in the current or direction of water flow.

The Proposed Action Alternative would not cause substantial alteration of the existing drainage pattern of the Proposed Project Area in a manner which would result in substantial erosion or siltation on- or off-site. All facilities receiving and conveying stormwater from the Airport would be below ground pipe or concrete-lined structures. As such any increases in stormwater peak flow rates or changes in the drainage infrastructure would not result in substantial erosion or siltation.

With provision of the required detention requirements identified above, the Proposed Action Alternative's impacts on surface water due to stormwater drainage systems and flooding would not be significant when compared to the No Action Alternative.

Sources of dry-weather flow within the Proposed Project Area are associated with activities that include outdoor cleaning and maintenance of rental vehicles; maintenance of the APM system and equipment; and building and grounds maintenance. These activities would result in an increase in the source of pollutants (listed in Table 4-20) within the Proposed Project Area and receiving water bodies. However, measures under the SWPPP, existing NPDES General Industrial Permit and existing MS4 Permit would be implemented and periodically updated as necessary to reflect the current conditions and level of activity to prevent or minimize the introduction of pollutants and discharge of dry-weather flows. As such, impacts related to water quality during dry-weather discharge conditions would not be significant when compared to the No Action Alternative.

Wet-weather runoff from the proposed development areas would result in an increase in pollutant loads that are discharged to the North Dominguez Channel Sub-Basin and downstream to receiving waters. As stated above, changes to the land cover from the development of the CONRAC and ITF East facilities would reduce open space/pervious area by 63 acres, resulting in an increase in impervious areas and contaminant load in surface water runoff. Similarly, development of the ITF West, APM facilities, and associated roadways would increase impervious surfaces and decrease infiltration within the Proposed Project Area. Pollutant loads discharged to the Dominguez Channel Watershed by surface water runoff would increase; the most substantial increases resulting from implementation of the Proposed Action Alternative would be for oil and grease, lead, zinc, and ammonia. The conversion of open space/pervious area to transportation land use for the development of the ITF West would increase contaminant loads for all constituents except for total suspended solids (TSS) when compared to the No Action Alternative. Development of the APM MSF would also convert open space to industrial and transportation use, thus impacting surface runoff and water quality. Pollutant loads discharged to the Dominguez Channel by surface water runoff would increase, particularly oil and grease, lead, zinc, and ammonia, during operation of the Proposed Action Alternative. However, measures under the SWPPP, existing NPDES General Industrial Permit and existing MS4 Permit would be implemented and periodically updated as necessary to reflect the current conditions and level of activity to prevent or minimize the introduction of pollutants and discharge of pollutant loads. Provision of the stormwater management facilities identified above would result in no significant impact when compared to the No Action Alternative.

#### 5.11.4.2.2 Groundwater

Operation of the Proposed Action Alternative would not require the use of groundwater, and thus, would not draw upon groundwater supplies. Although operation of the Proposed Action Alternative would potentially result in a net increase in impervious areas and an associated decrease in the volume of surface recharge within the Proposed Project Area when compared to existing conditions, the reduction in surface recharge would not substantially change the groundwater storage or groundwater elevation beneath the Proposed Project Area because the basin is replenished predominantly through injection wells that are part of the seawater intrusion barrier system.[54] Therefore, impacts to groundwater supply and recharge would not be significant when compared to the No Action Alternative.

### 5.11.5 MITIGATION MEASURES

As indicated in Sections 5.11.3 and 5.11.4, implementation of the Proposed Action Alternative would not result in significant impacts to water resources when compared to the No Action Alternative; therefore, no mitigation measures are required.

## 5.12 Cumulative Impacts

### 5.12.1 METHODOLOGY

Cumulative impacts to environmental resources result from the incremental effects of a proposed action when combined with other past, present, and reasonably foreseeable future actions in the area, regardless of the entity (i.e., federal or non-federal) or person that would carry out those actions. In some cases, individually minor but collectively significant actions occurring over a defined period of time can cause cumulative impacts. In accordance with NEPA, a discussion of cumulative impacts resulting from projects proposed, under construction, recently completed, or planned for implementation in the near future is required. For purposes of this analysis, past, present, and reasonably foreseeable projects at/adjacent to LAX were identified within the immediate vicinity of the Proposed Action. The development projects at/adjacent to LAX that are considered in this assessment of potential cumulative impacts are listed in **Table 5-35** and **Figure 5-12**.

[54] U.S. Department of the Interior, U.S. Geological Survey, *Ground-Water Quality of Coastal Aquifer Systems in the West Coast Basin, Los Angeles County, California, 1999-2002,* pg. 2, 2004.

**Table 5-35 (1 of 4): Past, Present, and Reasonably Foreseeable Projects**

| | PROJECT | DATES | DESCRIPTION |
|---|---|---|---|
| | **Past Projects** | | |
| 1 | Central Utility Plant Replacement Project (CUP-RP) | May 2011 – Mar 2015 | Replacement CUP and related underground piping network within CTA. |
| 2 | Runway 6L-24R Runway Safety Area Improvements Project – North Airfield | June 2015 – Oct 2015 | Improvements to Runway 6L-24R included implementation of declared distances to meet FAA Runway Safety Area (RSA) requirements. The Runway 6L-24R RSA Project also required the demolition and reconstruction of service roads and the relocation of the AOA fence and security gates. |
| 3 | Runway 6R-24L Runway Safety Area Improvements Project - North Airfield | Aug 2015 – Nov 2016 | Improvements to both ends of Runway 6R-24L, including an easterly shift of the runway and reconfigured taxiways to meet FAA RSA requirements. The Runway 6R-24L RSA Project also required the relocation of a security post and the taxicab holding/staging area. |
| 4 | Terminal 3 Improvements | Nov 2015 – Nov 2016 | Minor interior improvements to implement regulatory upgrades in Terminal 3. |
| | **Present Projects** | | |
| 5 | South Terminal Improvements | Nov 2011 – Dec 2018 | Major interior improvements and building system upgrades within Terminal 7 and Terminal 8. |
| 6 | LAX Bradley West Project | Nov 2013 – Nov 2017 | Replacement of existing concourses and aprons at the Tom Bradley International Terminal (TBIT) with new concourses and gates at Bradley West. Work includes demolition of existing TBIT concourses and installation of east gates/aprons along Bradley West concourses. Also includes Taxilane T project and construction of secure/sterile passenger and baggage connection between the TBIT core and Terminal 4. Although construction of a similar connection between TBIT core and Terminal 3 is also part of the overall Bradley West Project, it is broken out separately below (Project 18, Terminal 3 Connector), as its construction would not begin until after the majority of the Bradley West improvements are completed. |
| 7 | Terminal 2 Improvements | Jan 2014 – Jan 2018 | Major interior improvements and building system upgrades to Terminal 2. |
| 8 | Terminal 1 Improvements | Aug 2014 – Dec 2018 | Major interior improvements and building system upgrades to Terminal 1, including addition of floor space and reconfiguration of gates. |
| 9 | West Aircraft Maintenance Area Project | Aug 2014 – Jan 2018 | The West Aircraft Maintenance Area (WAMA) project will allow for more efficient and effective maintenance of existing aircraft at LAX, including Aircraft Design Group (ADG) VI aircraft (Airbus A380s and Boeing 747-8s). The project includes aircraft parking and maintenance facilities, employee parking areas, and related storage, equipment, and facilities. The project will be able to accommodate up to 8 ADG VI aircraft simultaneously or 18 ADG III aircraft (aircraft similar in size to and including Boeing 737s). The first phase of the WAMA Project was completed in July 2016. The second phase of the WAMA Project (construction of an additional maintenance hangar) will be dictated by market conditions and is anticipated to be completed by 2018. |

**Table 5-35 (2 of 4): Past, Present, and Reasonably Foreseeable Projects**

| | PROJECT | DATES | DESCRIPTION |
|---|---|---|---|
| 10 | LAX Northside Development | April 2016 – June 2025 | The Northside Development will transform approximately 340 acres of under-utilized land on the north side of the airport to better serve LAWA and the local communities of Westchester and Playa del Rey. |
| 11 | Runway 7L-25R Runway Safety Area Improvements Project - South Airfield | May 2016 – Nov 2017 | Improvements at west end of Runway 7L-25R, including runway and connecting taxiway extensions to meet FAA RSA requirements. Rehabilitation of deteriorating concrete at east end of runway and Taxiway B. |
| 12 | Metro Crenshaw/LAX Transit Corridor Project | Jan 2015 – 2019 | The Los Angeles County Metropolitan Transportation Authority (Metro) is constructing the Crenshaw/LAX Transit Corridor Project, which includes an 8.5-mile light-rail transit line that will connect the existing Metro Green Line and the Metro Expo Line at Crenshaw and Exposition Boulevards. As part of this project, a station is being constructed in proximity to LAX near the intersection of Century Boulevard and Aviation Boulevard. |
| 13 | LAX Midfield Satellite Concourse (MSC) North Project | April 2015 – Mar 2020 | The MSC North Project consists of a satellite concourse west of TBIT that would include up to 12 aircraft gates that could accommodate ADG V and ADG VI aircraft. The MSC North Project includes associated apron areas, a new crossfield taxiway, a taxilane, and provisions for an underground tunnel. |
| 14 | Hyperion Treatment Plant Connector | Oct 2017 – May 2018 | This project will provide a connection from LAWA's existing retention basin within the southwest portion of LAX to the existing North Central Outfall Sewer (NCOS) interceptor that runs within LAWA property and is connected to the Hyperion Treatment Plant (HTP). The purpose of this connection is to convey the stormwater flow from LAWA's Imperial and Pershing subdrains (approximately 1,200 acres) to the HTP, to help LAWA comply with the City's Low Impact Development and Industrial General Permit requirements. Improvements include construction of an approximately 4'-diameter connection to the NCOS, and installation of pumps and related electrical and mechanical equipment. |
| N/A | Aircraft Noise Mitigation Program | 2001 – 2020 | Voluntary acquisition of residences and existing incompatible uses within the Manchester Square and Belford neighborhoods, which are located within the CNEL 65 dB noise contour. |
| N/A | Southern California Metroplex Aircraft Route and Airspace Management Structure Optimization (SoCal Project) | Nov 2016 – April 2017 | The FAA SoCal Project seeks to improve the efficiency of airspace in the Southern California Metroplex by optimizing aircraft arrival and departure procedures at Southern California airports. The FAA project may involve changes in aircraft flight paths and altitudes in certain areas, but would not result in any ground disturbance or increase the number of aircraft operations within the Southern California airspace. FAA published a final EA and Finding of No Significant Impact for the SoCal Metroplex project in August 2016. |

**Table 5-35 (3 of 4): Past, Present, and Reasonably Foreseeable Projects**

| | PROJECT | DATES | DESCRIPTION |
|---|---|---|---|
| N/A | Miscellaneous Projects and Improvements | Jan 2014 – July 2020 | LAWA will undertake 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; terminal electrical, plumbing, and facilities upgrades; miscellaneous demolition; and other improvements. |
| | **Reasonably Foreseeable Projects** | | |
| 15 | Runway 7R-25L Rehabilitation | Sep 2017 – Dec 2018 | Reconstruction of runway pavement. |
| 16 | Argo Drain Sub-Basin Stormwater Infiltration and Treatment Facility | Oct 2017 – Dec 2019 | Also referred to as the Westchester Stormwater Best Management Practices Project, this project would develop a 22-acre stormwater infiltration facility north of Westchester Parkway and east of Pershing Drive that would treat both City of Los Angeles and LAWA stormwater flows from the Argo watershed. |
| 17 | Terminal 1.5 | Jun 2017 – Feb 2020 | Terminal 1.5 will be constructed between existing Terminal 1 and Terminal 2 to provide additional passenger processing facilities for the north passenger terminals. |
| 18 | Terminal 3 Connector | Jan 2021 – Dec 2022 | The Terminal 3 connector will provide a passenger connection between TBIT and Terminal 3 on the north side, similar to the Terminal 4 connector. |
| 19 | Airport Police Facility | Nov 2017 – Dec 2020 | Relocation of LAWA Police Department to consolidate facilities into one location in the LAX Northside, which will include the police headquarters, shooting range, canine facility, and parking structure. |
| 20 | Secured Area Access Post (SAAP) Project | Fourth Quarter 2017 – Second Quarter 2020 [2/] | Construction of a fully functional, secured access point onto the Airport Operations Area (AOA) on the west side of LAX. This will be the sole full-access SAAP on World Way West to replace SAAP 5 which was displaced by the MSC project, and SAAP 21, which was taken out of service by Phase 2 of the WAMA Project in May 2017. The proposed location of the new SAAP is parallel to, and south of, World Way West, near where the road will terminate at Coast Guard Road once the LAX MSC North Project is completed. |
| 21 | Terminals 2 and 3 Modernization Project | Sep 2017 – Dec 2023 | Improvements to Terminals 2 and 3, consisting of upgrading the Terminal 2 concourse, including construction of additional floor area; the demolition and reconstruction of the Terminal 3 concourse building to provide additional concourse area, including a new operation control center; the demolition of the southern appendages of the Terminal 3 satellite; the demolition and reconstruction of the passenger and baggage processing facilities (ticketing buildings) at Terminals 2 and 3, including new facilities for passenger and baggage screening, ticketing, and baggage claim; and a secure connector between Terminals 2 and 3. |

**Table 5-35 (4 of 4): Past, Present, and Reasonably Foreseeable Projects**

| | PROJECT | DATES | DESCRIPTION |
|---|---|---|---|
| 22 | Concourse 0 | Jan 2020 – Dec 2023 | Concourse 0 would be constructed to the east of Terminal 1, in the current location of the Park One surface parking lot. Concourse 0 would provide up to 660,000 square feet of floor space, including 11 aircraft gates. |
| 23 | Airport Metro Connector (AMC) 96th Street Transit Station | 2020 – 2023 | Metro will be constructing a new multi-modal transportation center at 96th Street and Aviation Boulevard to connect LAX to the regional bus and transit system. Components of the AMC Station include three at-grade light rail transit (LRT) platforms, bus plaza, bicycle hub, pedestrian plaza, passenger vehicle pick-up and drop-off area and Metro transit center/terminal building ("Metro Hub") to connect passengers between the multiple transportation modes. |
| 24 | MSC South Project | 2020 – 2025 | The MSC South concourse would be constructed on the south end of the MSC North concourse in order to provide up to 18 additional aircraft gates. The facility would provide approximately 560,000 square feet of floor space. |
| 25 | North Airfield Safety Improvements | July 2019 - 2025 | Improvements to the north airfield could include installation of taxiways, improvements to existing taxiways, installation of runway status lights, and other safety improvements, including land use compatibility projects with existing Runway Protection Zones. |
| 26 | Potential Future Related Development [1/] | 2030 - 2035 | After completion of the Proposed Action, parcels will be available for up to 900,000 square feet of commercial development. In the CONRAC area, the land located between W. 98th Street and W. Century Boulevard and the land located on the corner of Aviation Boulevard and W. Arbor Vitae Street would be available after construction of the Project facilities is completed. In addition, the areas located south of the ITF West along W. 98th Street and along Airport Boulevard would be available, as would portions of the Belford area located south of W. 96th Street. |

NOTES:

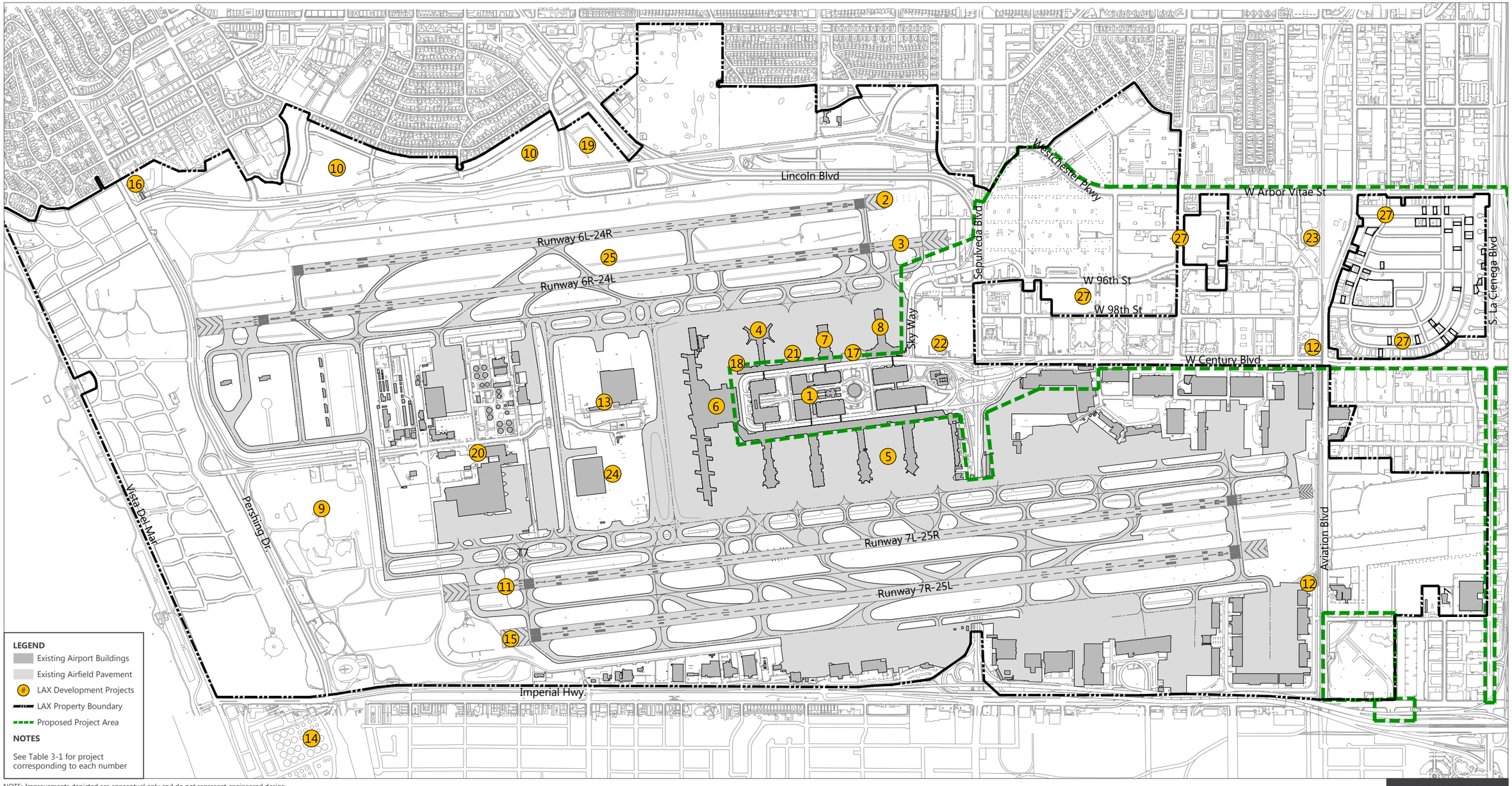
1/ There are no current proposals or plans regarding what types or amounts of development may occur on the parcels that would be available for other uses as a result of the Proposed Action. Further planning, assessment and other efforts would be needed. Thus, particular uses and development are not reasonably foreseeable at this time. However, to conservatively assess and disclose possible cumulative impacts, this EA makes reasonable assumptions about possible future development for purposes of assessing cumulative impacts, including on surface traffic and air quality.

2/ The proposed SAAP project would take approximately 13 months for demolition and construction. Construction and demolition may not be continuous; the 13 months of construction activity is estimated to occur in the timeframe between the fourth quarter of 2017 and the second quarter of 2020.

SOURCES: LAWA, 2016; Los Angeles County Metropolitan Transportation Authority (Metro), *Airport Metro Connector 96th Street Transit Station Draft Environmental Impact Report*, Executive Summary and Chapter 2, Project Description, June 2016; Federal Aviation Administration, *Finding of No Significant Impact (FONSI) and Record of Decision (ROD) For the Southern California Metroplex Project*, August 2016.

PREPARED BY: Ricondo & Associates, Inc., May 2017.

**[Preliminary Draft for Discussion Purposes Only]**




NOTE: Improvements depicted are conceptual only and do not represent engineered design.
SOURCE: Los Angeles World Airports; HNTB, July 2012; Historic Resources Group, LAX Landside Transportation Project Resources Assessment, January 2016; MapLAX, July 2016.
PREPARED BY: Ricondo & Associates, Inc., August 2017.

**FIGURE 5-12**

Past, Present, and Reasonably Foreseeable Projects

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For this EA, 29 projects meet the criteria described above; these projects are in various stages of planning and/or construction. The discussion below provides a qualitative analysis of these 29 projects and their potential impacts to the environmental resources presented in this EA, including: air quality, Department of Transportation Act, Section 4(f) and Land and Water Conservation Fund Act, Section 6(f) resources; hazardous materials, solid waste, and pollution prevention; historic, architectural, archaeological, and cultural resources; land use; natural resources and energy supply; noise and noise-compatible land use; socioeconomic impacts, environmental justice, children's environmental health and safety risk; visual effects; and water resources.

As indicated below, past, present, and reasonably foreseeable development projects at/adjacent to LAX have the potential to independently impact a number of the resource categories evaluated in this EA, such as air quality. The impacts associated with the construction of the Proposed Action Alternative would be reduced through the implementation of minimization measures discussed in this EA. The Proposed Action Alternative would not result in significant operational changes to LAX or increase the type or amount of activity at LAX when compared to the No Action Alternative.

### 5.12.2 AIR QUALITY

Development of the Proposed Action Alternative would substantially improve long-term landside operations at LAX, and thus would significantly reduce operational emissions. While construction emissions of the Proposed Action Alternative would result in a temporary increase in emissions at LAX, these emissions would conform with the SIP for all applicable criteria pollutants, therefore conforming to the CAA. A list of past, present, and reasonably foreseeable projects at/adjacent to LAX that could overlap in time for construction are provided in **Table 5-36**, along with estimated mass emissions. Emissions for several of these projects were estimated or obtained from publicly available and readily accessible environmental documents; construction emissions for other projects were estimated based on the ratio of the project costs as compared to the Proposed Action. When considered in addition to other development projects at/adjacent to LAX, the Proposed Action Alternative would not have significant cumulative air quality impacts when compared to the No Action Alternative.

### 5.12.3 DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F) AND LAND AND WATER CONSERVATION FUND ACT, SECTION 6(F) RESOURCES

Implementation of the Proposed Action Alternative would not significantly affect any Section 4(f) resources, including properties listed or eligible for listing on the National Register of Historic Places. Additionally, construction and operations of the cumulative projects identified in Table 5-35 are not anticipated to directly impact or occupy any Section 4(f) resource based on their location within the vicinity of LAX. While some projects may result in increases in noise, criteria air pollutants emissions, water pollutants, or other environmental impacts that could affect nearby Section 4(f) resources, it is not anticipated that these adverse impacts would result in a physical or constructive use of these resources. All operations and construction would be consistent with existing operations, thus, the Proposed Action Alternative would not cumulatively contribute to a significant impact on Section 4(f) resources when compared to the No Action Alternative.

## Table 5-36: Cumulative Construction Projects Peak Quarter Emissions Estimates (tons/quarter)

| CUMULATIVE DEVELOPMENT PROJECTS DURING CONSTRUCTION | CO | VOC | $NO_X$ | $SO_X$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| N/A Landside Access Modernization Program [1/] | 9.7 | 1.7 | 17.7 | <1 | 1.3 | 0.9 |
| 1. Potential Future Related Development | 2.8 | 0.93 | 2.8 | <1 | 0.25 | 0.25 |
| 2. South Terminal Improvements | 0.6 | 0.3 | 0.8 | <1 | 0.1 | 0.1 |
| 3. LAX Bradley West Project | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 4. Terminal 1 Improvements | 2.2 | 0.2 | 1.5 | <1 | 0.2 | 0.1 |
| 5. West Aircraft Maintenance Area Project | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 6. Runway 6R-24L Runway Safety Area Improvements-North Airfield | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 7. Runway 7L-25R Runway Safety Area Improvements-South Airfield | 65.5 | 6.7 | 15.3 | 2.9 | 1.9 | 0.6 |
| 8. Metro Crenshaw/LAX Transit Corridor Project and Stations [7/] | 4.9 | 1.0 | 8.8 | <1 | 1.0 | 0.6 |
| 9. LAX Midfield Satellite Concourse (MSC) North Project | 35.0 | 3.6 | 12.5 | <1 | 9.5 | 2.2 |
| 10. Hyperion Treatment Plant Connector | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 11. Miscellaneous Projects and Improvements | 23.9 | 6.4 | 32.3 | <1 | 4.2 | 1.7 |
| 12. Terminal 2 Improvements | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 13. Runway 7R-25L Rehabilitation | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 14. MSC North Extension [3/] | 3.5 | 0.4 | 1.3 | <1 | 1 | 0.2 |
| 15. LAX Northside Development | 8.1 | 4.1 | 1.6 | <1 | 1.0 | 0.4 |
| 16. Terminal 3 Improvements | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 17. Argo Drainage Sub-Basin Stormwater Infiltration and Treatment Facility | 11.3 | 1.0 | 6.0 | 0.0 | 1.5 | 0.7 |
| 18. Terminal 1.5 | 1.0 | 1.5 | 1.2 | <1 | 0.3 | 0.2 |
| 19. Terminal 3 (T-3) Connector | 0.5 | 0.2 | 0.6 | <1 | 0.1 | 0.0 |
| 20. Canine Facility/Airport Police Department Range | --[6/] | --[6/] | --[6/] | --[6/] | -[6/] | --[6/] |
| 21. Secured Area Access Post (SAAP) Project | 1.3 | 0.2 | 1.8 | <1 | 0.2 | 0.2 |
| 22. Terminals 2 and 3 Modernization Project | 9.9 | 2.8 | 8.5 | <1 | 4.4 | 1.9 |
| 23. Airport Police Station Relocation | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] | --[2/] |
| 24. Concourse 0 [5/] | 2.3 | 0.5 | 5.6 | <1 | 2.6 | 0.4 |
| 25. MSC South Project | 3.5 | 0.4 | 1.3 | <1 | 1 | 0.2 |
| 26. North Airfield Safety Improvements [4/] | 6.8 | 1.4 | 16.3 | <1 | 10.9 | 1.5 |
| Total from Other Construction Projects Emissions | 183.1 | 31.6 | 118.2 | 2.9 | 40.2 | 11.3 |
| **Total Cumulative Construction Project Emissions** | **192.8** | **33.3** | **135.9** | **2.9** | **41.5** | **12.2** |

NOTES:

1/ Project construction is estimated to occur from 2018 to 2030.

2/ Based on the anticipated construction schedule, this project is not anticipated to result in overlapping construction emissions with the Proposed Action Alternative during the estimated combined peak day.

3/ MSC North Extension peak day emissions estimated to be 10 percent of MSC North Project emissions.

4/ North Airfield Safety Improvements emissions were based on emissions estimated for LAX Specific Plan Amendment Study – Alternative 2 for construction elements: Center Taxiway for 24L, Runway 24L & South Parallel Taxiways, North CTA Aprons & Taxiways, and associated Support.

5/ Concourse 0 emissions were based on emissions estimated for LAX Specific Plan Amendment Study – Staff Recommended Alternative for construction elements: North CTA Concourses, North CTA Aprons & Taxiways, and associated Support.

6/ Canine Facility/Airport Police Department Range is accounted for in LAX Northside Development.

7/ Includes the AMC 96th Street Transit Station.

SOURCES: City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Midfield Satellite Concourse*, (SCH No. 2013021020), June 2014; City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Northside Plan Update*, (SCH No. 2012041003), December 2014; City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport (LAX) Terminal 1.5 Project Initial Study-Proposed Mitigated Negative Declaration*, July 2016; City of Los Angeles, Los Angeles World Airports, *Final Environmental Impact Report for Los Angeles International Airport (LAX) Specific Plan Amendment Study*, (SCH No. 1997061047), January 2013.
PREPARED BY: Ricondo & Associates, Inc., February 2017.

### 5.12.4 HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

Construction of the Proposed Action Alternative, as well as the cumulative development projects identified in Table 5-35, would require the use of motor fuel, oil, and other petroleum-based products; however, construction plans would include provisions for appropriate handling of these materials, including compliance with state and federal regulations for the transport, use, or disposal of hazardous materials and hazardous waste. Additionally, construction of the Proposed Action Alternative and some of the cumulative development projects may interfere with ongoing remediation efforts in the vicinity of LAX. Compliance with existing federal, state, regional, and local regulations regarding hazardous waste described in Section 4.6.1.1 as well as with LAWA's *Procedure for the Management of Contaminated Materials Encountered During Construction,* would ensure that no significant cumulative impacts would occur.

Operations of the Proposed Action Alternative and the cumulative development projects would not significantly increase the use of hazardous materials, or generate significant amounts of additional solid waste. The Proposed Action Alternative would not result in a significant cumulative impact from hazardous materials, solid waste, or pollution prevention when compared to the No Action Alternative.

### 5.12.5 HISTORIC, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

The cumulative impacts analysis evaluates the impacts of the Proposed Action Alternative on historical resources in conjunction with past, present, and reasonably foreseeable projects, including both LAX and non-LAX development projects, within the vicinity of LAX, as listed in Table 5-35. The implementation of the Proposed Action Alternative, when combined with these other projects, could result in cumulative impacts to historical resources if the combined impacts would exceed the identified threshold of significance.

Table 5-35 identifies other projects and improvements at and adjacent to LAX, including a number of terminal improvement projects, the majority of which involve interior improvements, within the CTA. None of the terminal improvement projects would result in a direct physical impact to any of the historical resources in the CTA (i.e., the Theme Building). Terminal improvement projects that have the potential to affect views of the Theme Building include the LAX Terminal 1.5 Project and the LAX Terminals 2 and 3 Modernization Project (projects 17 and 21 in Table 5-35), both of which propose new passenger processing buildings in the northern portion of the CTA, north of the Theme Building and across World Way. Evaluations of the potential impacts to historical resources from construction and operation of the LAX Terminal 1.5 Project and LAX Terminals 2 and 3 Modernization Project were conducted by HRG in June 2016.[55] FAA determined that neither project would cause a substantial adverse change in the significance of a historical resource, including the Theme Building. While the Proposed Action Alternative would alter the visual setting of the Theme Building, this visual setting has historically been altered through the construction of parking garages surrounding the

[55] City of Los Angeles, Los Angeles World Airports, *Los Angeles International Airport, Terminal 1.5 Project*, *Initial Study – Proposed Mitigated Negative Declaration, Appendix B, Historic Resources Report*, June 2016, Available: http://www.lawa.org/ourLAX/CurrentProjects.aspx?id=13739; City of Los Angeles, Los Angeles World Airports, *Notice of Preparation and Initial Study, Los Angeles International Airport (LAX) Terminals 2 and 3 Modernization Project, Appendix A, Historic Resources Technical Report*, June 2016, Available: http://www.lawa.org/uploadedFiles/OurLAX/pdf/LAX_T2_3_Mod_Project_NOP-IS_Initial_Study_SECURE.pdf.

building. The Theme Building would remain physically intact in its original location and its unique architectural design would remain discernible and continue to convey its historical significance despite being partially obscured by the proposed new construction. The Proposed Action Alternative in combination with the LAX Terminal 1.5 Project and the LAX Terminals 2 and 3 Modernization Project would not result in a significant cumulative impact on the Theme Building when compared to the No Action Alternative. None of the other projects identified in Table 5-35 would be implemented near or affect any of the other historic resources identified in Section 4.7.

The APE is located within a highly urbanized area and has been subject to disturbance by Airport operations and development, commercial and residential development, and other on-going construction activities. Thus, surficial archaeological resources, cultural resources, and human remains that may have existed at one time have likely been displaced by these disturbances. While discovery of archaeological resources, cultural resources, and human remains in artificial fill deposits within the APE is unlikely, excavations associated with the Proposed Action Alternative and other development projects at/adjacent to LAX could impact archaeological resources, cultural resources and human remains that have not been disturbed or displaced by previous development. Therefore, the Proposed Action Alternative in combination with other proposed projects at and adjacent to LAX could result in potential cumulative impacts on archaeological resources that are historical resources or unique archeological resources and unique cultural resources when compared to the No Action Alternative.

Under the Proposed Action Alternative, with compliance with LAWA's ATP, potentially significant impacts to archaeological resources that are historical resources or unique archeological resources would be reduced and not be significant when compared to the No Action Alternative. Additionally, through compliance with guidance as to the treatment of human remains that could be encountered during construction excavations, such as the procedures outlined in Section 7050.5(b) and (c) of the State Health and Safety Code, Section 5097.94(k) and (i) and Section 5097.98(a) and (b) of the Public Resources Code, cumulative impacts from disturbance of any human remains, including those interred outside of formal or dedicated cemeteries, would not be significant when compared to the No Action Alternative.

### 5.12.6 LAND USE

As discussed in Section 5.6.3, the Proposed Action Alternative would be consistent and not conflict with applicable land use plans, policies, and regulations. Therefore, Proposed Action Alternative impacts related to conflicts with applicable land use plans, policies, or regulations would not be significant when compared to the No Action Alternative.

As identified in Table 5-35, there are other ongoing and planned Airport and non-Airport projects within the immediate vicinity of the Proposed Action Alternative. These projects represent further improvement in the Airport operations and further development of the surrounding area. However, these projects would not create fundamental conflicts with applicable land use plans, policies, and regulations.

On-Airport projects include improvements to runways, new and improved terminals, new concourses, and development of the Northside area. LAWA reviews all on-Airport projects against the LAX Plan and the LAX

Specific Plan. In addition, LAWA would oversee the future development of the Northside area in accordance with the LAX Northside Design Guidelines and Standards. Non-LAWA projects, including Metro's Crenshaw/LAX Transit Corridor Project, Metro's AMC 96th Street Transit Station, and improvements to the Hyperion Treatment Plant connector, would be designed to be consistent with applicable land use plans, policies, and regulations. However, in certain instances, amendments to the various plans may be proposed to ensure consistency. There would be no cumulative conflicts with applicable land use plans, policies, and regulations. Therefore, the Proposed Action Alternative, in combination with the ongoing and future projects at LAX and the vicinity of the Airport, would not result in a significant cumulative impact related to land use and planning when compared to the No Action Alternative.

### 5.12.7 NATURAL RESOURCES AND ENERGY SUPPLY

As identified in Table 5-35, other ongoing and future projects have been identified within the immediate vicinity of the Proposed Project Area. Cumulative energy and water demand in the area is also impacted by regional growth. The LADWP forecast for future utility demand in the UWMP and the Power IRP concluded that excess capacity exists through 2040. Anticipated water demand for the Proposed Action Alternative combined with ongoing and future development projects falls within UWMP's projected water supplies for normal, single-dry, and multiple-dry years through the year 2035 and is within the UWMP's 25-year water demand growth projections.

Based on the demand growth forecast, cumulative utility impacts on supply and distribution capabilities or on new supply facilities and distribution infrastructure are unlikely. In addition, new buildings would be required to meet energy consumption standards prescribed for new structures in Title 24, and all LAX development projects would also comply with LAWA's *Sustainability Plan*. Finally, as the Proposed Action Alternative would reduce VMT and thus, consumption of transportation-related fuels, it would not have a cumulative impact on transportation-related fuels when compared to the No Action Alternative. As such, cumulative impacts of the Proposed Action Alternative when combined with ongoing and future development projects would not result in a demand for scarce consumable natural resources and energy in excess of available or future supplies. No significant cumulative impacts would occur as a result of implementation of the Proposed Action Alternative when compared to the No Action Alternative.

### 5.12.8 NOISE AND NOISE-COMPATIBLE LAND USE

#### 5.12.8.1.1 Construction Equipment Noise

LAWA would implement noise control measures during construction of the Proposed Action Alternative, thus noise levels at nearby noise-sensitive receptors would not be significant. When construction of the Proposed Action Alternative and other future projects such as the Metro Crenshaw/LAX Transit Corridor and Metro AMC 96th Street Transit Station occurs simultaneously, construction noise could increase in the immediate area. However, the area surrounding these construction sites is largely commercial and industrial with no nearby noise-sensitive receptors. Thus, cumulative noise levels from construction would not be significant when compared to the No Action Alternative.

#### 5.12.8.1.2 Roadway Noise

The Proposed Action Alternative would not cause a significant increase in roadway noise levels; in some cases it would decrease traffic on area roadways, thus decreasing the traffic noise level. The development projects identified in Table 5-35 are not anticipated to substantially increase roadway noise in the area, as the traffic associated with these projects was included in the traffic volumes utilized for the noise analysis. Cumulative impacts related to roadway noise would not be significant when compared to the No Action Alternative.

#### 5.12.8.1.3 Transit Noise

The proposed APM would not cause a significant increase in noise levels above ambient noise levels. The proposed APM would cross above the Metro Crenshaw/LAX and Green transit lines at Aviation Boulevard and W. 96th Street, in an area that will consist of Metro's AMC 96th Street Transit Station and the ITF East. No noise-sensitive receptors are located within 1,500 feet of these stations, thus, no cumulative transit noise impacts on noise-sensitive receptors would occur when compared to the No Action Alternative.

### 5.12.9 SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

As discussed in Section 5.9.3, operations of the Proposed Action Alternative would not include any residential uses; its operations would not directly contribute to the projected population and housing growth within or adjacent to the Proposed Project Area. Additionally, the employment that would be generated for operations of the Proposed Action Alternative is unlikely to indirectly induce population growth within or adjacent to the Proposed Project Area. As shown in Table 5-35 and Figure 5-12, numerous ongoing and reasonably foreseeable projects at LAX are within the immediate area of the Proposed Action Alternative. Similar to the Proposed Action Alternative, none of these ongoing or future projects involve residential uses that would result in direct population or housing impacts nor would they displace substantial numbers of housing units or people. Consequently cumulative impacts because of direct population growth inducement would not be significant when compared to the No Action Alternative.

Similarly, because the Proposed Action Alternative would not displace substantial numbers of housing units or people, it would not, in combination with the ongoing and reasonably foreseeable projects in the LAX vicinity cause a cumulative displacement of substantial numbers of housing units or people when compared to the No Action Alternative.

The ongoing and reasonably foreseeable projects at LAX and in the LAX vicinity would generate construction employment that could indirectly induce population growth either within or in the vicinity of the Proposed Project Area. New employees generated by the ongoing and reasonably foreseeable projects at LAX and the LAX vicinity, including the Proposed Action Alternative, would likely commute from the local Los Angeles area and would not require relocation to within or in the vicinity of the Proposed Project Area. As discussed in Section 5.9.3.2, the Proposed Action would generate employment, including approximately 20 to 2,500 construction jobs annually between years 2018 and 2031, and approximately 100 net jobs during operation,

which would not result in significant impacts on population and housing when compared to the No Action Alternative.

The SCAG 2016–2040 RTP/SCS forecasts that air passenger demand within the SCAG region will increase from 91.2 million annual passengers in 2014 to 136.2 million annual passengers by year 2040; representing a 1.6 percent annual growth rate. To accommodate air passenger growth, there would be an increase in airport-support jobs, including the ongoing and future projects at LAX, which would be approximately 47,000 employees by 2040 based on the 1.6 percent annual growth rate. Given that future growth of the Airport is accounted for in SCAG's 2016–2040 RTP/SCS, the Proposed Action Alternative and the ongoing and future projects at LAX are accounted for within SCAG's population, housing, and employment growth forecasts through year 2040 for jurisdictions within and in the vicinity of the Proposed Project Area. Similarly, SCAG's 2016-2040 RTP/SCS includes population, housing, and employment growth forecasts for the areas where the reasonably foreseeable projects identified in Table 5-35 would occur. The Proposed Action Alternative would not directly or indirectly cause growth that exceeds SCAG's population and housing growth forecasts. The Proposed Action Alternative in combination with the ongoing and reasonably foreseeable projects at LAX and in the LAX vicinity would not result in significant cumulative indirect population growth inducement when compared to the No Action Alternative. .

Population characteristics and demographics in the LAX vicinity are in line with those presented above for the Proposed Project Area. Implementation of identified reasonably foreseeable actions in combination with the Proposed Action Alternative would not result in significant impacts to air quality, climate, noise or traffic that would disproportionately impact minority or low-income populations. Additionally, significant impacts to visual character, lighting, hazardous materials or water resources are not expected. There would be no cumulative disproportionately high or adverse impacts to an environmental justice community as a result of the implementation of Proposed Action Alternative when compared to the No Action Alternative.

Air quality impacts on schools resulting from the Proposed Action Alternative as well as identified reasonably foreseeable projects in the vicinity of the Proposed Project Area or on residential and recreational areas within the Proposed Project Area would not exceed applicable significance thresholds. The construction and operation of the Proposed Action in combination with the other development projects would not cause disproportionate health or safety risks to children when compared to the No Action Alternative.

The construction of the Proposed Action Alternative would alter ground access to, from, and around LAX, which has the potential to impair the movement of emergency vehicles. While local roadway and/or lane closures would occur for varying periods during construction, roadway access would be maintained by the use of detours and traffic lane reconfigurations. These closures would have the potential to result in an increase in response times for fire protection personnel, which could result in a significant impact to emergency access and response times for fire protection and emergency services. However, construction impacts would not be significant with implementation of project design features identified in Section 5.9.3. Completion of the Proposed Action Alternative would improve traffic flows, thereby improving response times for emergency services over time.

As discussed in Section 5.9.4.2 operations of the Proposed Action Alternative would not significantly impact fire protection and emergency services. The ongoing and reasonably foreseeable projects at LAX in combination with the Proposed Action Alternative, would have the potential to increase demand for fire and emergency services. However, cumulative development would not result in the need for a new facility or the expansion, consolidation, or relocation of an existing facility to maintain adequate service levels for either law enforcement or fire protection services. Therefore, cumulative impacts on law enforcement and fire protection services would not be significant when compared to the No Action Alternative.

As discussed in Section 5.9.1.5, the traffic model developed for the off-Airport traffic analysis was based on the SCAG RTP 2012 Transportation Model and the City of Los Angeles' Westside Mobility Plan model. These models include regional growth projections, including housing and employment data, based on LADOT and SCAG growth projections for future horizon years. In addition, the model was updated to incorporate traffic data from 212 probable development projects in surrounding jurisdictions (see **Appendix L***)*. Therefore, the model includes background traffic volumes due to ambient area-wide growth for future horizon years, as well as changes in the transportation network (i.e., roads and intersections) during the same period.

Construction activities associated with the Proposed Action Alternative and development projects at/adjacent to LAX would generate increased traffic associated with construction employees and deliveries in the vicinity of the Proposed Project Area. Although there may be short-term localized impacts associated with construction activities, the Proposed Action Alternative and development projects at/adjacent to LAX, when compared to the No Action Alternative, would not disrupt local traffic patterns or substantially reduce the levels of service of roads serving LAX and its surrounding communities.[56], due to implementation of the traffic project design features of the Proposed Action Alternative.

The Proposed Action Alternative is a transportation improvement project. As identified in Section 5.9.4.2.4, the majority of intersections for future horizon years would see improved traffic conditions under the Proposed Action Alternative when compared to the No Action Alternative. Any localized impacts would not extend to the full Proposed Project Area. Therefore, as future development projects were analyzed in conjunction with the Proposed Action Alternative, and because when considering operational impacts as a whole there would be no cumulative disruption of local traffic patterns or substantial reduction in the levels of service of roads serving LAX and its surrounding communities,[57] there would be no significant cumulative impacts to area intersections when compared to the No Action Alternative.

### 5.12.10 VISUAL EFFECTS

As discussed in Section 5.10.3 and 5.10.4, the Proposed Action Alternative would not result in impacts to light emissions or visual effects. As identified in Table 5-35, a number of ongoing and future projects are planned

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[56] U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

[57] U.S. Department of Transportation, Federal Aviation Administration, Order 1050.1F, *Environmental Impacts: Policies and Procedures*, effective July 16, 2015.

within the immediate area of the Proposed Project Area, including Metro's AMC 96th Street Transit Station, which would be located adjacent to the ITF East to provide a connection for passengers traveling to LAX. Cumulative development would be of a similar visual character to the existing Airport and commercial uses within the Proposed Project Area and is not anticipated to introduce new aesthetic elements that would be out of scale or character with the existing visual environment. Cumulatively, construction activities associated with these projects would result in short-term visual impacts. The Proposed Action Alternative would result in the obstruction of some views of the Theme Building. Implementation of design guidelines identified in Section 5.5.4 would minimize the impact to the visual character of the Theme Building. Therefore, there would be no cumulative impacts relative to visual character or resources when compared to the No Action Alternative.

As previously identified, light-sensitive uses within proximity to the Proposed Project Area include the residential uses located north of Westchester Parkway/W. Arbor Vitae Street between Sepulveda Boulevard and Bellanca Avenue and the hotel buildings along W. Century Boulevard and Airport Boulevard. Development of the Proposed Action Alternative in combination with past, present, and reasonably foreseeable projects would introduce new or expanded sources of lighting and glare. As previously described, the Proposed Project Area is developed with a range of low to high ambient nighttime light levels, consistent with an urbanized area. The introduced sources of lighting would not substantially alter the existing ambient lighting environment. All future projects would comply with applicable design guidelines and regulations, to minimize the spillover of light onto adjacent light-sensitive uses. As such, development of the Proposed Action Alternative in combination with past, present, and reasonably foreseeable future projects would not create annoyance or interfere with normal activities due to light intrusion; therefore, there would be no cumulative impacts relative to light emissions when compared to the No Action Alternative.

## 5.12.11 WATER RESOURCES

### 5.12.11.1 Surface Water

The Proposed Action Alternative would be developed in an urbanized area and runoff from the Proposed Project Area and the surrounding area would be served by existing storm drain systems. Runoff from the Proposed Project Area and surrounding urban uses is typically directed into the adjacent streets, where it flows to the nearest drainage improvements. It is likely that most, if not all, of the cumulative development projects would also drain to the surrounding street system.

The Proposed Project Area is located mostly within the Dominguez Channel Watershed, with a small portion located within the Santa Monica Bay Watershed. These watersheds include both County of Los Angeles and City of Los Angeles drainage and flood control structures and are composed of mainly urban, commercial, and industrial uses. Cumulative development would be unlikely to substantially alter the existing drainage pattern of the area, as it is a highly developed urbanized area. Design features of the Proposed Action Alternative include provision for required detention facilities to accommodate any increase in stormwater flows. These design features would assure that the Proposed Action Alternative would not contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, and would not cause an

increase in runoff that would cause or exacerbate flooding with the potential to harm people or damage property.

Thus, increased flooding, or the exceedance of existing or planned stormwater drainage systems would not occur. Cumulative impacts to capacity of existing or planned stormwater drainage systems and/or flooding would not be significant when compared to the No Action Alternative.

It is unlikely that there would be a substantial alteration of drainage systems and watercourses since the alignment of such facilities have been established and capacities have been determined based on the existing land uses located in those watersheds. In accordance with municipal requirements, cumulative development projects and other future development projects would be required to implement BMPs such that post-development peak stormwater runoff discharge rates would not exceed the estimated pre-development rates. Furthermore, for cumulative projects within the City, the City of Los Angeles Department of Public Works would review each future development project on a case-by-case basis to ensure that sufficient local and regional drainage capacity is available. Consequently, the Proposed Action Alternative and cumulative development projects would not result in a significant cumulative impact on the movement of surface water because together they would not cause a substantial change in the current or direction of water flow. Similarly, adherence to the SWPPP and implementation of standard BMPs during construction would assure that the cumulative impacts related to increased siltation, erosion, and hazardous material spills would not be significant when compared to the No Action Alternative.

Each of the cumulative development projects would be subject to the same requirements as the Proposed Action Alternative and thus, would be required to prepare a Low Impact Development (LID) Plan, and, if applicable, a SWPPP for construction activities. SWPPPs are required if more than one acre is disturbed. As with the Proposed Action Alternative, the LID Plan and/or SWPPP prepared for the cumulative development projects would incorporate BMPs requiring controls of pollutant discharges that utilize Best Available Technology (BAT) to reduce pollutants. Cumulative development projects within the County of Los Angeles and City of Los Angeles are required to submit and implement a SWPPP and a Standard Urban Stormwater Mitigation Plan (SUSMP) containing design features and BMPs to reduce post-construction pollutants in stormwater discharges. Increases in regional controls associated with other elements of the MS4 Permit also would improve regional water quality over time. Water quality impacts of the cumulative development projects in combination with the Proposed Action Alternative would not be significant with preparation and implementation of the SWPPP and SUSMP; compliance with the City's LID Ordinance; and the enforcement of these requirements by the City or County. Therefore, cumulative surface water impacts from implementation of the Proposed Action Alternative in combination with cumulative development projects would not be significant compared to the No Action Alternative.

### 5.12.11.2 Groundwater

Construction and operations of the Proposed Action Alternative would not deplete groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or the local groundwater table level. Cumulative development projects, individually and cumulatively, would create more impervious surfaces thus reducing the total groundwater recharge area. However, cumulative development

projects located within the watershed would add to the local groundwater basin through the addition of imported and/or recycled water. The water used for irrigation could offset the difference in the reduction of groundwater recharge area from rainfall-related recharge that occurs today. Given that the cumulative development projects are located in an urbanized area, any reduction in groundwater recharge resulting from the overall net change in impervious area within the cumulative development project sites would be minimal in the context of the regional groundwater basin.

Additionally, the Proposed Action Alternative and all cumulative development projects are required to comply with all applicable existing regulations that prevent contamination and must meet regulatory water quality standards. As with the Proposed Action Alternative, the cumulative development projects would be unlikely to cause or increase groundwater contamination.

Therefore, cumulative impacts to groundwater quality would not be significant because the Proposed Action Alternative in combination with cumulative development projects would not cause substantial interference with groundwater recharge such that there would be a net decrease in the aquifer volume or a change in groundwater storage that would adversely affect the quantity, water level, or flow of the underlying groundwater relative to beneficial uses of the basin when compared to the No Action Alternative.

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# 6. Coordination and Public Involvement

## 6.1 Introduction

Under 40 CFR § 1501.4, federal agencies are required to involve environmental agencies, applicants, and the public, to the extent practicable, when preparing EAs. Therefore, when conducting the NEPA process for the preparation of an EA, the FAA and the airport sponsor are encouraged to begin early coordination with the proper federal, state, tribal, and local agencies, including surrounding municipalities, in order to determine any possible environmental concerns. Following the release of this Draft EA, a public workshop will be held to obtain input on the analyses presented. The primary components of the agency coordination and public involvement program include the following:

- agency and public scoping;
- notification of the publication of the Draft EA for agency and public review in local newspapers;
- a public workshop scheduled for September 19, 2017; and
- preparation of a Final EA.

Keeping agencies and the public informed and gathering their input are essential components of any environmental study. The following sections summarize the agency coordination and public involvement program for this EA.

## 6.2 Agency Coordination and Public Involvement Program

### 6.2.1 AGENCY AND PUBLIC SCOPING

#### 6.2.1.1 Agency Scoping Letter

A scoping letter was mailed June 10, 2016, to 162 agencies and interested parties. The letter described the project and invited federal, state, and local agencies to attend the scoping meeting and/or provide scoping comments. A copy of the scoping letter and mailing list is included in the Scoping Report provided in **Appendix N**.

#### 6.2.1.2 Scoping Meeting

A scoping meeting was held June 22, 2016, from 5:00 p.m. to approximately 8:00 p.m. at Los Angeles Fire Station #5 located at 8900 S. Emerson Avenue, 90045 in Los Angeles, CA. Presentation boards describing the

Proposed Action were displayed, Frequently Asked Questions and Fact Sheets were provided, and Airport and consultant staff were in attendance to describe the Proposed Action and answer questions. A copy of the presentation materials and sign-in sheets are also included in the Scoping Report in **Appendix N**.

Seventeen (excluding FAA and LAWA staff) members of the public, or individuals representing a variety of organizations, attended the scoping meeting. Two written comments were received at the meeting. The scoping meeting summary and materials are also included in **Appendix N**.

#### 6.2.1.3 Scoping Comments Received

The scoping period was open for over 38 days, commencing on June 3, 2016 with publication of the public notice in the *Los Angeles Times,* followed by *The Argonaut* and the *Daily* Breeze on June 9, 2016, and concluding on July 11, 2016 at 5:00 p.m. During this time, interested parties, regulatory agencies, and the general public were provided the opportunity to offer input on the purpose and need for the Proposed Action, alternatives to the Proposed Action, and areas of environmental concern that should be examined in the EA.

Four agency/interested party comment letters were received during the scoping period. The scoping comments received are summarized in the Scoping Report in **Appendix N**.

### 6.2.2 PUBLIC OUTREACH

LAWA has conducted extensive public outreach as part of the LAX Landside Access Modernization Program, including holding four public workshops as part of the California environmental review process, and meeting with over 150 agencies, business and community groups, as well as elected officials to brief them and address concerns related to the Proposed Action. LAWA maintains an extensive database containing over 12,000 addresses, which is used to notify the public of key public meetings. Additionally, LAWA maintains a Facebook page and website dedicated to the LAX Landside Access Modernization Program.

### 6.2.3 AGENCY AND PUBLIC REVIEW OF THE DRAFT EA AND DRAFT GENERAL CONFORMITY DETERMINATION

This Draft EA and Draft General Conformity Determination (see **Appendix O**) are available for review by the general public, government agencies, and interested parties for a period of 39 days. The Notice of Availability (NOA) of the Draft EA and Draft General Conformity Determination for review was published on August 18, 2017. The NOA was sent to everyone included on the mailing list provided by LAWA. The NOA was also published in the *Los Angeles Times, The Argonaut* and the *Daily Breeze*. Copies of the Draft EA and Draft General Conformity Determination are available for review at the locations listed in **Table 6-1**, including LAWA offices and the FAA Airport District Office in Lawndale, CA. Review days and times vary by location. The documents can also be viewed at www.connectinglax.com.

**Table 6-1: Locations Where Draft EA and Draft General Conformity Determination Are Available**

| LOCATION | ADDRESS | CITY | ZIP CODE |
|---|---|---|---|
| LAWA Offices | 1 World Way, Room 218 | Los Angeles | 90009 |
| Federal Aviation Administration<br>Western-Pacific Region Airports Division | 15000 Aviation Boulevard,<br>Room 3024 | Lawndale | 90261 |
| Westchester-Loyola Village Branch Library | 7114 W. Manchester Avenue | Los Angeles | 90045 |
| Dr. Mary McLeod Bethune Regional Branch Library | 3900 S. Western Avenue | Los Angeles | 90062 |
| Culver City Library | 4975 Overland Avenue | Culver City | 90230 |
| El Segundo Library | 111 W. Mariposa Avenue | El Segundo | 90245 |
| Hawthorne Library | 12700 Grevillea Avenue | Hawthorne | 90250 |
| Inglewood Library | 101 W. Manchester Boulevard | Inglewood | 90301 |

SOURCE: Ricondo & Associates, Inc., February 9, 2017.
PREPARED BY: Ricondo & Associates, Inc., February 9, 2017.

A public workshop will be held by LAWA to afford interested parties the opportunity to review and comment on the Draft EA and Draft General Conformity Determination in addition to the opportunity to submit written comments. No decisions on the project will be made at the public workshop. The workshop will be held as follows:

September 19, 2017
5:00 to 8:00 p.m.
Flight Path Museum
6661 W. Imperial Highway
Los Angeles, California 90045

Anyone wishing to comment on the Draft EA or Draft General Conformity Determination will be offered the opportunity to do so in writing. Written comments must be submitted by **5:00 p.m., Tuesday, September 26, 2017** to:

Evelyn Quintanilla
Chief of Airport Planning
Los Angeles World Airports
P.O. Box 92216
Los Angeles, CA, 90009-2216

All comments related to the Draft EA will be considered by the FAA and LAWA in preparing the Final EA and Final General Conformity Determination.

### 6.2.4 FINAL EA AND FINAL GENERAL CONFORMITY DETERMINATION

Although the FAA is not required to formally respond to public comments concerning EAs, the Final EA and Final General Conformity Determination will reflect the FAA's consideration of the comments received. The FAA will use the Final EA to make a decision on the Proposed Action and issue a determination. Notice of release of the Final General Conformity Determination, Final EA and FAA's determination will be published in the *Los Angeles Times, The Argonaut* and the *Daily Breeze*.

# 7. List of Preparers

The following individuals contributed to the preparation of this EA. This section provides brief synopses of the qualifications and responsibilities of those responsible for the preparation of this document.

## 7.1 Principal Federal Aviation Administration Reviewers

*Victor Globa, Environmental Protection Specialist, Federal Aviation Administration, Western-Pacific Region, Los Angeles Airports District Office*

B.S. Business Administration - Aviation Management. Mr. Globa has over 25 years of experience. Responsible for the FAA review of the Environmental Assessment; coordination with the California State Historic Preservation Office.

*Frank Smigelski, Environmental Specialist, Office of Airports, Planning and Environmental Division, National Headquarters*

M.S. Engineering/Environmental Studies, B.S. Biology. Mr. Smigelski has 29 years of experience. Responsibilities include providing review of the Environmental Assessment and supporting documentation.

*Jean Wolfers-Lawrence, Environmental Protection Specialist, Office of Airports, Planning and Environmental Division, National Headquarters*

B.Sc. Biology, M.Sc. Environmental Management and Sustainability. Experience includes eleven years of environmental resource impact assessment and environmental planning. Responsibilities include providing review of the Environmental Assessment and supporting documentation.

## 7.2 Los Angeles World Airports

*Samantha Bricker, Deputy Executive Director, Los Angeles World Airports*

M.A. and B.A. in Political Science. Ms. Bricker joined LAWA in July 2016 as the Deputy Executive Director for Project Development and Coordination for LAWA. She has 24 years of experience in transportation projects and joined LAWA after completing her tenure as Chief Operating Officer of the Exposition Metro Line Construction Authority. She is responsible for coordinating with external agencies and stakeholders in support of LAWA's Landside Access Modernization Program and was recently appointed to manage the Environmental Programs Group.

*Evelyn Y. Quintanilla, Chief of Airport Planning II, Los Angeles World Airports*

B.S. Urban Planning & Development. Ms. Quintanilla has 18 years of experience in city and airport planning. Ms. Quintanilla is the division manager of the Environmental Programs Group and oversees CEQA/NEPA clearances, LAX Plan compliance, and entitlements for all projects at LAWA.

*Angelica Espiritu, City Planner, Los Angeles World Airports*

B.S. Urban & Regional Planning. Ms. Espiritu has 13 years of experience at LAWA. She currently serves as a City Planner in LAWA's Environmental Programs Group.

*Vinita Waskow, City Planner, Los Angeles World Airports*

B.S. Landscape Architecture, Master of City Planning. Ms. Waskow has over 10 years of experience in the planning and urban design field. She currently serves as a City Planner in LAWA's Environmental Programs Group and oversees environmental review and entitlement applications.

*Brenda Martinez-Sidhom, Community Project Director, Los Angeles World Airports*

Mrs. Martinez-Sidhom currently serves as the Stakeholder Liaison for LAWA, and oversees the public release of environmental documents and coordination of public outreach for the Entitlement and Environmental Clearance Section.

*Lisa Trifiletti, Trifiletti Consulting*

B.A. from Boston College, an M.A. from the Harvard Graduate School of Education, and a Loyola University Juris Doctor degree. Ms. Trifiletti is a land use consultant to LAWA and previously served as Deputy Executive Director, Chief Sustainability Officer, and Director of Environmental and Land Use Planning for LAWA until creating an independent consulting company in 2016. She managed the coordination and interface with all LAWA divisions and all external regulatory agencies including the FAA, SCAQMD, Caltrans, LA County Metro, California Department of Fish and Wildlife, LA County Airport Land Use Commission, LA City Office of Historic Resources, LA City Council, LA County Board of Supervisors, and other relevant local agencies.

## 7.3 Consultant Team

### RICONDO & ASSOCIATES, INC.

*Joseph A Huy, CM, Senior Vice President*

Qualifications – Over 20 years of experience in airport planning and environmental studies with significant experience in preparing airfield, terminal, and landside planning projects, and airfield operational analyses.

Responsibilities – Project management support, project description, landside element impact analysis, activity forecast support, resource planning and project team coordination.

*Stephen D. Culberson, Vice President*

Qualifications – Over 25 years of experience in airport environmental and planning studies, with significant experience in preparing and managing environmental assessments and environmental impact statements, airport master planning projects, and activity forecasts.

Responsibilities – Project management, NEPA documentation, purpose and need, alternatives, affected environment, and environmental consequences.

*Virginia Jackson, Director*

Qualifications – More than 20 years of experience in airport environmental and planning analyses, with significant experience preparing and managing environmental assessments, airport noise analyses, and airport master plans.

Responsibilities – NEPA documentation, including the purpose and need and alternatives.

*Darrin McKenna, Director*

Qualifications – More than 20 years of experience in airport landside transportation planning, traffic engineering and design, operational analysis, traffic simulation, and intelligent transportation systems (ITS).

Responsibilities – Directed on-airport traffic modeling, analyses, and documentation.

*Allison Sampson, Managing Consultant*

Qualifications – Over 7 years of experience in airport planning and environmental analyses.

Responsibilities – NEPA documentation, purpose and need, alternatives, affected environment, and environmental consequences; responsible for managing documentation and project records.

*Julie Car, Senior Consultant*

Qualifications – More than ten years of experience in aviation and environmental planning, with expertise in protected species, sensitive habitat, wetlands, and wildlife management.

Responsibilities – NEPA analysis and documentation, affected environment, and environmental consequences.

*Brian Philiben, Senior Consultant*

Qualifications – Five years of experience in airport planning and environmental analyses with a background of more than five years of environmental consulting experience, with particular expertise in land use planning.

Responsibilities – Managed EA documentation, including the affected environment and environmental consequences sections, GIS analysis and exhibit production, as well as the maintenance of project records.

*David Plakorus, Senior Consultant*

Qualifications – Over seven years of experience in environmental and planning studies, with experience in preparing and managing environmental assessments and environmental impact statements, with particular expertise in land use and socioeconomics.

Responsibilities - NEPA documentation, including the background, purpose and need and environmental consequences.

*Kimberly Schneider, Consultant*

Qualifications – Over 2 years of experience in airport planning and environmental documentation.

Responsibilities – NEPA documentation: purpose and need, alternatives, affected environment, and environmental consequences.

## CDM SMITH (AIR QUALITY)

*John Pehrson, Associate*

Qualifications – Over 30 years of experience in air quality evaluations, including 20 years of preparing airport air quality impact analyses.

Responsibilities – Air quality impact analyses and climate change sections supervision and quality control.

*Gwen Pelletier, Senior Air Quality Scientist*

Qualifications – Over 15 years of experience in air quality and climate change evaluations, including 10 years of preparing airport air quality and climate change impact analyses.

Responsibilities – Task leader for NEPA air quality impact analyses and climate change/greenhouse gas assessment.

*Jeremy Gilbride, Air Quality Engineer*

Qualifications – Chemical engineer with focus on environmental impact evaluations.

Responsibilities – Air quality modeler for criteria air pollutants emissions and dispersion, and greenhouse gas emissions and mitigation.

## RAJU ASSOCIATES (OFF-AIRPORT TRANSPORTATION)

*Srinath Raju, President*

Qualifications – Over 30 years of experience in transportation planning, traffic engineering and transit planning with significant experience in preparation and management of large transportation studies for EISs, EAs, and categorical exclusions including projects involving master plans, community plans, specific plans, general plans and infrastructure plans.

Responsibilities – Project and resource management, travel demand forecasts, off-airport transportation impact analysis and preparation and management of transportation section for inclusion in the NEPA documentation for the EA.

*Chris Munoz, Senior Traffic Engineer*

Qualifications – Over 20 years of experience in preparation of traffic impact analyses, transport planning analyses, identification and documentation of impacts and mitigations.

Responsibilities – Preparation of intersection level forecasts for the Project Alternatives; design and implementation of automated procedures for preparation of presentation exhibits. Preparation of NEPA documentation.

*Bruce Chow, Senior Transportation Planner*

Qualifications – Over 25 years of experience in transportation planning, development of land use / socio-economic data for use in travel demand models, traffic engineering analysis and micro-simulation of traffic conditions.

Responsibilities – Preparation of traffic analysis at ramps and locations within Caltrans jurisdiction, assessment of traffic impacts and identification of mitigations. Preparation of NEPA documentation. Overall quality control checks for the off-airport transportation section.

## SYNERGY (AIR QUALITY CONFORMITY STRATEGY, NEPA DOCUMENT REVIEW)

*Mary Vigilante, President*

Qualifications – Nearly 40 years of experience in airport environmental and planning studies, with significant experience in preparing NEPA documentation, air quality assessments, climate change evaluations, and sustainability.

Responsibilities – Air quality and greenhouse gas protocol and NEPA documentation.

## HISTORIC RESOURCES GROUP (CULTURAL RESOURCES)

*Paul Travis, Principal*

Qualifications – Over a decade of experience as a preservation planner, specializing in large-scale development projects and master plans that involve historic resources, including airports, movie studios, university campuses, and NEPA projects.

Responsibilities – NEPA and Section 106 cultural resource technical analyses and agency coordination.

*Peyton Hall, Managing Principal*

Qualifications – Over 35 years' experience as a licensed architect, with extensive experience in all aspects of architectural preservation, conservation and re-use.

Responsibilities – NEPA and Section 106 cultural resource technical analyses and agency coordination.

*John LoCascio, Principal*

Qualifications – More than 20 years as a licensed architect, working on design and construction monitoring, Federal Historic Tax Credit projects, building conservation and technical assistance with preservation architecture projects.

Responsibilities – NEPA and Section 106 cultural resource technical analyses and agency coordination.

## JBG CONSULTING (DOCUMENT EDITOR/ADMINISTRATIVE RECORD)

*Julie Gaa, Principal*

Qualifications – Over 29 years of experience in environmental impact analyses, project management, and quality control/quality assurance, with significant experience in preparing environmental impact statements, environmental assessments, and categorical exclusions for airport projects.

Responsibilities – Quality control/quality assurance and technical integration.

## MERIDIAN CONSULTANTS (LAND USE, NOISE, PUBLIC SERVICES)

*Joe Gibson, Partner*

Qualifications – Over 35 years of experience in managing and conducting environmental studies related to water resource projects throughout the United States, including environmental assessments and environmental impact statements. His clients have included federal, state, and local government agencies, as well as private-sector clients.

Responsibilities – Project management, alternatives, affected environment, and cumulative impact analysis.

*Candice Woodbury, Project Planner*

Qualifications – More than 3 years of experience of providing environmental impact analysis for a variety of development and land use projects, including the planning and preparation of environmental documents such as environmental assessments.

Responsibilities – Alternatives, affected environment, and cumulative impact analysis.

*Christ Kirikian, Senior Environmental Scientist*

Qualifications – Over 5 years of experience assisting in the development of environmental documents, with significant experience preparing technical reports related to the assessment of noise control associated with urban development and infrastructure projects.

Responsibilities – Alternatives, affected environment, and cumulative impact analysis.

*Kelene Strain, Senior Project Manager*

Qualifications – Over 14 years of diverse experience in planning, environmental analysis, and mitigation and conservation banking. She has managed and aided in the preparation and coordination of environmental documentation, including environmental assessments.

Responsibilities – Alternatives, affected environment, and cumulative impact analysis.

## NINYO & MOORE (HAZARDS AND HAZARDOUS MATERIALS)

*Summer Hansen-Rooks, Project Environmental Scientist*

Qualifications – Over 12 years of experience in environmental consulting with all aspects of environmental project management; permitting and agency negotiations; preparation of environmental documents including permitting, compliance, and reporting; aerially-deposited lead surveys and reporting; waste characterization, handling, and disposal; and preparation and review of work plans, hazardous materials assessments (HMAs), initial site assessments (ISAs), development and implementation of Phase II environmental site assessments including soil, soil vapor, indoor and outdoor air, and groundwater investigations, conceptual site models, corrective action plans, remedial and removal action plans, and closure documentation reports.

Responsibilities – Project management and technical responsibilities including regulatory compliance; oversight of environmental site assessments and/or investigations; the development and implementation of work plans; evaluation of analytical data; supervision of field technicians and staff-level geologists, engineers, and scientists; and review of reports for final submittal.

*Patrick Cullip, Project Engineer*

Qualifications – Over 8 years of experience performing environmental remediation, operations and maintenance, remediation system installation, underground storage tank (UST) removal, soil contamination removal, dual-phase extractions, aerially-deposited lead (ADL) sampling, geological and geotechnical logging, quarterly groundwater monitoring reports, pilot test reports, design, and oversight projects; conducting Phase I environmental site assessments (ESAs), hazardous materials assessments (HMAs), and initial site assessments (ISAs) and feasibility testing; and evaluating regulatory compliance.

Responsibilities – Oversight and performance of environmental site assessments and/or investigations; the development and implementation of work plans; evaluation of analytical data; supervision of field technicians and staff-level geologists, engineers, and scientists; and review of reports for final submittal.

## POINT C (OFF-AIRPORT TRANSPORTATION)

*Tony Harris, Partner*

Qualifications – More than 25 years in the transportation industry, both public and private sectors, delivering various transportation infrastructure programs and projects with significant experience in completing environmental and design phases along with implementing funding strategies.

Responsibilities – Coordination with public agencies to develop implementation strategies to complete the traffic analysis and mitigation measures to address associated impacts.

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# 9. List of Abbreviations and Acronyms

## A

ACCRI—Aviation Climate Change Research Initiative

ACM—Asbestos-containing material

ACWM—Asbestos-containing waste material

ADG—Aircraft Design Group

ADT—Average daily traffic

AEDT—Aviation Environmental Design Tool

AEP—Airport Emergency Plan

AF/Y—Acre-feet per year

AIP—Airport Improvement Program

ALP—Airport Layout Plan

ALUC—Airport Land Use Commission

ALUCP—Airport Land Use Compatibility Plan

ALUP—Airport Land Use Plan

AMC—Airport Metro Connector

AMS—American Meteorological Society

ANMP—Aircraft Noise Mitigation Program

AOA—Airport Operations Area

APE—Area of Potential Effects

APM—Automated People Mover

AQMP—Air Quality Management Plan

ARCC—Airport Response Coordination Center

AST—Aboveground Storage Tank

ATCT—Airport Traffic Control Tower

ATP—Archaeological Treatment Plan

## B

BAT—Best Available Technology

bgs—Below ground surface

BID—Business Improvement District

BMP—Best Management Practice

## C

CAA—Clean Air Act

CAAA—Clean Air Act Amendments of 1990

CAAQS—California Ambient Air Quality Standards

CalEEMod—California Emissions Estimator Model

CalEPA—California Environmental Protection Agency

CAL FIRE—California Department of Forestry and

Fire Protection

CALM—Coordination and Logistic Management Team

CalOSHA—California Occupational Safety and Health Act

CalRecycle—California Department of Resources Recycling and Recovery

Caltrans—California Department of Transportation

CARB—California Air Resources Board

CCAA—California Clean Air Act

CCTV—closed circuit television

CEQ—Council on Environmental Quality

CEQA—California Environmental Quality Act

CERCLA—Comprehensive Environmental Response, Compensation, and Liability Act

CFR—Code of Federal Regulations

$CH_4$—Methane

CMS—Changeable Message Sign

CNEL—Community Noise Equivalent Level

CNG—Compressed natural gas

CO—Carbon Monoxide

$CO_2$—Carbon Dioxide

$CO_2e$—Carbon Dioxide Equivalent

CONRAC—Consolidated rental car facility

CPUC—California Public Utilities Commission

CRM—Cultural Resource Monitor

CSB—Customer Service Building

CTA—Central Terminal Area

CUP-RP—Central Utility Plant Replacement Project

CWA—Clean Water Act

CWC—California Water Code

## D

dB—Decibel

dBA—A-weighted sound pressure level

DNL—Day-Night Average Sound Level

DOE— Department of Energy

DOT— Department of Transportation

## E

EA—Environmental Assessment

EIR—Environmental Impact Report

EIS—Environmental Impact Statement

EMS—Emergency Medical Services

EMT—Emergency medical technician

EPCRA—Emergency Planning & Community Right to Know Act

## F

FAA—Federal Aviation Administration

FEMA—Federal Emergency Management Agency

FHWA—Federal Highway Administration

FONSI—Finding of No Significant Impact

FRA—Federal Railroad Administration

$FT^3$—Cubic feet

FTA—Federal Transit Administration

FTE—Full-time equivalent

**G**

GAO—General Accountability Office

GCASP—General Construction Activity Stormwater Permit

GDP – Gross Domestic Product

GHG—Greenhouse gas

GPD—Gallons per day

GSA—Groundwater sustainability agency

GTC—Ground Transportation Center

**H**

HMA—Hazardous Materials Assessment

HMI—Hazardous Materials Impact

HMTA—Hazardous Materials Transportation Act

HOPE—Homeless Outreach Partnership Endeavor

HRG—Historic Resources Group

HSR—Historic Structures Report

**I**

ICAO— International Civil Aviation Organization

IMC—Incident Management Center

IRP—Integrated Resource Plan

ITC—Intermodal Transportation Center

ITF—Intermodal Transportation Facility

ITS—Intelligent Transportation Systems

**J**

**K**

kWH—Kilowatt hour

**L**

$L_{eq}$—Equivalent continuous noise level

$L_{eq}$—One-hour equivalent sound level

LACDPW—Los Angeles County Department of Public Works

LACFCD—Los Angeles County Flood Control District

LADOT—Los Angeles Department of Transportation

LADWP—Los Angeles Department of Water and Power

LAFC—Los Angeles Fire Code

LAFD—Los Angeles Fire Department

LAGBC—Los Angeles Green Building Code

LAHSA—Los Angeles Homeless Services Authority

LAPD—Los Angeles Police Department

LAWA—Los Angeles World Airports

LAWAPD—Los Angeles World Airports Police Department

LAX—Los Angeles International Airport

LBP—Lead-based paint

LEP—Limited English Proficiency

LID—Low Impact Development

LOS—Level of service

LRT—Light Rail Transit

LUST—Leaking Underground Storage Tank

LWCF Act—Land and Water Conservation Fund Act of 1965

**M**

MAP—Million annual passengers

MCM—Minimum Control Measures

MEP—Maximum extent practical

Metro—Los Angeles County Metropolitan Transportation Authority

mgd—million gallons per day

MMcf—Million cubic feet

MOA—Memorandum of Agreement

MPO—Metropolitan Planning Organization

MS4—Municipal Separate Storm Sewer System

MSAT – mobile source air toxics

MSC—Midfield Satellite Concourse

MSF—Maintenance and Storage Facility

$MTCO_2e$—Metric tons of $CO_2$ equivalent

MTP – Metropolitan Transportation Plan

MUTCD—Manual on Uniform Traffic Control Devices

MW—Megawatt

MWD— Metropolitan Water District of Southern California

MWh—Megawatt-hours

**N**

$N_2O$—Nitrous oxide

NAAQS—National Ambient Air Quality Standards

NAC—Noise Abatement Criteria

NAHC—Native American Heritage Commission

NASA—National Aeronautics and Space Administration

NCOS— North Central Outfall Sewer

NEPA—National Environmental Policy Act of 1969

NFPA—National Fire Protection Association

NHPA—National Historic Preservation Act

$NO_2$—Nitrogen dioxide

NOA—Notice of Availability

NOAA—National Oceanographic and Atmospheric Administration

$NO_x$—Nitrogen oxides

NPDES—National Pollutant Discharge Elimination System

NPS—National Park Service

NRHP—National Register of Historic Places

**O**

$O_3$—Ozone

OSHA—Occupational Safety and Health Act

**P**

PARTNER—Partnership for Air Transportation Noise & Emissions Reduction

PATH—People Assisting the Homeless

Pb—Lead

PCB—Polychlorinated biphenyls

PFC—Passenger Facility Charge

$PM_{10}$—Particulate matter

$PM_{2.5}$—Fine particulate matter

ppb—parts per billion

ppm—parts per million

**Q**

QTA—Quick Turnaround Area

**R**

RCRA—Resource Conservation and Recovery Act

ROD—Record of Decision

RPZ—Runway Protection Zone

RSA—Runway Safety Area

RTP—Regional Transportation Plan

RWL—Receiving water limit

RWQCB—Regional Water Quality Control Board

**S**

SAAP—Secured Area Access Post

SCAG—Southern California Association of Governments

SCAQMD—South Coast Air Quality Management District

SCCIC—South Central Coastal Information Center

SCS—Sustainable Communities Strategy

SDWA—Safe Drinking Water Act

SF—Square feet

SHPO—State Historic Preservation Officer

SIP—State Implementation Plan

SLF—Sacred Lands File

$SO_2$—Sulfur dioxide

SoCalGas—Southern California Gas Company

SPAS—Specific Plan Amendment Study

SPCC Plan—Spill Prevention Control and Countermeasures Plan

SUSMP—Standard Urban Stormwater Mitigation Plan

SWPPP—Stormwater Pollution Prevention Plan

SWRCB—State Water Resources Control Board

**T**

TAF—Terminal Area Forecast

TBIT—Tom Bradley International Terminal

TCOM—Traffic Comparison

TCWG – Transportation Conformity Working Group

TDM—Transportation Demand Management

THPO—Tribal Historic Preservation Officer

TIP – Transportation Improvement Program

TMDL—Total Maximum Daily Load

TMO—Transportation Management Organization

TMP—Traffic Management Plan

TNC—Transportation Network Company

TPSS—Traction power substation

TRAVIS—Traffic and Automated Vehicle Identification System

TSA—Transportation Security Administration

TSL—Temporary Street Lighting

TSR—Transportation Security Regulation

TSS—Total Suspended Solids

TTS—Temporary Traffic Signal

## U

U.S.C.—United States Code

USEPA—United States Environmental Protection Agency

USO—United Service Organizations

UST—Underground Storage Tank

UWMP—Urban Water Management Plan

## V

V/C—Volume to capacity

VMT—Vehicle miles traveled

VOCs—Volatile Organic Compounds

## W

WAMA—West Aircraft Maintenance Area

WATCH—Work Area Traffic Control Handbook

WQBELS—Water quality-based effluent limitations

WRD—Water Replenishment District

WSA—Water Supply Assessment

WTCP—Worksite Traffic Control Plan

## X

## Y

## Z

ZIMAS— City of Los Angeles Zone Info and Map Access System